2018 Annual Compliance Report for Honolulu Harbor and Kalaeloa Barbers Point Harbor

Small Municipal Separate Storm Sewer System (Small MS4) General Permit Program for

- **Honolulu Harbor - NGPC Permit: HI 03KB482**
- **Kalaeloa Barbers Point Harbor - NGPC Permit: HI 03KB488**

State of Hawaii
Department of Transportation, Harbors Division
79 South Nimitz Highway
Honolulu, Hawaii 96813

Protect Our Harbor Waters
-Mālama I Ke Awa Kai-

January 28, 2019

NPDES Small MS4 General Permit
2018 Annual Compliance Report for
Honolulu Harbor and Kalaeloa Barbers Point Harbor

Date: JAN 2 3 2019

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ACRONYMS AND ABBREVIATIONS

ACR	Annual Compliance Report
AG	State of Hawaii, Department of the Attorney General
AMS	Asset Management System
BMP	Best Management Practices
CCH	City and County of Honolulu
CD	Consent Decree
CM	Construction Manager
HDOH-CWB	State of Hawaii, Department of Health, Clean Water Branch
HDOT	State of Hawaii, Department of Transportation
EPA	U.S. Environmental Protection Agency
ERP	Enforcement Response Plan
ETC	EnviroServices and Training Center, LLC
GIS	Geographic Information System
HAR	Hawaii Administrative Rules
HAR-E	Harbors Division, Engineering Branch
HAR-EC	Harbors Division, Engineering Branch, Construction Section
HAR-ED	Harbors Division, Engineering Branch, Design Section
HAR-EE	Harbors Division, Engineering Branch, Environmental Section
HAR-EM	Harbors Division, Engineering Branch, Maintenance Section
HAR-EP	Harbors Division, Engineering Branch, Planning Section
HAR-O	Harbors Oahu District
HAR-OCG	Harbors Oahu District, Custodial & Grounds Maintenance Unit
HAR-OM	Harbors Oahu District, Maintenance Unit
HAR-PM	Harbors Division, Property Management Section
HAR-SI	Harbors Division, Management Information Systems
IDDE	Illicit Discharge Detection and Elimination
KBPH	Kalaeloa Barbers Point Harbor
KIPA	Keehi Industrial Park Association
MCM	Minimum Control Measures
MOA	Memorandum of Agreement
MS4	Municipal Separate Storm Sewer System
NAV	Notice of Apparent Violation
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance Plan
ORI	Outfall Reconnaissance Inventory
ORIIP	Outfall Reconnaissance Inventory Inspection Program
PEAR	Program Element Audit Report
P2	Pollution Prevention
PM	Harbors Division Project Manager
POPC	Pollutants of Potential Concern
SSS O&MP	Storm Sewer System Operations and Maintenance Program
SWMP	Stormwater Management Plan
TEMY	Tenant Environmental Manager of the Year
TIM	Tenant Inspection Manual
TMDL	Total Maximum Daily Load
VGP	Vessel General Permit
USACE	U.S. Army Corps of Engineer

NPDES Small MS4 General Permit
Annual Compliance Report for
Honolulu Harbor and Kalaeloa Barbers Point Harbor

1 GENERAL NPDES PERMIT INFORMATION

State of Hawaii NPDES Program Permit Numbers:	
Honolulu Harbor:	HI 03KB482
Kalaeloa Barbers Point Harbor:	HI 03KB488
Annual Report for Permit Year:	16
Reporting Period:	January 1, 2018 – December 31, 2018
Permittee (Owner/Operator) Details:	
Organization:	State of Hawaii Department of Transportation Harbors Division
Mailing Address:	State of Hawaii, Dept. of Transportation 869 Punchbowl Street Honolulu, Hawaii 96813-5097
Owner:	Jade T. Butay
Title:	Director of Transportation
Telephone Number:	808-587-2150
Email:	jade.butay@hawaii.gov
Recipient:	
	Director of Health Clean Water Branch Environmental Management Division State Department of Health P.O. Box 3378 Honolulu, Hawaii 96801-3378
Prepared By:	
Company:	EnviroServices & Training Center LLC (ETC)
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On March 7, 2003, the State of Hawaii, Department of Transportation Harbors Division (hereinafter referred to as "HDOT-Harbors") filed a Notice of General Permit Coverage (NGPC) and Notice of Intent (NOI) for Honolulu Harbor and Kalaeloa Barbers Point Harbor (both on the island of Oahu) to acquire a Small Municipal Separate Storm Sewer System (Small MS4). The State of Hawaii, Department of Health, Clean Water Branch (HDOH-CWB) provided HDOT-

Harbors two NGPCs on May 19, 2003, assigning Small MS4 permit identification number HI 03KB482 for Honolulu Harbor, and HI 03KB488 and Kalaeloa Barbers Point Harbor. The NGPC authorizes discharges of stormwater and certain non-stormwater discharges from a Small MS4, and allows the HDOT-Harbors to discharge only stormwater and certain non-stormwater discharges identified in Hawaii Administrative Rules (HAR) 11-55, Appendix K, from the stormwater outfalls that HDOT-Harbors identified in its NOI, and from any newly constructed stormwater outfalls.

The general permit requires the permittee to:

1. Submit a Stormwater Management Plan (SWMP) within 120 calendar days of the date of the NGPC.
2. Develop, implement, and enforce the SWMP designed to reduce the discharge of pollutants from their Small MS4 to the maximum extent practicable (MEP) in order to protect water quality.
3. Submit a new NOI with filing fee, and obtain a new NGPC for any revisions to the information submitted in the NOI (with the exception of changes to contact person information for non-transfer of ownerships, newly constructed storm sewer outfalls, and changes to the SWMP). This NGPC cannot be modified.
4. Submit the annual report by January 28 of the following year in accordance with HAR 11-55, Appendix K to the State of Hawaii, Department of Health, Clean Water Branch.

This document fulfills the HDOT-Harbors Division requirement to submit an annual compliance report (ACR) for the 2018 SWMP prior to the deadline of January 28, 2019. Regarding the "stormwater and certain non-stormwater discharges…" stated in the NOI, the DOT-Harbors has an Illicit Discharge Detection and Elimination (IDDE) Program that documents and performs outfall inspections; this program is summarized in Section 3.4 of this report.

1.1 PERMIT COMPLIANCE ASSISTANCE

The permittee relies on the entities listed in Table 1 to satisfy some of its NPDES permit obligations.

Table 1. NPDEC Permit Compliance Assistance

Name	Responsibilities
State of Hawaii Department of the Attorney General (AG)	• Involved in making changes to the Hawaii Revised Statues and Hawaii Administrative Rules (HAR), as necessary. • Serves as primary interface with EPA Region IX. • Provides legal authority and legal support with preparing the Enforcement Response Plan (ERP).
City and County of Honolulu Dept. of Planning & Permitting Site Development Division Wastewater Branch	• Authorizes and tracks drainage connections to its sanitary sewer system through Industrial Wastewater Discharge Permit.

Table 1. NPDEC Permit Compliance Assistance	
Name	Responsibilities
Construction Managers (Various Firms)	• Conduct construction inspections. • Ensure construction sites are in compliance with applicable environmental regulations.
Design Consultants (Various Firms)	• Incorporate stormwater management program requirements in all Harbors facilities design projects.
State of Hawaii Harbors Division Oahu Harbor District	• Implements the Stormwater System Operation and Maintenance Program, supports data entry into Cityworks, provides suggestions to improve the program, including purchasing new equipment, and participates with enforcement.
EnviroServices & Training Center, LLC	• Assists Harbors Division in meeting the public and tenant outreach and education, employee and contractor training, all types of environmental inspections, and reporting requirements of the Consent Decree, the Small MS4 NPDES permits, and other environmental regulations.
Weston Solutions, Inc.	• Assists Harbors Division in meeting the environmental and related civil engineering, environmental permitting, and reporting requirements of the Consent Decree, the Small MS4 NPDES permits, and other environmental regulations.
SHI International Corp., Azteca *Cityworks*, and Woolpert, Inc.	• Assists Harbors Division in installing, configuring, testing, and deploying its *Cityworks* AMS and PLL software as well as providing ongoing licensing and software support services.

A copy of this annual report will be submitted to the Regional U.S. Environmental Protection Agency (EPA) Region 9 Chief of the Water II Enforcement Office.

1.2 STORMWATER MANAGEMENT PLAN

Changes have been made to the SWMP since the NOI or the last ACR, including changes in response to HDOH-CWB review. The current version of the SWMP was submitted in 2015. HDOT-Harbors has started to prepare revisions to its SWMP in 2019 to account for stormwater program accomplishments and changes. The final revisions are expected to be completed after the Appendix K permit renewal has been published.

No changes have been made, or are proposed, to the Outfall Reconnaissance Inventory Inspection Program (ORIIP) during the reporting year 2018. HDOT Harbors is in the process of updating the ORIIP Manual, which is expected to be completed with the SWMP revisions. Any significant changes to the ORIIP Manual will be reported in the next ACR. A full outfall reconnaissance was conducted in 2018. The majority of the inspections were conducted on the land side due to a

potential tsunami threat from the Kilauea Volcano eruption located on the Big Island of Hawaii.

No changes were made to the Tenant Inspection Manual (TIM) during the reporting year 2018. Harbors is in the process of updating the TIM, which is expected to be completed with the SWMP revisions. Any significant changes to the TIM will be reported in the next ACR. 100% of Harbors tenants were inspected in 2018.

The HDOT Harbors MS4s have not annexed land since obtaining permit coverage. There are no receiving water bodies newly listed as impaired and total maximum daily loads (TMDLs) have not been established.

2 NPDES PERMIT

Table 2 provides a summary of Harbors' NPDES permit conditions and compliance actions.

Table 2. Status of NPDES Permit Compliance

Description	Yes	No	Explanation
Permittee is in compliance with NPDES permits.	✓		• Harbors environmental program meets and exceeds the six minimum control measures of an MS4 permit for both the Honolulu Harbor and Kalaeloa Barbers Point Harbor NPDES permits. • Harbors has met permit requirements and is continuously working on improving existing programs.
Permittee has met all conditions of the Consent Decree (1:14-CV-00408-JMS-KSC).		✓	In 2018, Harbors met all the conditions of the Consent Decree (CD) requirements except for the following area. 1. While the Harbors Division posts information regarding stormwater management on its website, the number of webpage viewers decreased by 5.75% comparing 2018 to 2017 (from 1,427 to 1,345). With cyber-security at the forefront of protecting government information, proposed social media approaches to promoting stormwater compliance have not progressed. Harbors will continue to promote their webpage in correspondence and through educational materials and evaluate more effective means to achieve this goal or whether to amend the goal. 2. The Enforcement Response Plan (ERP) was submitted to EPA on August 5, 2015 but not approved. Revisions to the ERP have been made and will be submitted to the EPA in 2019. 3. The social media initiative was suspended by Harbors due to concerns regarding vulnerabilities involving false information and misreporting information.
Permittee is	✓		• Harbors has adequately retained required records.

Table 2. Status of NPDES Permit Compliance			
Description	**Yes**	**No**	**Explanation**
currently in compliance with record-keeping and reporting requirements.			• Harbors is currently using its *Cityworks* AMS to manage its stormwater program work processes and related record-keeping in conjunction with its GIS maps.

2.1 SWMP CORE PROGRESS EVALUATION

HDOT-Harbors continues to work with consultants to meet the requirements of the Consent Decree and the updated 2015 SWMP. Management continues their involvement to implement the program.

The HDOT-Harbors education and outreach program, as prepared for HDOT-Harbors employees and tenants, enhances the general awareness of impacts that different activities may have on stormwater runoff, and how best management practices (BMPs), together with post-construction BMPs, help minimize or mitigate those impacts.

In 2018, HDOT-Harbors invited Jason Mehlinger, from the Division of Aquatic Resources, to provide pollution prevention awareness outreach to tenants during tenant training sessions. Feedback and comments received from previous years were evaluated and added to the program where applicable. On November 14, 2018, HDOT-Harbors participated in a statewide Protect Our Water Conference. In addition, HDOT-Harbors tenants took the lead to organize harbor cleanups and initiated educational programs for various community groups and students.

HDOT-Harbors continued its inspections of high/medium/low risk tenants in 2018 and provided outreach and education during site visits. In addition to the Tenant Environmental Manager of the Year (TEMY) award, eleven other tenant environmental managers were recognized for their commendable stormwater program promotion and support efforts. The biennial dry weather outfall reconnaissance was completed for all outfalls at Honolulu Harbor and Kalaeloa Barbers Point Harbor. Annual wet weather outfall inspections were completed for all outfalls designated as 'hotspots' deserving more frequent observation than the scheduled biennial outfall reconnaissance.

HDOT-Harbors continues to implement the Construction Site Runoff Control Program. In particular, Harbors Engineering Branch (HAR-E) and associated consultants and contractors whose primary job duties are related to implementing this program, continued to attend construction and post-construction trainings in 2018. HDOT-Harbors Engineering Branch Environmental Section (HAR-EE) continues to review and evaluate all projects from design through construction phases, as well as coordinate and/or inspect regulated construction sites.

Harbors Oahu District continues its efforts on pollution prevention and good housekeeping. Two semi-annual rounds of screening inspections were conducted for all accessible storm drain inlets and trench drains in 2018. Additionally, follow-up cleaning and comprehensive structural inspections were performed at all drain inlets and trench drains identified as requiring further attention by the screening inspectors.

HDOT-Harbors continues to use its GIS-integrated *Cityworks* AMS for record-keeping, work flow, and data management. This AMS was configured in 2016 to operate on the State of Hawaii server, allowing additional Harbors personnel to gain access and training. *Cityworks* PLL was configured for HDOT-Harbors Engineering Branch Planning Section (HAR-EP) in 2018 and nine (9) HAR-EP personnel were trained to use *Cityworks* PLL for twelve (12) predefined work processes. With specific training in Illicit Discharge Detection and Elimination (IDDE), HDOT-Harbors Marine Cargo Specialists and Ground Maintenance crew actively use *Cityworks* on mobile devices to properly document work results and to report environmental issues found.

2.1.1 Challenges

As required by Paragraph 10 of the Consent Decree and in accordance with the Revised Audit Work Plan approved in November 2016, the second, third, and fourth of the six (6) program element audits (Program Element Audit Report) of the Compliance Audits commenced. PEAR #2 commenced in November 2017 and concluded in March 2018. PEAR #3 commenced soon thereafter in March 2018 and concluded in September 2018. PEAR #4 commenced in September 2018 and will conclude in March 2019. The Revised Audit Work Plan and the PEAR #2&3 draft and final reports for HDOT-Harbors (Attachments 20 and 21) have been included with this report.

<u>Summary of PEAR #2 Findings & Corrective Actions Taken</u>. PEAR #2 audited all three HDOT Divisions for their Construction Site Runoff Control. HDOT-Harbors audit resulted in neither Potential Violation nor deficiencies.

<u>Summary of PEAR #3 Findings & Corrective Actions Taken</u>. PEAR #3 audited all three HDOT Divisions for their Public Outreach / Public Involvement Program. HDOT-Harbors audit results consisted of one (1) Potential Violation and two (2) deficiencies. The Potential Violation was for failing to stencil or relabel drain inlets for thirty-seven (37) instances within 60 days after inspection. HDOT-Harbors Engineering Branch worked with the Oahu District and its Maintenance Baseyard to ensure that all stenciling and relabeling occurred within 60 days after inspection. The 2 deficiencies involved inconsistencies on conducting tenant inspections in relation to what was written in the Consent Decree and the SWMP. Several high and medium risk ranked tenants were not inspected at the minimum requirement of twice per year for high-risk and once per year for medium-risk tenants. To correct the deficiencies, HDOT-Harbors will commit to maintaining regularly scheduled inspections for all tenants. One inspection was inadvertently listed as a new tenant inspection and therefore reported in the 2017 ACR. HDOT-Harbors will consider providing additional clarity in plans and/or training regarding the definition of "tenant".

While the environmental engineering staff has grown to support compliance with the Consent Decree, the Oahu District also realized the need for staffing to enter data into *Cityworks*. Additional HAR-O staff members are being requested for legislative approval to replace contractors and to support the full implementation of this real-time GIS-integrated electronic reporting and record-keeping system.

2.1.2 Effectiveness of the Program

With regard to BMPs, HDOT-Harbors has determined that all of the selected BMPs are appropriate

to reduce the discharge of potential pollutants in the stormwater. The metrics detailed in Section 3 of this report were effective at tracking HDOT-Harbors stormwater compliance in 2018.

The training and inspection activities continuously helped tenants, consultants, and contractors identify areas that could potentially generate illicit discharges and better control the sources to minimize potential pollutant discharges. Additionally, the MS4 cleaning, street sweeping, and volunteer events continue to remove debris that would otherwise enter the HDOT-Harbors small Municipal Separate Storm Sewer System (MS4) and, subsequently, the receiving waters.

One volunteer cleanup event, sponsored by Hawaiian Cement (HDOT-Harbors tenant), was organized with the Leahi Soccer Club 2002 Maile on May 19, 2018. The group removed a large amount of debris that included cigarette butts, plastic wrappers, bags, bottles, foam, and straws from HDOT-Harbors' public areas (Attachment 2). These volunteer programs also function as an educational tool to promote good stewardship among community members, particularly young adults.

To ensure that HDOT-Harbors small MS4 functions properly during rain events, small MS4 inspection and cleaning events continued in 2018 and removed over 1.13 tons of debris that could have been discharged to the harbors. The amount of debris removed from the small MS4 is 71% less than the previous year. This is likely due to HDOT-Harbors implementing the SSSOMP to include good housekeeping practices. Street sweeping is an important BMP to prevent debris from entering the small MS4 or adjacent harbor waters. Sweeping took place twice a week (or as needed and requested by tenants) in 2018, and a total of 259.53 tons of debris were collected (Attachment 18).

Education and outreach efforts were directed towards tenants, employees, and the general public to promote stormwater awareness. These efforts were focused on preventing discharge of potential pollutants and debris from everyday activities and implementing source control related BMPs, which also contributed to the reduction of debris entering the storm drains. The small MS4 inspection log is included in Attachment 16.

Harbors personnel and tenants have been trained to be observant during their daily activities and report any suspected illicit discharges. Based on the number of suspected illicit discharges reported in 2018, it appears that Harbors personnel and tenants are becoming more adept at identifying and reporting the suspected illicit discharges.

Table 3 below summarizes data regarding progress to reduce the discharge of potential pollutants.

Table 3. Status of BMPs

MCM [1] Description	BMP Applied [2]	Parameter	Quantity	Does BMP Demonstrate a Direct Reduction in Pollutants?
P2 & Good Housekeeping	Volunteer event debris removal	Cigarette butts, trash, debris	16 Filled Trash Bags	Yes – pollutants would otherwise remain in the MS4
P2 & Good Housekeeping	MS4 Cleaning	Debris	1.13 Tons	Yes – pollutants would otherwise remain in MS4

Table 3. Status of BMPs				
MCM [1] Description	BMP Applied [2]	Parameter	Quantity	Does BMP Demonstrate a Direct Reduction in Pollutants?
P2 & Good Housekeeping	Street Sweeping	Debris	259.53 Tons	Yes – pollutants would otherwise discharge to the MS4
IDDE	Elimination of illicit discharges to MS4	Investigations related to MS4 discharges	3 each	Yes – illicit discharges eliminated
IDDE	Elimination of direct discharges to Harbor waters (non-MS4 discharges)	Investigations related to non-MS4 discharges	2 each	Yes – illicit discharges eliminated

Notes
[1] MCM = Minimum Control Measure
[2] Response Action on MCM/resultant outcome

2.1.3 Proposed Modifications for 2019

The SWMP was updated in 2015. Updates to the SWMP were initiated in 2018 to account for program accomplishments and changes to date in conjunction with the HDOH's new Small MS4 General Permit process. The final revisions to the SWMP are anticipated to be completed in conjunction with the promulgation of the revised Appendix K Permit anticipated in 2019.

2.1.4 Consent Decree Timelines

The Consent Decree timelines (as of 12/31/18) have been met.

2.1.5 Water Quality Monitoring Data

The permanent BMPs implemented at HDOT-Harbors are evaluated qualitatively because they have not been implemented long enough to determine their effectiveness. Harbors does not have a sufficient number of permanent BMPs to determine their impacts on water quality through monitoring. At this time, Harbors has not yet decided on how to effectively monitor the pollutant removal effectiveness of its permanent BMPs.

2.1.6 Stormwater Messages

In conjunction with the annual evaluation of signage, an inspection of a total of 89 Pollution Prevention signs was conducted in December 2018 to assess the physical condition and visual effectiveness of each sign. A total of eighteen (18) signs were found to require repair, replacement, or further attention. Work orders related to sign repair/replacement have been submitted to Oahu District Maintenance Baseyard and repair work is anticipated to be completed within the 1st Quarter of 2019.

3 STORMWATER MINIMUM CONTROL MEASURES

DOT-Harbors NPDES permits are regulated by HAR 11-55, Appendix K, which requires all permittees to develop, implement, and enforce a SWMP designed to reduce the discharge of pollutants from the permittee's small MS4 system to the MEP to protect water quality and satisfy the water quality requirements of the Clean Water Act. HAR 11-55 requires a SWMP to include the following six minimum control measures (MCM) with implementation dates and rationales for each measure.

1. Public Education and Outreach;
2. Public Involvement;
3. Illicit Discharge Detection and Elimination Program;
4. Construction Site Stormwater Runoff Control;
5. Post-Construction Stormwater Management in New Development and Re-Development; and
6. Pollution Prevention and Good Housekeeping.

HAR 11-55 Appendix K also requires the permittee to develop "measurable goals" to gauge permit compliance and program effectiveness for each minimum control measure identified above. The permittee shall select measurable goals using an integrated approach that fully addresses the requirements and intent of the minimum control measure.

This section details how HDOT-Harbors has met each of the six requirements, including measurable goals.

3.1 GENERAL PROGRAM REQUIREMENTS

The Consent Decree requires Hawaii Department of Transportation, Harbors Division to comply with all requirements of the Clean Water Act, as well as the terms and conditions of all applicable NPDES Permits, including the Hawaii Small MS4 General Permit.

Table 4 provides a summary describing HDOT-Harbors' General Program Requirements per the Consent Decree.

Table 4. General Program Requirements

MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.5. Stockpile BMPs	HAR-EE / HAR-EM	By 11/5/14, develop and implement a plan for stockpile stabilization.	11/5/14	• The stockpile stabilization plan submitted to HDOH and EPA in 2014 was approved in 2015. • Stockpiles were stabilized with vegetation, soil sediment control, and berms prior to 2014. • All stockpiles were inspected in 2018. The last inspection was conducted on 10/29/2018 (Attachment 15). • Approximately 200,000 cubic yards of Stockpile 2A was removed for use by a large housing development project in Kapolei, Oahu during 2018 until the material was determined not to be suitable for further use by the project contractor. The affected portion of Stockpile 2A was subsequently bermed around its perimeter to contain stormwater runoff and stabilize with Soil Sement.	✓	N/A	Continue to maintain BMPs implemented. Stockpile 2A removal discontinued in 2018.

Table 4. General Program Requirements							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.10. Office of Environmental Compliance	DOT Administration	By 5/4/15, ensure: 1) Reports to Director of Transportation 2) Reorganize and hire manager. 3) Oversee compliance for DOT. 4) Perform program audits.	11/5/14	• In 2016, the manager position of Office of Environmental Compliance manager was filled. This manager now oversees compliance for DOT. • The audit plan was developed and implemented in 2017. • Program audits for Construction Site Runoff Control and Public Outreach/Public Involvement were completed in 2018. The IDDE Program Element and Industrial Commercial Activities / Tenant Program audit was initiated in 2018 and will be completed by March 2019.	✓	N/A	Continue to conduct compliance audits and PEAR 4, PEAR 5, and PEAR 6 in 2019.
CD.11.a. SWMP Modification	HAR-EE	By 2/3/15, modify the joint SWMP to comply with the Consent Decree and MS4 permits and post it on the Harbors webpage.	11/5/14	• The SWMP was modified and posted to the Harbors webpage in February of 2015. • Modifications to the SWMP were initiated in 2018 and will be finalized after proposed changes to Appendix K of HAR 11-55 are approved and MS4 submittal requirements are known.	✓	N/A	Complete modifications to the SWMP in conjunction with revised Appendix K Permit.

Table 4. General Program Requirements							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.19.a. Enforcement Response Plan (ERP)	HAR-E and HAR-PM	By 12/5/14, submit an ERP to DOH and EPA.	11/5/14	• A revised draft of the Enforcement Response Plan (ERP) was submitted to the EPA on August 5, 2015 but was not approved. • Revisions to the ERP have been made and will be submitted to the EPA in 2019.		N/A	Finalize revisions to the ERP and submit to the EPA in 2019. Implement ERP upon approval.
CD.19.b. Memorandum of Agreement (MOA)	AG	By 12/5/14, enter into an MOA with DOH.	11/5/14	• The Memorandum of Agreement with HDOH was signed by both parties and transmitted to the EPA on May 26, 2015.	✓	N/A	Implement where necessary.
CD.19.b. Authority to Issue Civil Fines	AG	By 12/31/14, use best efforts to obtain authority to issue civil fines.	11/5/14	• HDOT is in the process of revising their Enforcement Response Plan (ERP) that includes enforcement actions and penalties for persistent violators (construction contractors, tenants and other third parties). The ERP will be implemented upon approval by the EPA/HDOH.	✓	N/A	Implement enforcement actions and penalties for construction contractors, tenants & third parties in accordance with the approved ERP.

3.2 PUBLIC EDUCATION AND OUTREACH

HAR 11-55, Appendix K, requires the NPDES permittee to provide public education and outreach. Specifically, it requires the permittee to develop and implement a public education program to distribute educational materials to users of the permittee's small MS4 sewer system, or equivalent outreach activities emphasizing the following:

A. Impacts of stormwater discharges on water bodies;
B. Hazards associated with illicit discharges; and
C. Measures that users of the permittee's small MS4 can take to reduce pollutants in stormwater runoff, including, but not limited to, minimizing fertilizer application, and practicing proper storage and disposal of chemicals and wastes.

Table 5 provides a summary describing HDOT-Harbors' public outreach and education program, including the MCM, milestones, BMP goals, and planned activities.

Table 5. Public Education and Outreach

MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD 14.a.i. SWMP A.3.1.1 Awareness Message Integration	HAR-EE	100% of printed and electronic communications with tenants, staff, and public should include the environmental message.	1/1/18	• The message "Mālama I Ke Awa Kai - Protect Our Harbor Waters "along with the HDOT's raindrop fish logo has been included in 100% of emails, tenant notices, educational materials, surveys, and training presentations. • The stormwater message was revised in November 2018 from "Mālama I Ke Kai" to "Mālama I Ke Awa Kai" for accuracy on the Hawaiian Translation of Protect our Harbor Waters.	✓	N/A	Continue to integrate message into all printed and electronic communication.

Table 5. Public Education and Outreach							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD 14.a.ii. SWMP A.3.1 Awareness Message Distribution	HAR-EE	Identify and implement no less than three forms of disseminating stormwater awareness information to tenants and the public.	1/1/18	The stormwater message and logo have been included in at least five forms of information: • Documents (SWMP, ACR). • Newspaper advertisement (Attachment 1). • BMP handouts and flyers (Attachment 3a – 3d). • Tenant Training Notice Attachment 4a). • Training presentations (Tenant, Construction and Post-Construction, and IDDE in Attachments 4b, 5a, and 7a).	✓	N/A	Continue to include message wherever beneficial.

Table 5. Public Education and Outreach							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.14.a.ii. SWMP A.3.1.3. Social Media	HAR-EE	Annually, increase the number of users who "follow" the Harbors social media page / account.	1/1/18	• At this time, the public and tenants are directed to visit information posted on Harbors Stormwater Management webpage, and report suspected illicit discharges to Harbor Traffic Control at (808) 587-2076 (24/7) or Reporting Hotlines at (808) 587-1962 (working hours only). • A new web site dedicated for Harbors SWMP has been created to mirror the existing one with a customized web address reflecting the stormwater awareness message – http://hidot.hawaii.gov/harbors/malamaikeawakai/ • There were 1,345 webpage views in 2018 which is 5.75% less than the 1,427 views in 2017.		This MCM/BMP will be evaluated in the new SWMP that will be updated in conjunction with the new Appendix K permit.	Re-evaluate goals in accordance with revised social media strategy.
CD 14.a.ii. SWMP A.3.1.4 Volunteer Event	HAR-EE	Annually, set up and solicit one volunteer event.	1/1/18	• In 2018, Hawaiian Cement sponsored Leahi Soccer Club 2002 Maile for a clean-up event with 25 volunteers (Attachment 2).	✓	N/A	Arrange and/or co-host a volunteer event.

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CD 14.a.ii. SWMP A.3.1.4 Volunteer Event Participation	HAR-EE	Increase participation from the previous year if less than 50 individuals attend.	1/1/18	• In 2018, individual participation in volunteer programs aimed to clean the harbors and promote clean water had a total of 25 volunteers from Leahi Soccer Club 2002 Maile (Attachment 2). • Volunteer participation increased from 22 volunteers in 2017 to 25 volunteers in 2018.	✓	This MCM/BMP will be evaluated in the new SWMP that will be updated in conjunction with the new Appendix K permit.	Continue to coordinate and support volunteer programs. Re-evaluate use of definite counts of individuals as measurable goals in revising the SWMP in 2018.
CD.14.a.ii.1) SWMP A.3.2.4. Tenant Training	HAR-EE	Ensure 80% of tenants participate in annual tenant stormwater training.	1/1/18	• Two stormwater awareness training events were conducted on 08/30/2018 and 09/20/2018 (Attachments 4a, 4b, & 4c). • 80.6 % of tenants attended this training (Attachment 4c). • The Tenant Environmental Manager of the Year (TEMY) was presented to Ross Barnes of University of Hawaii Marine Center. In addition, eleven runners-up were awarded in 2018 (Attachment 4d).	✓	N/A	Continue the efforts and increase the training participation rate through individual calls, visits, email reminder, etc.

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MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
SWMP A.3.2.4. Training Feedback	HAR-EE	Annually ensure that at least 50% of tenant training attendees provide a positive feedback.	1/1/18	• Based on the feedback forms received following the two training events, 90% of tenants gave positive feedback regarding the quality of the training's content and 80% gave positive feedback regarding the quality of the trainer's performance. • A summary and the hardcopies are in Attachment 4e.	✓	N/A	Continue to track training feedback and make improvements to training where feasible.
CD.14.a.iii. SWMP A.3.1.2. Newspaper Advertisement	HAR-EE	Annually place an ad in one local newspaper to educate the public and describe Harbor's efforts to improve stormwater quality.	1/1/18	A newspaper advertisement was placed in the Honolulu Star Advertiser on 10/12/2018 that described Harbors efforts on pollution prevention and how the public can help improve stormwater quality (Attachment 1).	✓	N/A	Develop and publish one advertisement.

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MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
SWMP A.3.1.5. Suspected Illicit Discharge Reports (SIDR)	HAR-EE	Annually increase the number of inquiries and reports received.	1/1/18	• In 2018, Harbors received 47 inquiries/reports, which decreased from the 51 received in 2017 (Attachment 11). • Harbors prepared SIDR pocket guides with contact numbers and SIDR information required as well as magnetic cards with contact numbers that will be distributed in 2019 upon approval. • Harbors reinforced reporting procedures in their annual training.		This MCM/BMP will be evaluated in the new SWMP that will be updated in conjunction with the new Appendix K permit.	Continue to increase the number of inquiries and reports received through advertisement of the hotline number & education. Distribute SIDR pocket guides for HAR-O & HAR-E use.
SWMP A.3.1.5. Response	HAR-EE	Respond to all inquiries and reports within 24 hours to minimize water quality impacts.	1/1/18	All inquiries were responded to within 24 hours (Attachment 12).	✓	N/A	Continue to respond to received inquiries.
CD.14.b.i. SWMP A.3.1.6. Update Webpage	HAR-EE, HAR-SI	Ensure that webpage remains useful and relevant.	1/1/18	The webpage has been updated throughout 2018 to include updated training materials (http://hidot.hawaii.gov/harbors/library/storm-water-management/; http://hidot.hawaii.gov/harbors/malamaikeawakai/).	✓	N/A	Update webpage as needed.

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MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.14.b.ii. SWMP A.3.1.6. Webpage Links	HAR-EE, HAR-SI	Ensure links to Airports and Highways are included on the web page.	1/1/18	The links to the other HDOT Division web pages are included on the Harbors webpage.	✓	N/A	Maintain links.
CD.14.b.iii. SWMP A.3.1.6. Webpage Message	HAR-EE, HAR-SI	100% of webpages where stormwater awareness message is prominently displayed.	1/1/18	The stormwater message is prominently displayed on the HDOT-Harbors webpage as well as the Stormwater Educational Materials.	✓	N/A	Continue to display message.
CD.14.b.iii. SWMP A.3.1.6. Webpage Visitors	HAR-EE, HAR-SI	Ensure the number of visitors to Harbors stormwater management webpage has increased from the previous year.	1/1/18	HDOT-Harbors received a total of 961 unique page views which is 1.6% less than the number of unique page views in 2017 (977).		This MCM/BMP will be evaluated in the new SWMP in conjunction with the new Appendix K permit promulgation .	Revise webpage to attract new visitors. Continue to promote webpage through trainings and material handouts. Continue to track webpage views.
CD.14.c.i. SWMP A.3.1.7. Stormwater Signs Installation	HAR-EE, HAR-O	By 11/5/14, identify 50 locations that are suitable for signs.	11/5/14	Completed in 2014 and tracked in AMS. To date, 90 signs have been installed.	✓	N/A	Replace/Repair missing or damaged signs. Continue to evaluate the need for additional signs.

Table 5. Public Education and Outreach							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.14.c.i. SWMP A.3.1.7. Stormwater Sign Evaluation	HAR-EE	Annually, evaluate whether additional stormwater signs are necessary	1/1/18	• Signage evaluation has indicated that no additional signage at Honolulu Harbor and Kalaeloa Barbers Point Harbor is needed at this time. The ongoing and future redevelopment of certain areas at Honolulu Harbor (i.e., the Kapalama Container Terminal & the Keehi Industrial Lots) and Kalaeloa Barbers Point Harbor will require re-evaluation of pollution prevention signage requirements in the future. • Signage evaluation indicated that 18 signs needed repair, replacement, or further attention.	✓	N/A	Continue to Evaluate the need for more signs.
CD.14.c.ii. SWMP A.3.1.7. Storm Drain Inlet Stencils	HAR-EE/ HAR-O	By 2/3/15, ensure 100% of storm drain inlets are stenciled.	2/3/15	• 100% of accessible storm drains (634 drain inlets & 134 trench drain segments) were stenciled/re-stenciled by December 31, 2018. • Stainless steel markers (medallions) were purchased in 2018 and installed in high traffic and other areas where painted stencils were not lasting more than a year.	✓	N/A	Continue to re-stencil/re-label as necessary.

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MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.14.c.ii. SWMP A.3.1.7. Storm Drain Inlet Stencils	HAR-EE / HAR-O	Annually inspect 100% of stencils for legibility prior to the wet season and re-stencil within 60 days of the inspection as needed.	1/1/18	• In 2018, HDOT conducted an inspection of stencils simultaneously with the storm drain cleaning efforts. • 100% of stenciled drains were inspected and 25.9% required re-stenciling; all re-stenciling of these drains was completed in 2018 within 60 days.	✓	N/A	Inspect stencils and re-stencil/ re-label as necessary. Continue to install more durable stencils and markers as needed.
CD.14.d.i. SWMP A.3.2.3. Tenant BMPs	HAR-EE	Annually, ensure that 100% of information on BMPs is available in fact sheets.	1/1/18	A list of updated tenants' BMPs is available on the HDOT-Harbors webpage: • http://hidot.hawaii.gov/harbors/library/storm-water-management/ • http://hidot.hawaii.gov/harbors/malamaikeawakai/	✓	N/A	Distribute BMP flyers as necessary.

Table 5. Public Education and Outreach							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.14.d.ii. SWMP A.3.2.1. Tenant Lease Agreements	HAR-PM	Ensure 100% of new / renewed tenant leases include language requiring BMPs.	1/1/18	• Lease agreement language was updated in 2014. • 100% of tenant renewals and new tenants have been issued leases with the updated language.	✓	N/A	Continue to use the new format.
CD.14.d.iii. SWMP A.3.3.1 Vessel BMPs	HAR-O	Develop BMPs for Vessel Operators and make them available on the webpage or as print media.	11/5/14	• A BMP flier is available on the HDOT-Harbors webpage titled "BMPs for Small Vessel Maintenance Activities." • Harbors will continue to work on translating this BMP into other foreign languages as necessary, to provide outreach to non-English speaking users.	✓	N/A	Distribute updated flyers. Continue to evaluate and translate this BMP into foreign languages as necessary.
CD.14.e.i. SWMP A.3.2.2. Tenant Inventory	HAR-EE / HAR-PM	Ensure that 100% of tenants are accurately listed in the electronic inventory based upon most recent inspection.	1/1/18	• Harbors continues to maintain their electronic tenant inventory. • There is a total of 76 tenants occupying 86 sites (Attachment 9).	✓	N/A	Continue to update and maintain tenant inventory data to GIS-integrated AMS.

Table 5. Public Education and Outreach							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.14.f.i. & ii. SWMP A.3.2.4. Tenant Survey	HAR-EE	Annually, provide a questionnaire to tenants and have 60% of tenants respond. Use data from quiz to update training materials.	1/1/18	• Approximately 77% of tenants completed a questionnaire during or after the tenant training events. • A summary of the results and the hard copy questionnaire are included in Attachment 4f. • The most commonly missed question (#9) was relating to spill response procedures. (Attachment 4f).	✓	N/A	Update the training quiz and distribute to tenants.
CD.14.g. SWMP A.3.2.3.-4. Tenant Educational Materials	HAR-EE	Twice per year, distribute educational materials to tenants.	1/1/18	Educational materials that were distributed in 2018 include fact sheets attached to the annual tenant training notice on 8/16/2018 (Attachment 3a) and handouts available at the annual Protect Our Water Conference on 11/15/18 (Attachment 3c & 3d).	✓	N/A	Distribute materials twice per year.
CD.14.h.i. New Tenant Information Package	HAR-EE	Develop and update as necessary the New Tenant Information Package to include stormwater requirements.	11/5/14	The new tenant information package is available on the HDOT-Harbors webpage and is also provided to the new tenants directly.	✓	N/A	Distribute information to new tenants.

Table 5. Public Education and Outreach							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.14.h.ii. TIM Section 2 Inspect New Tenants	HAR-EE	Conduct an initial inspection of 100% of new tenants within three months of the tenant occupying a Harbor's space.	1/1/18	One new/initial inspection was conducted in 2018, which represents 100% of new tenants formally identified by HAR-PM (Labeled as "new" under the "Inspection Type" column in Attachment 9).	✓	N/A	Inspect new tenants as applicable.

3.3 PUBLIC INVOLVEMENT AND PARTICIPATION

HAR 11-55, Appendix K requires the NPDES permittee to create a public involvement program that includes users of the permittee's small MS4 to develop, implement, and review the SWMP. Table 6 shows how HDOT-Harbors satisfied this requirement for its tenants and the general public.

Table 6. Public Involvement and Participation

MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/ Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.11.a.ii. SWMP A.4. Solicit Comments through Webpage	HAR-EE	By 2/3/15, solicit comments on the revised SWMP through the Harbors webpage.	11/5/14	• The SWMP was posted on the Harbors webpage in February 2015. • There were 1,669 webpage views in 2015 and no public comments received on the SWMP.	✓	N/A	Re-evaluate public involvement strategy.
CD.11.a.ii. SWMP A.4. Solicit Comments through Newspaper	HAR-EE	By 2/3/15, advertise in one local newspaper for SWMP comments	11/5/14	• On February 7, 2015 a notice was placed in the Honolulu Star Advertiser that directed the public to comment on the updated SWMP. • No public comments were received in 2015.	✓	N/A	Re-evaluate public involvement strategy.

Table 6. Public Involvement and Participation							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/ Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.11.a.ii. SWMP A.4. SWMP Commenter	General Public, Tenants	Within 45 days of posting SWMP, receive at least one comment on the updated SWMP from a tenant or the public. Receive at least one comment that results in a revision to the SWMP.	2/2/15	No public comments were received on the SWMP.	✓	N/A	Re-evaluate public involvement strategy.

3.4 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PROGRAM

HAR 11-55, Appendix K requires the NPDES permittee to create an IDDE program. The program should implement and enforce methods to detect and eliminate illicit discharges that, at a minimum, include the following:

A. Establish rules, ordinances, or other regulatory mechanism, including enforcement procedures and actions, that prohibit non-stormwater discharges, except those listed in section 1 (of Appendix K) that do not cause or contribute to any violations of water quality standards, into the permittee's small MS4 system;
B. Procedures to detect and eliminate illicit discharges (as defined in 40 CFR Section 122.26(b) (2)); and
C. Compile of a list of non-stormwater discharges or flows that are considered to be significant contributors of pollutants to the system, and measures to prevent these discharges into the permittee's small MS4, or reduce the amount of pollutants in these discharges.

Table 7 summarizes data regarding HDOT-Harbors' IDDE program, MCMs, BMPs, goals, milestones, and planned activities.

Table 7. Illicit Discharge Detection and Elimination (IDDE) Program

MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.16.a. Illicit Discharge Definition	HAR-EE	By 11/5/14, promulgate a definition of illicit discharge with examples.	11/5/14	• Definition included in SWMP and provided in all training presentations (tenant/ employee stormwater general awareness, construction and post-construction, tenant inspector, ORI, and IDDE). • "A non-stormwater discharge that poses a risk to the environment."	✓	N/A	Continue to communicate definition.

Table 7. Illicit Discharge Detection and Elimination (IDDE) Program							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.16.b.i. & iii. SWMP B.4. Tenant Site Assessments	HAR-EE, HAR-O, HAR-PM	Annually, conduct site assessments in high risk areas and implement enforcement response plan where necessary.	1/1/18	• HDOT-Harbors Oahu District personnel and HAR-PM have been informed that they should remain vigilant during daily activities in harbor areas for suspected illicit discharges. • HAR-EE and consultants' personnel assess sites for illicit discharges during tenant, construction, and outfall inspections. Refer to those items for additional data. • There was one (1) enforcement action as a result of site assessments in 2018.	✓	N/A	Update IDDE and tenant training and continue to conduct site assessments.

Table 7. Illicit Discharge Detection and Elimination (IDDE) Program							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.16.b.ii. SWMP B.4. Outreach Activities	HAR-EE	Conduct outreach during site assessments and identify areas that may need signs.	1/1/18	• HDOT-Harbors continued to provide verbal outreach during site assessments and other activities. • In 2018, HDOT-Harbors Oahu District maintained a total of 15 signs in need of repair or replacement, as a result of the signs survey conducted in 2017. Signs at two locations within an active construction site were not repaired. • In 2018, Harbors environmental personnel conducted an inspection of 89 metal signs to assess their quality and need for replacement. • A total of 18 signs were found to need repair, replacement or further action. • Work Orders were created for sign repair/replacement; new signs will be ordered and replaced in the first quarter of 2019.	✓	N/A	Continue to conduct outreach activities.

Table 7. Illicit Discharge Detection and Elimination (IDDE) Program							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.16.c.i. SWMP B.3. ORIIP Section 2 Outfall Prioritization	HAR-EE	Annually, reprioritize outfalls.	1/1/18	All outfalls were inspected in 2018. Inspection reports were entered into *Cityworks.*	✓	N/A	Re-prioritize outfalls based on ORI.
CD.16.c.i. SWMP B.3. ORIIP Section 2 Outfall Inspections	HAR-EE	Inspect outfalls according to their risk ranking.	1/1/18	• All outfalls were inspected using the ORI form for Dry Weather inspections. Outfalls adjacent to a NPDES NOI-C permit regulated construction site (a high risk area) were inspected for Wet Weather inspections using the ORI form (Attachment 10a). • ORI reports are found in Attachments 10b and 10c.	✓	N/A	Conduct dry weather screening of all outfalls. Conduct wet weather screening.
CD.16.c.ii. & CD.16.d. SWMP B.3 ORIIP Section 3.3 Dry Weather Illicit Discharges	HAR-EE	Ensure 100% of illicit discharges identified during dry weather flows are properly addressed.	1/1/18	Outfall inspections revealed no illicit discharges.	✓	N/A	Continue to address illicit discharges if any.

Table 7. Illicit Discharge Detection and Elimination (IDDE) Program							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.16.c.i.2. & CD.16.c.ii. SWMP B.3 ORIIP Section 3.4 Wet Weather BMP Improvements	HAR-EE	Ensure that 100% of BMPs identified during wet weather ORI as needing improvement are properly addressed.	1/1/18	• Dry weather inspections were conducted for all outfalls located at Honolulu Harbor, Keehi Lagoon area, and Kalaeloa Barbers Point Harbor on May 29, 2018 – September 10, 2018. • Wet weather ORIs were conducted for outfalls located at high risk areas at Piers 41 & 42 on April 2, 2018.	✓	N/A	Continue to address BMPs that need improvement.
CD.16.d. SWMP B Illicit Discharge Tracking and Elimination	HAR-EE	Identify and take necessary actions to stop the source of all illicit discharges.	1/1/18	• There was one illicit discharge identified from tenant facilities and it was addressed promptly (Attachment 11a). • HAR-EE also assisted with resolving 5 other reports of miscellaneous discharges (Attachment 11b).	✓	N/A	Investigate illicit discharges where observed.
CD.16.e.i. TIM Section 4.3 Tenant Risk Ranking	HAR-EE HAR-PM	Annually ensure that all tenants have been risk ranked according to the TIM.	1/1/18	• An inventory of tenant inspections and their risk rankings are included in Attachment 9. • There are 47 low ranked, 20 medium ranked and 4 high ranked for a total of 71 risk ranked tenants for 2018.	✓	N/A	Update risk ranking as necessary.

Table 7. Illicit Discharge Detection and Elimination (IDDE) Program							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.16.e.ii Routine Tenant Inspections	HAR-EE HAR-PM	Conduct tenant inspections / site reconnaissance in accordance with risk ranking and TIM.	1/1/18	• In 2018, a total of 82 routine/recurring tenant inspections and site reconnaissance were conducted. • Outreach materials were provided during these inspections when necessary and tenants were instructed to visit the Harbors webpage.	✓	N/A	Continue to conduct inspections as required by risk ranking.
CD.16.e.iii. Site Reconnaissance Follow-up Inspections	HAR-EE HAR-PM	Ensure that 100% of follow-up inspections to the site reconnaissance are completed following a substantive change to a facility's operations, size, or activities.	1/1/18	• There were no substantive changes to facility operations, size or activities in 2018. • No follow-up inspections were needed after conducting the annual reconnaissance.	✓	N/A	Continue to conduct follow-up inspections as necessary.
SWMP B.2. TIM. Illicit Discharge Follow-up Inspections	HAR-EE	Ensure that 100% of follow-up inspections for illicit discharges are completed within 7 days of discovery.	1/1/18	100% of follow-up inspections for illicit discharges were completed within seven days of discovery (Attachment 11).	✓	N/A	Continue to conduct follow-up inspections as necessary.

Table 7. Illicit Discharge Detection and Elimination (IDDE) Program							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
SWMP B.2. TIM. Compliant Follow-up Inspections	HAR-EE	Ensure that 100% of follow-up inspections are completed the next working day after receipt of a compliant.	1/1/18	There were no complaints received in 2018.	✓	N/A	Continue to conduct follow-up inspections as necessary.
CD.15.a.i. SWMP B.6.1. Employee Awareness Training	HAR-EE HAR-O	Annually, ensure that 100% of employees receive stormwater awareness and pollution prevention survey. Ensure that 80% of employees respond to the survey.	1/1/18	• Harbors created a survey via an online survey site called esurv.org. 89% of DOT-Harbors employees completed the educational survey and feedback was positive for the online platform. A summary of the survey results and a copy of the survey are included in Attachment 6. • Although the majority received very high scores, the most commonly missed question (#7) related to lack of treatment before entering the ocean from a storm drain inlet. Harbors plans to make this a focal point for training efforts in 2019.	✓	N/A	Evaluate the feedback and results from previous year and update educational materials to employees and conduct another survey.

Table 7. Illicit Discharge Detection and Elimination (IDDE) Program							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.15.a.ii. SMP B.6.1. Employee Education	HAR-EE HAR-O	Annually ensure that 100% of employees receive information about stormwater pollution.	1/1/18	• Handouts and informational sheets were distributed to Harbors offices to provide enhanced general awareness on stormwater management and improving general housekeeping which could be applied at work or at home (Attachment 3).	✓	N/A	Continue to distribute educational material.
CD.15.b.i. Illicit Discharge Detection and Elimination (IDDE) Program Training	HAR-EE HAR-O	Annually, train 100% of Marine Cargo Specialists, Police, and Grounds Supervisors on IDDE procedures.	1/1/18	• Marine cargo specialists, Harbor police, and grounds supervisors were trained on IDDE in December 2018 (Attachment 7b). Additionally, personnel from the Oahu District Maintenance Baseyard were also trained on IDDE procedures and in reporting suspected illicit discharges in harbor areas when observed during their normal rounds. • The presentation slides and a summary of completed training quizzes are included in Attachments 7a and 7b, respectively. • This exceeds 100% of available Harbors personnel trained in 2018.	✓	N/A	Continue to train on IDDE.

Table 7. Illicit Discharge Detection and Elimination (IDDE) Program							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.15.b.ii. & iii. SWMP B.6.2. &3. Inspector Training	HAR-EE	Ensure that 100% of inspectors have received tenant and/or Outfall Reconnaissance Inventory (ORI) training.	1/1/18	• There were two (2) new inspectors that required training in 2018.	✓	N/A	Provide training to any new inspectors.

3.5 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

HAR 11-55, Appendix K requires the NPDES permittee to develop, implement, and enforce a program to reduce pollutants in stormwater runoff entering the permittee's small MS4 system from construction activities disturbing one acre or more, including construction activities less than one acre that are part of a larger common plan of development or sale that would disturb one acre or more, that, at a minimum, includes the following:

A. Establish rules, ordinances, or other regulatory mechanism, including enforcement procedures and actions, that require erosion and sediment controls;
B. Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;
C. Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the adverse impacts to water quality;
D. Procedures for site plan reviews which incorporate consideration of potential water quality impacts;
E. Procedures for receipt and consideration of information submitted by the public; and
F. Procedures for site inspection and enforcement of control measures.

Table 8 provides information about the construction site stormwater runoff controls, including MCMs, BMPs, goals, milestones, and planned activities.

Table 8. Construction Site Stormwater Runoff Control

MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.17.a. City and County of Honolulu BMPs	HAR-EE	Ensure that City and County of Honolulu (CCH) BMPs are implemented for construction activities.	11/5/14	• The CCH BMPs are referenced in the construction manual. • Further, during plan reviews and inspections, construction sites are evaluated to ensure they are following the CCH construction BMP requirements when applicable.	✓	N/A	Continue implementing CCH BMPs.

Table 8. Construction Site Stormwater Runoff Control							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.17.b.i. SWMP C – CSRCP Construction Inspections	HAR-EE / Construction Managers	Ensure 100% of construction inspections and enforcement actions are entered in a database.	1/1/18	• The construction inspection inventory is included in Attachment 12. • There were 4 active sites and 45 inspections during 2018. • There were no enforcement actions other than findings and recommendations documented in the inspection checklist, the majority of which were addressed during or by the next round of inspection.	✓	N/A	Continue tracking construction inspections and enforcement.
CD.17.b.ii. Temporary Erosion and Sediment Control Inspector	HAR-EE / Personnel Office	By 11/5/14, assign one temp and full-time position whose duties will include sediment and erosion control.	11/5/14	A HDOT-Harbors engineer is currently assigned to this position.	✓	N/A	Inspector will continue to perform duties relating to temporary erosion and sediment control measures.
CD.17.b.iii. Permanent Erosion and Sediment Control Inspector	HAR-EE / Personnel Office	By 12/31/15, establish a permanent erosion and sediment control position and utilize consultants.	11/5/14	A permanent position for Erosion and Sediment Control Inspector was filled in 2017.	✓	N/A	None.

Table 8. Construction Site Stormwater Runoff Control							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.17.b.iv. SWMP C – CSRCP Construction Plan Reviews	HAR-EE / Engineering Project Managers	Review 100% of construction projects for environmental requirements per the Construction Site Runoff Control Program.	1/1/18	A total of 5 tenant projects and 41 HDOT-Harbors projects were reviewed in 2018 (Attachments 13 and 14), which represents 100% of projects requiring environmental review.	✓	N/A	Review construction plans.
SWMP C – CSRCP Review Checklist	HAR-EE	Ensure that 100% of projects are reviewed using the Construction Site Design Review Checklist.	1/1/18	100% of the NOI-C regulated projects reviewed are required to use the Construction Site Design Review Checklist.	✓	N/A	Continue to review form where applicable.

Table 8. Construction Site Stormwater Runoff Control							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
SWMP C – CSRCP Less Than One Acre Forms	HAR-EE	Ensure that 100% of non-exempt projects that are less than one acre have submitted the form.	1/1/18	• Three (3) HDOT-Harbors projects were considered non-exempt projects and two (2) were regulated by NPDES NOI-C Permit. One (1) tenant project was considered non-exempt and no projects regulated by NPDES NOI-C Permit (Attachments 13 and 14) reviewed were exempt from construction and post-construction programs. • 7.3% of HDOT-Harbors projects and 20% of tenant projects were considered non-exempt projects less than one acre and therefore were required to submit the form.	✓	N/A	Continue to review form where applicable.
SWMP C – CSRCP Review Documents	HAR-EE	Ensure that 100% of SWPPPs, NOIs, and discharge permits have been reviewed.	1/1/18	100% of project supporting documents are reviewed as a part of the standard review process.	✓	N/A	Continue to review where applicable.
SWMP C – CSRCP Section 5.1	HAR-EE	Ensure 100% of contractors receive the Construction BMP Field Manual.	1/1/18	100% of contractors were provided with access to the BMP field manual on Harbors' webpage.	✓	N/A	Maintain BMPs on webpage.

Table 8. Construction Site Stormwater Runoff Control							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.15.c. & d. SWMP C – CSRCP Section 5.1 Construction and Post-Construction Training	HAR-EE	Ensure that 100% of staff whose duties are related to construction or post-construction are trained by an instructor who is approved by EPA and HDOH.	1/1/18	• A construction and post-construction training were provided to engineers, consultants, contractors, and inspectors on 12/4/2018 and 12/6/2018 (Attachment 5a). The online video has been continuous used as an alternate training source. • As a result, a total of 26 people was trained, which represents 100% of the required individuals (Attachment 5b). • Completed surveys are included in Attachment 5b.	✓	N/A	Conduct annual training.
SWMP C – CSRCP Section 5 Construction Training Materials	HAR-EE	Update training materials to reflect comments received from the training survey.	1/1/18	Comments received indicated that participants would like to see more photos of examples of BMPs & examples of failure specifically for paved and concrete areas, maintenance project requirements, and more information that is specifically applicable to harbors (Attachment 5b).	✓	N/A	Conduct annual training.

Table 8. Construction Site Stormwater Runoff Control							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
SWMP C – CSRCP Section 5.2	HAR-EE	Aim for a goal of 85% positive feedback about construction training.	1/1/18	Survey results from 2018 indicated that training participants found the training material very relevant and useful with an average of 98% positive feedback (Attachment 5c).	✓	N/A	Improve feedback tracking system and continue to solicit feedback on training.

3.6 POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

HAR 11-55, Appendix K requires the NPDES permittee to develop, implement, and enforce a program to reduce pollutants in stormwater runoff entering the permittee's Small MS4 system from new development and redevelopment projects that disturb greater than or equal to one acre, including construction sites less than one acre that are part of a large common plan of development, or sale that would disturb one acre or more, that, at a minimum, includes the following:

A. Establish rules, ordinances, or other regulatory mechanisms, including enforcement procedures and actions, that address post-construction runoff from new development and redevelopment projects;
B. Structural and/or non-structural BMPs to minimize water quality impacts and attempt to maintain predevelopment runoff conditions; and
C. Procedures for long-term O&M of BMPs.

Table 9 provides information about DOT-Harbors' post-construction stormwater management activities in new development and redevelopment projects, including MCMs, BMPs, goals, milestones, and planned activities.

Table 9. Post-Construction Stormwater Management in New Development and Redevelopment

MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2017?	New or Revised Goal	Planned Activities for Permit Year 16 (2018)
CD.18.a.i.,- iii. SWMP 2.5.1. Retrofit Project Inventory	HAR-EE	By 5/4/15, create an inventory of construction projects from 5/19/03 and rank them according to retrofit potential.	11/5/14	An inventory of projects was completed and evaluated for retrofit potential in 2015.	✓	N/A	None

Table 9. Post-Construction Stormwater Management in New Development and Redevelopment							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2017?	New or Revised Goal	Planned Activities for Permit Year 16 (2018)
CD.18.a.iii. Retrofit Feasibility Scope	HAR-EE	By 8/2/15, draft a scope of the retrofit feasibility study and submit it to EPA and DOH for approval.	11/5/14	• The Retrofit Feasibility Study Scope was submitted to EPA in early August 2015. • The EPA responded via letter dated December 3, 2015, that they required additional details. • The EPA approved the revised study outline on March 14, 2015. • The EPA approved the revised study approach on April, 19, 2016. • The EPA approved the revised study scope in August 2016. • On April 11, 2017 the Feasibility study report was submitted to EPA.	✓	N/A	None

Table 9. Post-Construction Stormwater Management in New Development and Redevelopment							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2017?	New or Revised Goal	Planned Activities for Permit Year 16 (2018)
CD.18.a.iii. SWMP E Final Retrofit Study	HAR-EE	240 days after EPA and DOH's approval, complete the final retrofit study.	4/31/17	• The Post-Construction BMP Retrofit Feasibility Study was performed by a HDOT-Harbors environmental engineering consultant (Weston Solutions, Inc.) and submitted to the EPA in 2017. • Three proposed PBMP retrofit project sites were included in the submittal. • The EPA approved the feasibility study on June 19, 2017.	✓	N/A	None

Table 9. Post-Construction Stormwater Management in New Development and Redevelopment							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2017?	New or Revised Goal	Planned Activities for Permit Year 16 (2018)
CD.18.a.iv. SWMP 2.5.2. Retrofit Construction	HAR-E	Four years after approval of the Retrofit Feasibility Study, the construction will commence for the three highest ranked projects.	6/19/17	• No construction work performed this year. The Retrofit BMP projects currently in various phases of design are anticipated to be completed in 2019. • Potential pollutants of concern (POPCs) were identified and effective permanent BMPs for the three (3) approved project sites at Piers 31, 51 and 52 have been recommended. • Construction of all three retrofit BMP projects are expected to commence in 2019, which is well ahead of the 2021 milestone deadline.	N/A	N/A	Design work will be completed and construction is anticipated to begin for the three approved PBMP retrofit projects in 2019.
CD.18.b.i. Permanent BMP Plan Review	HAR-EE	Review 100% of applicable construction projects using the Post-Construction BMP Plan Checklist.	1/1/18	The Post-Construction BMP Plan Checklist was used to evaluate 100% of the regulated projects (Attachments 13 and 14).	✓	N/A	Continue to use the Post-Construction BMP Plan Checklist for plan review on applicable projects.

Table 9. Post-Construction Stormwater Management in New Development and Redevelopment							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2017?	New or Revised Goal	Planned Activities for Permit Year 16 (2018)
CD.18.c. BMP Standards	HAR-EE	Adopt technical standards that govern permanent BMPs.	11/5/14	Harbors adopted the CCH BMP in 2015 SWMP. The 2017 version of the CCH BMP guide will be adopted in future SWMP revisions.	✓	Completed	None
CD.18.f.i. Harbors Project O&M Documents	HAR-EC / HAR-EE	Ensure 100% of Harbors projects with permanent BMPs have an O&M plan, monitoring plan where applicable, and ongoing maintenance.	1/1/18	100% of Harbors projects with permanent post-construction BMPs have an O&M plan, monitoring plan where applicable, and ongoing maintenance.	✓	N/A	Continue to review plans for permanent BMPs.
CD.18.f.i. Tenant Project PBMP Maintenance	HAR-PM / HAR-EE	Ensure 100% of tenant projects with permanent BMPs have updated leases requiring an O&M plan.	1/1/18	• All projects with permanent BMPs have an O&M Plan and Monitoring Plan. • 100% of tenant projects with PBMPs have O&M plans or have adopted one from the manufacturer(s).	✓	N/A	Update leases (when applicable) for tenants with permanent BMPs in include requirements for an O&M plan.

Table 9. Post-Construction Stormwater Management in New Development and Redevelopment							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2017?	New or Revised Goal	Planned Activities for Permit Year 16 (2018)
CD.18.f.ii. PBMP Inspections by Tenants	HAR-EE / HAR-PM/ Tenants	Ensure 100% of required annual PBMP inspections are conducted by tenants and reported to Harbors.	1/1/18	• 100% of required PBMP inspections are conducted by tenants and reported to Harbors. • UHMC performs maintenance on the PBMPs at Pier 35 as part of their lease agreement.	✓	N/A	Continue to ensure that tenants required to maintain PBMPs submit annual reports to HDOT-Harbors.
CD.18.d.& g. PBMP Inspections by Harbors	HAR-EE / Construction Managers	• Conduct permanent BMP inspections prior to, during, and upon completion of permanent BMP installation. • Once installed, conduct annual inspections and administer enforcement actions where necessary.	1/1/18	• Four (4) permanent BMP inspections were conducted in 2018. • No enforcement actions were necessary (Attachment 17).	✓	N/A	Continue inspections where necessary.

Table 9. Post-Construction Stormwater Management in New Development and Redevelopment							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2017?	New or Revised Goal	Planned Activities for Permit Year 16 (2018)
CD 18.g.ii. Enforcement Records	HAR-EE	Ensure that 100% of enforcement actions are recorded in the project database.	1/1/18	There were no enforcement actions relating to permanent BMPs in 2018.	✓	N/A	Record enforcement as necessary.
CD.18.e. Permanent BMP Database	HAR-EE	Ensure 100% of post-construction BMP inspections are included in a database compatible with GIS.	1/1/18	100% of PBMP inspections were recorded in *Cityworks* (Attachment 17).	✓	N/A	Update the inventory as necessary.

3.7 POLLUTION PREVENTION AND GOOD HOUSEKEEPING

HAR 11-55, Appendix K requires the NPDES permittee to develop a pollution prevention and good housekeeping (P2/GH) program that will implement and enforce an O&M program to prevent and reduce stormwater pollution from activities, including, but not limited to, park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance that, at a minimum, includes the following:

A. Good housekeeping and other control measures; and
B. Employee and contractor training on good housekeeping practices to ensure that good housekeeping measures and BMP practices are properly implemented.

Table 10 provides information about the P2/GH program, including MCMs, BMPs, goals, milestones, and planned activities.

Table 10. Pollution Prevention and Good Housekeeping

MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.20. Storm Sewer System Operation and Maintenance	HAR-O & HAR-E	By 12/5/14, submit a Storm Sewer System Operation and Maintenance Program (SSS O&M) to DOH and EPA.	11/5/14	• Completed. • HDOT-Harbors submitted a revised Storm Sewer System O&M plan that was accepted by HDOH in 2017.	✓	N/A	None

Table 10. Pollution Prevention and Good Housekeeping							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.20.a. Storm Sewer System Mapping	HAR-EE / HAR-EP	Within 180 days of Army Corps of Engineers (ACOE) development of a GIS layer, create a map that identifies all storm drainage features.	1/1/15	• Complete. • In 2015, the USACE continued to add and refine SSS map features. Additionally, HDOT-Harbors environmental engineering consultant (Weston Solutions, Inc.) conducted field work (kayak surveys, CCTV surveys and diving surveys) in November and December 2015 to fill in and correct 'data gaps' that remained in the original USACE version.	✓	Update storm drain maps as necessary.	Update SSS map as needed with new project information and other findings from field personnel and other sources.
CD.20.b. Asset Management System	HAR-EE / HAR-EP	Within 180 days of ACOE map completion, implement an asset management system (AMS).	11/5/14	• In 2015, HDOT-Harbors contracted with an AMS consultant team to install, configure, demonstrate, test and deploy a cloud-based, GIS-centric *Cityworks* AMS for the Honolulu and Kalaeloa Barbers Point Harbors stormwater system assets. • There were about 40 active *Cityworks* users from HDOT-Harbors personnel with essential roles in stormwater O&M and management in 2016.	✓	N/A	Update Cityworks AMS software when prompted by vendor (Azteca Cityworks).

Table 10. Pollution Prevention and Good Housekeeping							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
CD.20.c. Storm Drain Inspections	HAR-O	Complete storm drain inspections as described in the SSS O&M plan and record 100% in database.	1/1/18	• All accessible storm drain inlets and trench drains were inspected and cleaned in 2018 (Attachment 16). • Inspection findings and cleaning results were recorded in the HDOT-Harbors AMS.	✓	N/A	Continue screening and recording inspections of all storm drains.
CD.20.d. Storm Drain Cleaning	HAR-O	• By 8/2/15, clean all inlets, pipes, and outfalls. • Then ensure structures are cleaned at least every five years and more frequently for "hot spots." • Ensure 100% of hot spots include BMPs.	1/1/18	• Accessible drainage features were cleaned in 2018 when needed. • Approximately 1.13 tons of debris were removed from the cleaning activities.	✓	N/A	Schedule and clean storm drains found to contain debris during screening and comprehensive inspections. Schedule cleaning in accordance with the SSS O&M Manual provisions.
CD.20.d.ii. Rail Track Cleaning	Kalaeloa Barbers Point Harbor Tenants / HAR-OCB	Ensure that tenants develop and implement a cleaning schedule for the rail tracks.	1/1/18	The Kalaeloa Barbers Point Harbor District personnel ensure that the tenants have regularly completed rail track cleaning after each offloading operation to minimize coal dust and other aggregate materials from accumulating inside.	✓	N/A	Ensure that tenants continue to clean rails.

Table 10. Pollution Prevention and Good Housekeeping							
MCM/BMP Description	Responsible Dept. / Section	BMP Applied/ Measurable Goal(s)	BMP Start Date	Permit Year 16 Milestones/Progress on Goal(s)	Completed in 2018?	New or Revised Goal	Planned Activities for Permit Year 17 (2019)
SWMP BMP 7-2. Wash Racks	HAR-EE	Review 100% of applications for wash rack use.	1/1/18	No wash applications were reviewed and approved in 2018.	✓	N/A	Continue to review applications as received.
SWMP BMP 7-2. Dry Wells	HAR-EE	Review 100% of applications for dry wells and/or infiltration sinks.	1/1/18	No applications were received or reviewed in 2018.	✓	N/A	Continue to review applications as received.

4 PROGRAM OUTPUTS AND ACCOMPLISHMENTS

4.1 MS4 PROGRAM EXPENSES

Program expenditures include the costs of several consultant contracts as well as an estimate of time spent by HDOT-Harbors employees, HDOT ENV and AG support to ensure compliance with the conditions of the Consent Decree and the NPDES permit. Total expenditures in 2018 were similar to the previous year. The largest expenditure in 2018 was general permit compliance; this expense category includes all other program expenses not directly included in the permit element categories such as vendor fees related to the *Cityworks* AMS, legal support from the AG's office, technical support from HDOT ENV and HAR-E, and consultant efforts not otherwise accounted for. As a part of the pollution prevention program, HDOT-Harbors personnel inspected and cleaned small MS4s in 2018. Expenditures in the pollution prevention category were slightly lower compared to last year. Expenses in the construction program were about the same as previous years. Overall the funds expended in 2018 were adequate to address current needs. Table 11 provides a summary of the MS4 program expenses.

Table 11. MS4 Program Expenses

Item	Response
Office of Environmental Compliance created/staffed	Yes
Annual program budget/expenditures* ('Best efforts' estimates of 2018 expenditures)	
• Public Education and Outreach & Public Participation and Involvement Program expenditures	$120,700
• Illicit Discharge Detection and Elimination Program expenditures	$233,200
• Construction Site Runoff Control expenditures	$366,900
• Post-Construction Stormwater Management in New Development and Re-development Programs expenditures**	$170,750
• Pollution Prevention and Good Housekeeping BMP Program expenditures	$243,350
• General Permit Compliance expenditures	$792,560
• Program Total Expenditures	$1,927,460
Funding mechanisms(s) - (Routine Maintenance Fund, Special Maintenance, Major Maintenance, Service Project, Equipment Acquisition, Capital Improvement Project)	Routine and Special Maintenance Funds, CIP

Notes:
Data is from the 2018 calendar year.
*Expenditures from HDOT-Harbors employees have been approximately based on the estimated percentage of time that they worked on stormwater related tasks.
**Permanent Post-Construction BMP plan checklist reviews and associated inspections are accounted for under the Construction Site Runoff Control category since they are completed in conjunction with construction related tasks.

Figure 1 shows $792,560 (41%) of the total expenditures for 2018 were for general permit compliance. The construction program was the second-highest expense at $366,900 (19%). The Illicit Dishcarge Detection Elimination program was third most expensive at $233,200 (12%). The Pollution Prevention / Good Housekeeping program cost $243,350 (13%) of the total budget, the Post-Construction program cost $170,750 (9%), and the Public Education/Involvement program cost $120,700 (6%).

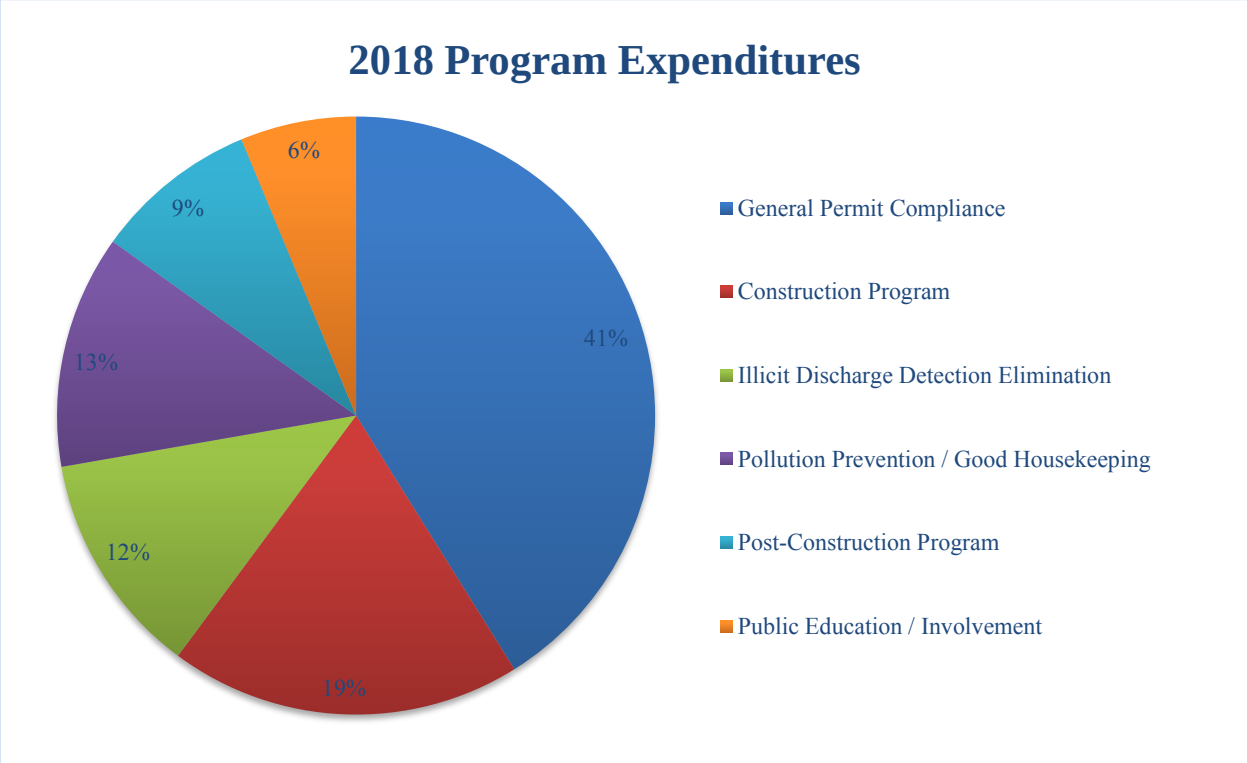


Figure 1. 2018 Program Expenditures

Figure 2 shows the program expenditures over the last four years.

- The general permit compliance expenditures decreased 2018. It was $901,011 in 2017, and decreased to $792,560 in 2018, a difference of $108,451.
- The Construction Program cost $366,900 in 2018, compared to $347,168 in 2017, $322,300 in 2016, $177,252 in 2015, and $202,600 in 2014.
- The IDDE program decreased slightly in 2018 to $233,200, compared to $265,113 in 2017, $244,200 in 2016, $187,1700 in 2015, and $234,400 in 2014.
- The Pollution Prevention/Good Housekeeping program increased slightly in 2018 to $243,350, compared to $222,931 in 2017, $233,300 in 2016, $823,297 in 2015, and $170,100 in 2014.
- The Post-Construction program cost $170,750 in 2018 compared to $150,857 in 2017, $98,700 in 2016, $35,794 in 2015, and $50,600 in 2014.
- The Public Education/Involvement program decreased spending in 2018 to $120,700, compared to $142,580 in 2017, $233,700 in 2016, $217,905 in 2015, and $220,700 in 2014.

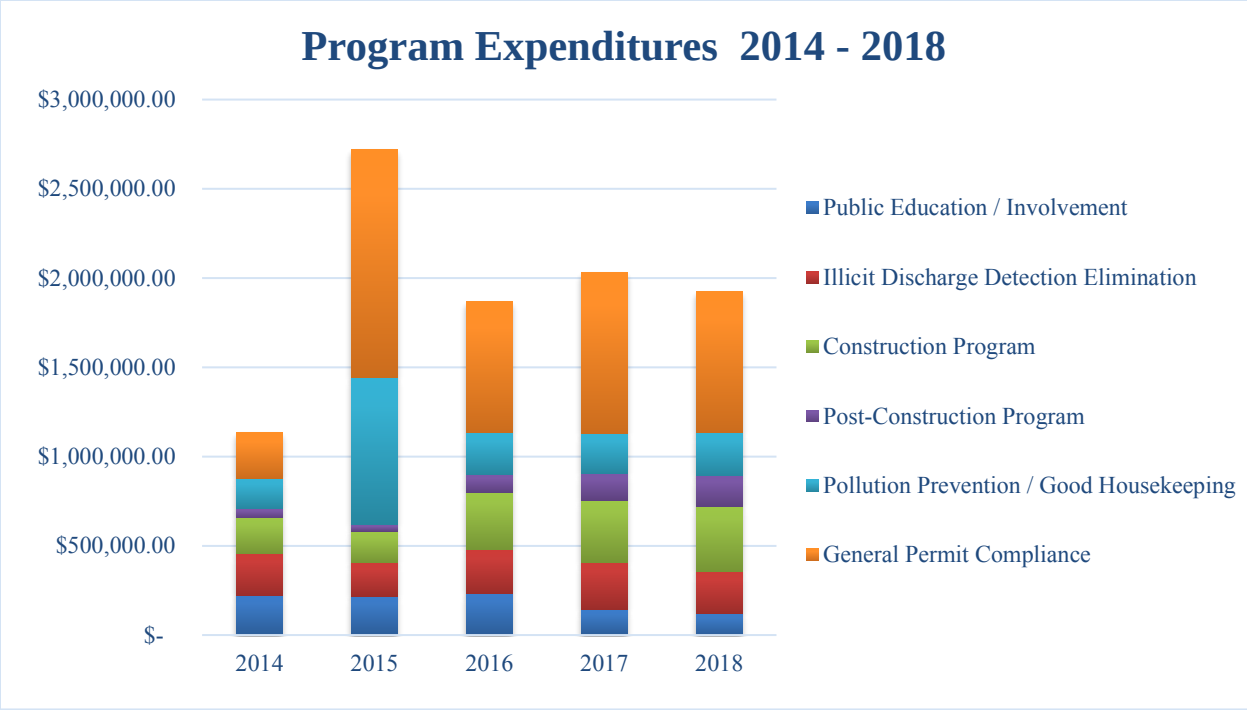


Figure 2. Program Expenditures from 2014 - 2018

4.2 EDUCATION, INVOLVEMENT, AND TRAINING

The training and education of HDOT-Harbors personnel, tenants, and the public were top priorities in 2018. The total number of people and the number of individuals per category was very similar to that of 2017. Reiteration of the environmental requirements, HDOT-Harbors stormwater procedures, and best management practices has shown to be the best way to facilitate a culture of compliance and stormwater pollution awareness. The large number of people trained and their high quiz scores attest to the effectiveness of the training program. Additionally, HDOT-Harbors continuously participated in the joint HDOT "Protect Our Water Conference" on November 14, 2018. Along with HDOT Highways and HDOT Airports Divisions, the conference highlighted the joint effort that the three HDOT divisions are taking to collectively protect the water resources of State of Hawaii.

Table 12. Education, Involvement, and Training

Description	Response
Estimated number of people reached by education program(s)*	366
• Tenant General Stormwater BMP Training	89
• Employee Stormwater Training	194
• Construction & Post-Construction Training	26
• IDDE	55
• New Inspectors	2
Average score on the environmental knowledge survey(s):	
• Tenant Stormwater Training	87.0 %
• Employee Survey (average % correct responses)	95.4 %

Table 12. Education, Involvement, and Training	
Description	**Response**
Tenants who had positive view of the training	90.0 %
Unique visitors to the stormwater webpage	956
Adopt-A-Harbor volunteers	25
Public Education Signs	91
Storm Drain Inlets Stenciled	201 Replaced
"Protect Our Water Conference" Attendees	356

Notes:
Data is from the 2018 calendar year.
*Some individuals may have been trained at two or more of the training sessions; however, they were counted separately.

Figure 3 provides data on the total number of employees, tenants, and engineering staff/consultants/contractors that received training for the last nine years.

- In 2018, 194 employees, 89 tenants, and 26 engineering staff/consultants/contractors were trained.
- In 2017, 189 employees, 123 tenants, and 20 engineering staff/consultants/contractors were trained.
- In 2016, 211 employees, 109 tenants, and 23 engineering staff/consultants/contractors were trained.
- In 2015, 237 employees, 99 tenants, and 28 engineering staff/consultants/contractors were trained.
- In 2014, 318 employees, 101 tenants, and 59 engineering staff/consultants/contractors were trained.
- In 2013, 16 employees, 126 tenants, and 17 engineering staff/consultants/contractors were trained.
- In 2012, 23 employees, and 118 tenants were trained.
- In 2011, 26 employees, and 84 tenants were trained.
- In 2010, 26 employees, and 83 tenants were trained
- In 2009, 51 employees, and 116 tenants were trained

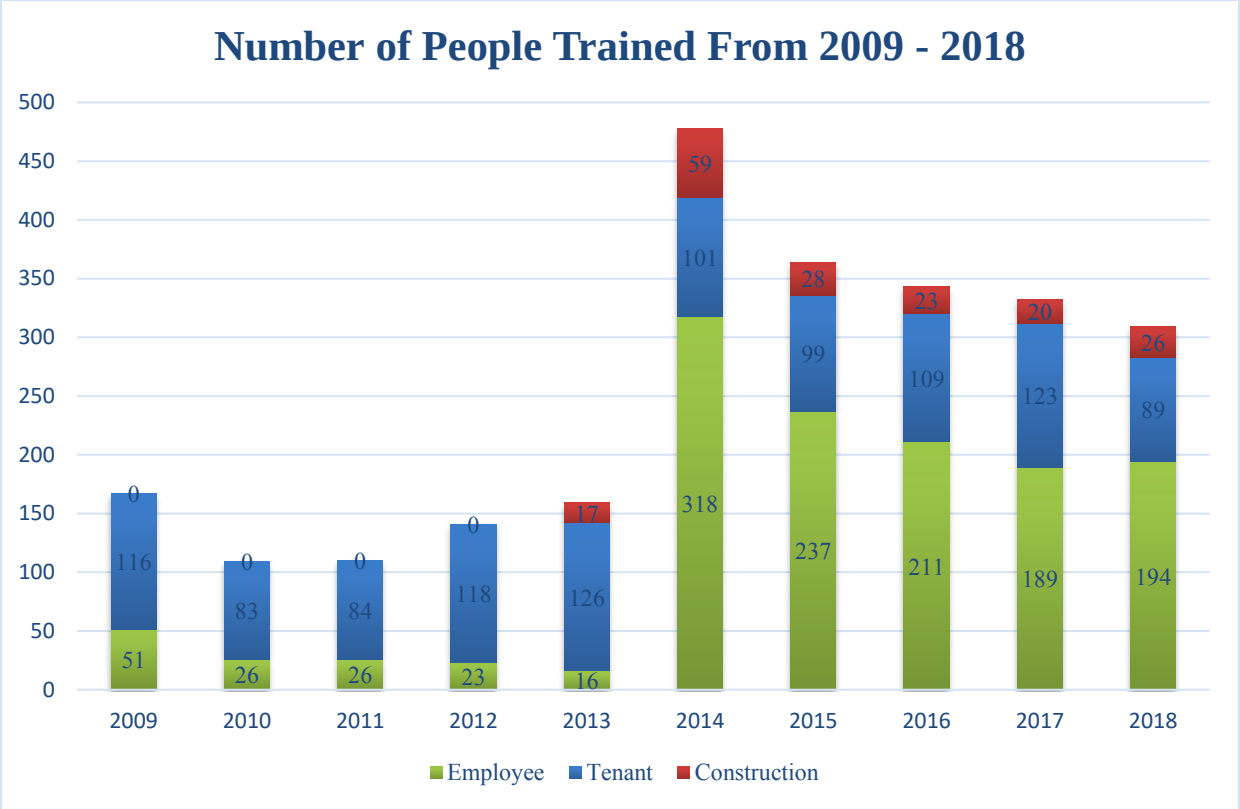


Figure 3. Number of People Trained from 2009 - 2018

4.3 LEGAL/REGULATORY

The current IDDE program was already in place prior to the 2015 SWMP revision. However, construction and post-construction related activities, as well as post-development stormwater management activities were implemented with the 2015 SWMP. Table 13 shows all accompanying regulations were also in place prior to 2015 SWMP.

Table 13. Legal and Regulatory

Description	In Place Prior 2015 SWMP	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with check)					
Illicit Discharge Detection & Elimination	✓				
Construction and Post-Construction Related Activities					✓
Post-Development Stormwater Management					✓
Accompanying Regulation Status (indicate with check)					
Illicit Discharge Detection & Elimination	✓				

Table 13. Legal and Regulatory					
Description	**In Place Prior 2015 SWMP**	**Reviewing Existing Authorities**	**Drafted**	**Draft in Review**	**Adopted**
Construction and Post-Construction Related Activities	✓				
Post-Development Stormwater Management	✓				

4.4 MAPPING AND ILLICIT DISCHARGES

The number of potential illicit discharges identified and investigated in 2018 has decreased from previous years. The amount and type of illicit discharge investigations in 2018 were nearly identical to those of 2017. No incidents lead to the implementation of enforcement procedures via written letters. All investigations ended with the resolution of the illicit discharge issues. The majority of the illicit discharge reports in 2018 came from HDOT-Harbors staff, tenants, and the public. This indicates that the training provided is effective and people understand the proper protocols to intitiate when potential pollution or a suspected illicit discharge is observed.

Table 14. Mapping and Illicit Discharges	
Description	**Response**
System-wide mapping complete (complete storm sewer infrastructure)	100 %
Mapping method(s)	
Paper	100 %
GIS	100 %
Outfalls required to be inspected/screened	
Honolulu Harbor	0
Kalaeloa Barbers Point Harbor	0
Illicit discharges investigated in 2018	6
SIDR / Public Reports	51
Tenant Inspections	1
Other Tenant Related Investigations	0
Construction Inspections	0
Outfall Reconnaissance	0
Illicit discharges investigated since 2010	243
% of population on sewer	100 %
% of population on septic systems	0 %
Complaints/concerns received from public	0
Note: Data is from the 2018 calendar year.	

Figure 4 shows the data recorded for illicit discharge investigations over the past nine years, although data is missing for years 2011 and 2009.

- In 2018, there were 51 investigations performed in follow-up to 51 Suspected Illicit

Discharge Reports (SIDRs); the SIDR is a report form used to inspect any public reports of discharges. There was 1 from tenant inspections, 0 from construction inspections, and 0 from ORI reports.

- In 2017, there were 51 investigations performed for the SIDR. There were only 2 from tenant inspections, 0 from construction inspections, and 0 from ORI reports.
- In 2016, there were 26 SIDR forms filed, 1 tenant inspection, 0 construction inspections, and 2 ORI reports filed.
- In 2015, there were 27 SIDR forms filed, 0 tenant inspection, 0 construction inspections, and 1 ORI report filed.
- In 2014, there were 12 SIDR forms filed, 5 tenant inspections, 0 construction inspections, and 5 ORI reports filed.
- In 2013, there were 19 SIDR forms filed, 5 tenant inspections, 0 construction inspections, and 11 ORI reports filed.
- In 2012, there were 24 SIDR forms filed, 15 tenant inspections, 0 construction inspections, and 16 ORI reports filed.
- There is no data available for 2011.
- In 2010, there were 10 SIDR forms filed, 0 tenant inspections, 0 construction inspections, and 3 ORI reports filed.

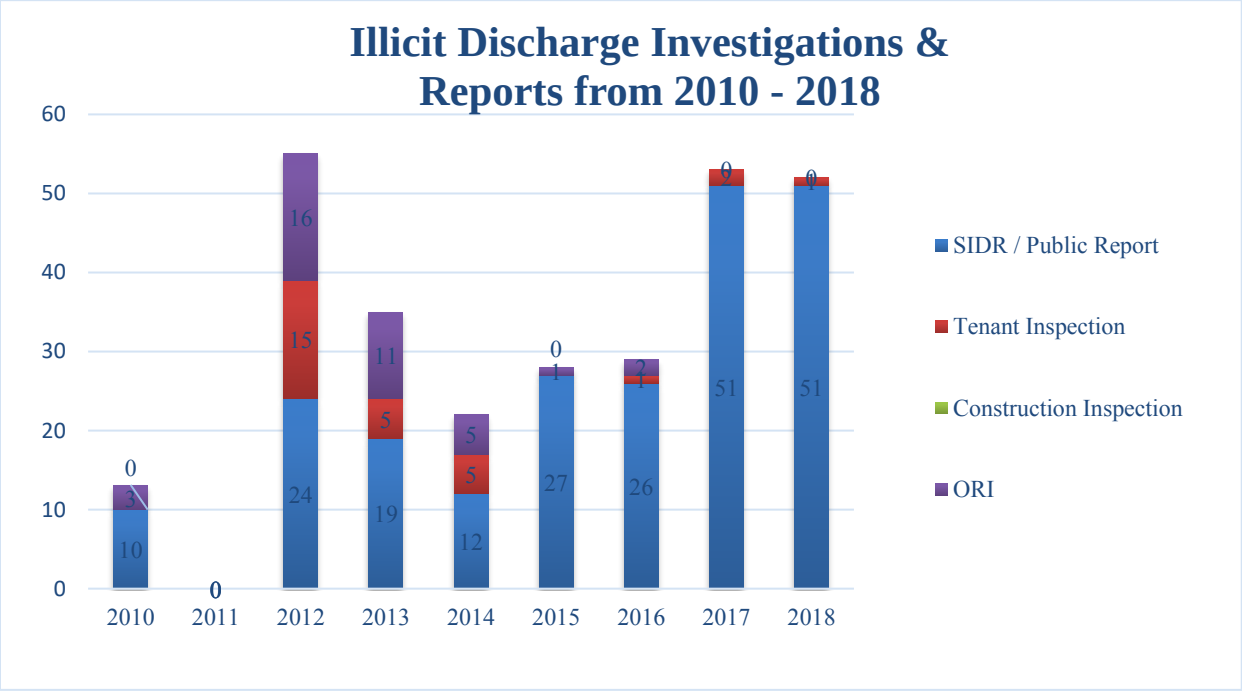


Figure 4. Illicit Discharge Investigations from 2010 - 2018

4.5 HARBORS TENANTS

The risk ranking for tenants in 2018 remained fairly consistent with rankings performed in 2017; 66% tenant sites are classified as low risk. This is consistent with the fact that the majority of tenants at Honolulu Harbor and Kalaeloa Barbers Point Harbor conduct small scale operations.

The risk rank of three (3) tenants changed in 2018 as a result of site inspections: One (1) of the sites changed from high to medium and two (2) of the sites changed from medium to low.

There was one tenant-related enforcement action in 2018, which directly involved the small MS4. During a tenant inspection, evidence water from washing activities was observed entering a nearby drain inlet. A verbal warning was provided onsite and a written warning was included in the tenant inspection report. The tenant immediately addressed the issues and implemented BMPs to mitigate the adverse effects of future occurrences.

HDOT-Harbors highlighted management of non-stormwater discharges during the annual tenant and IDDE trainings to protect harbor waters. HDOT-Harbors is planning to continue to highlight management of non-stormwater discharges in 2018 training events.

Table 15. Harbors Tenants

Description	Response
Total Unique Tenants	76
Total Tenant Sites	86
• Low Risk Rank	47
• Medium Risk Rank	20
• High Risk Rank	4
Number of Tenant Inspections	99
• New	1
• Regular	33
• Final	15
• Site Reconnaissance	49
• Follow-up	1
Number of Enforcement Actions	1
Note: Data is from the 2018 calendar year.	

Figure 5 represents the distribution of tenant risk ranking. 66% of the tenant sites are low risk, 28% are considered medium risk, and only 6% are considered a high risk.

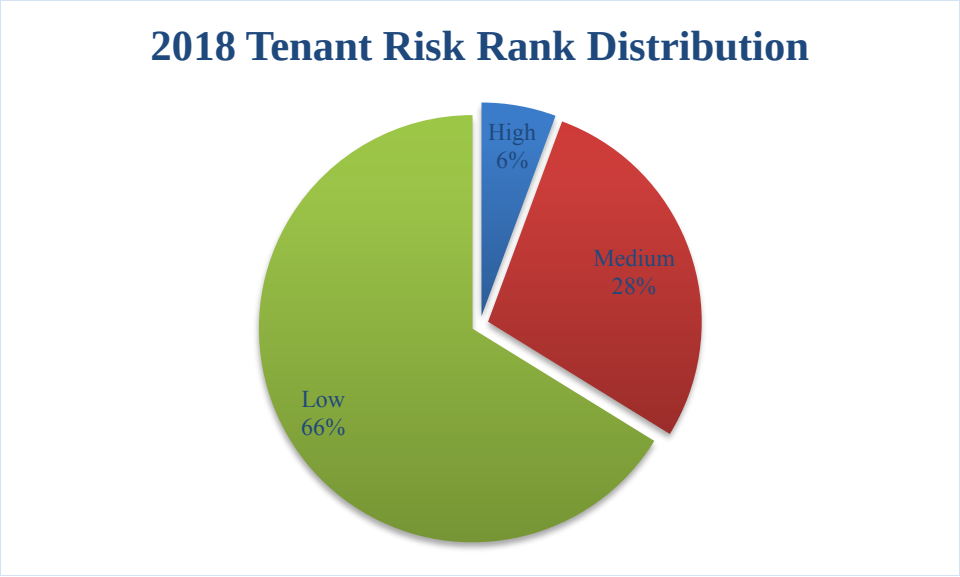


Figure 5. 2018 Tenant Risk Ranking Distribution

4.6 CONSTRUCTION

The number of construction inspections in 2018 increased from 2017. Minor findings were reported and corrected during/following inspections, leaving zero enforcement actions taken. This indicates that construction-related stormwater training is effective and shows evidence of growing stormwater pollution awareness at HDOT-Harbors, as well as the contractor's willingness to learn about the best methods to prevent pollution, and their commitment to implement BMPs as soon as possible.

Table 16. Construction

Description	Response
Total number of construction plan reviews	46
• HDOT	41
• Tenant	5
Total number of plan reviews requiring NGPC	2
Number of active construction sites on HDOT-Harbors land	4
• HDOT	2
• Tenant	2
• Others (e.g., CCH)	0
Estimated percentage of construction starts adequately regulated for erosion and sediment control	100%
Site inspections completed	45
Enforcement actions	0
• Written warning	0
• Notice of Apparent Violation (NAV)	0
• Issuance of stop work order and summons/citations	0
• Referral to HDOH	0

Table 16. Construction	
Description	**Response**
• Fines collected	0
Note: Data is from the 2018 calendar year.	

Figure 6 illustrates the number of construction inspections and enforcement actions taken over the last ten years.

- In 2018, there were 45 construction inspections and 0 enforcement actions.
- In 2017, there were 31 construction inspections and 2 enforcement actions.
- In 2016, there were 36 construction inspections and 0 enforcement actions.
- In 2015, there were 56 construction inspections and 6 enforcement actions.
- In 2014, there were 47 construction inspections and 36 enforcement actions.
- In 2013, there were 37 construction inspections and 13 enforcement actions.
- In 2012, there were 29 construction inspections and 21 enforcement actions.
- In 2011, there were 44 construction inspections, and 0 enforcement actions.
- In 2010, there were 54 construction inspections and 16 enforcement actions.
- In 2009, there were 52 construction inspections and 20 enforcement actions.

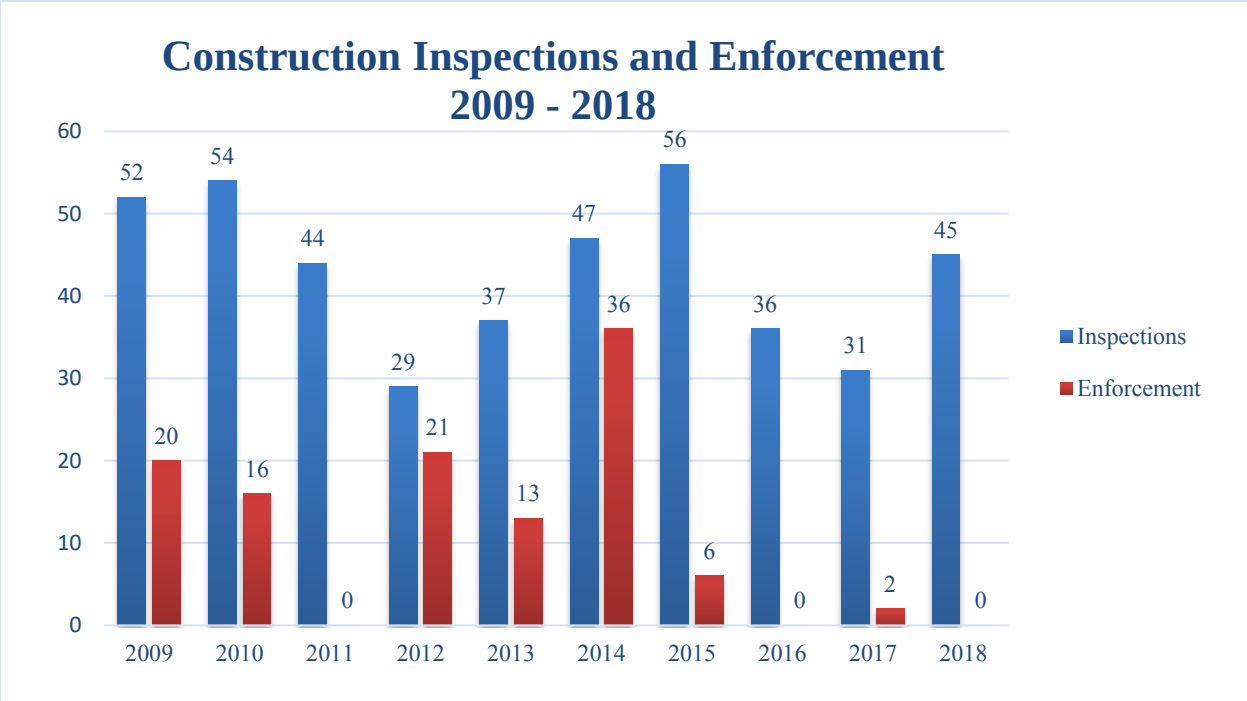


Figure 6. Construction Inspections and Enforcement from 2009 - 2018

4.7 POST-CONSTRUCTION STORMWATER MANAGEMENT

Table 17 shows all new development or redevelopment projects had adequate regulations for post-construction stormwater control; thus, there were no new permanent BMPs installed. Nine site inspections were completed to review proper PBMP operations. PBMP maintenance is required through lease agreements, due diligence, property covenants, and right of way/easements, etc. for

HDOT-Harbors tenants.

Table 17. Post-Construction Stormwater Management	
Description	**Response**
Estimated percentage of new development/redevelopment projects adequately regulated for post-construction stormwater control	100 %
Number of new permanent BMPs	0
Site inspections (for proper BMP operation) completed	5
BMP maintenance required through lease agreements, due diligence and property covenants, right of way/easements, etc.	1
Note: Data is from the 2018 calendar year.	

4.8 OPERATIONS AND MAINTENANCE

Debris removal reached a total of 1,080 tons in 2018; this was slightly more debris than the amount removed in 2017. The storm drain cleaning generated 1.13 tons of waste in 2018, which was significantly less than previous years. The amount of metal recycled was significantly less than what was recycled within the previous year. Green waste removed was slightly less than in 2017. Through inspections and trainings, the amount of debris entering the HDOT-Harbors small MS4 has continued to decrease. HDOT-Harbors employees and tenants have demonstrated their commitment in preventing pollution through implementation and maintenance of proper BMPs. Volunteer activities also played a key role in keeping the harbor water clean and preventing pollution.

Table 18. Operations and Maintenance	
Description	**Response**
Average frequency of catch basin cleaning	2 times/year
Number of storm drain cleanings	120
Quantity of screenings/debris removed from storm sewer infrastructure	1.13 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.)	PVT Landfill
• Vacuum truck(s) owned/leased by Harbors	1
• Vacuum trucks specified in contracts	No
• % Structures cleaned with vacuum	100%
• % Structures cleaned with manual labor	0 %
• Rotary brush street sweepers owned/leased	4
• Vacuum street sweepers owned/leased	0
• Vacuum street sweepers specified in contracts	No
Average frequency of street sweeping	2 times/week
Quantity of sand/debris collected by sweeping	259.53 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	Landfill
• Green Waste	17.58 tons
• Refuse	801.98 tons
• Used Batteries	0
• Electronic Waste	0 tons
Note: Data is from the 2017 calendar year.	

Figure 7 shows the level of debris and waste removed due to small MS4 maintenance actions over the last ten years.

- In 2018, HDOT-Harbors removed 17.58 tons of green waste, 801.98 tons of refuse, 259.53 tons of sweeper waste, 26.48 tons of scrap metal, 3.77 tons of recycled metal, and 1.13 tons of storm drain waste.
- In 2017, HDOT-Harbors removed 36.74 tons of green waste, 748.30 tons of refuse, 23 tons of sweeper waste, 15.80 tons of recycled material, 15 tons of recycled metal, and 4 tons of storm drain waste.
- In 2016, HDOT-Harbors removed 50.66 tons of green waste, 845.33 tons of refuse, 23.11 tons of sweeper waste, 49.66 tons of recycled metal, and 12 tons of storm drain waste.
- In 2015, HDOT-Harbors removed 33 tons of green waste, 802 tons of refuse, 121 tons of sweeper waste, 103 tons of recycled metal, and 121 tons of storm drain waste.
- In 2014, HDOT-Harbors removed 36.09 tons of green waste, 1,293.12 tons of refuse, 134.81 tons of sweeper waste, 0 tons of recycled metal, and 20.45 tons of storm drain waste.
- In 2013, HDOT-Harbors removed 10.24 tons of green waste, 701 tons of refuse, 185.35 tons of sweeper waste, 21.25 tons of recycled metal, and 0 tons of storm drain waste.
- In 2012, HDOT-Harbors removed 0 tons of green waste, 431 tons of refuse, 377.57 tons of sweeper waste, 13.12 tons of recycled metal, and 0 tons of storm drain waste.
- In 2011, HDOT-Harbors removed 9.48 tons of green waste, 364 tons of refuse, 201.76 tons of sweeper waste, 18.9 tons of recycled metal, and 0 tons of storm drain waste.
- In 2010, HDOT-Harbors removed 7.13 tons of green waste, 110.81 tons of refuse, 215.22 tons of sweeper waste, 15.92 tons of recycled metal, and 0 tons of storm drain waste.
- In 2009, HDOT-Harbors removed 13.17 tons of green waste, 175.37 tons of refuse, 246 tons of sweeper waste, 25.74 tons of recycled metal, and 0 tons of storm drain waste.

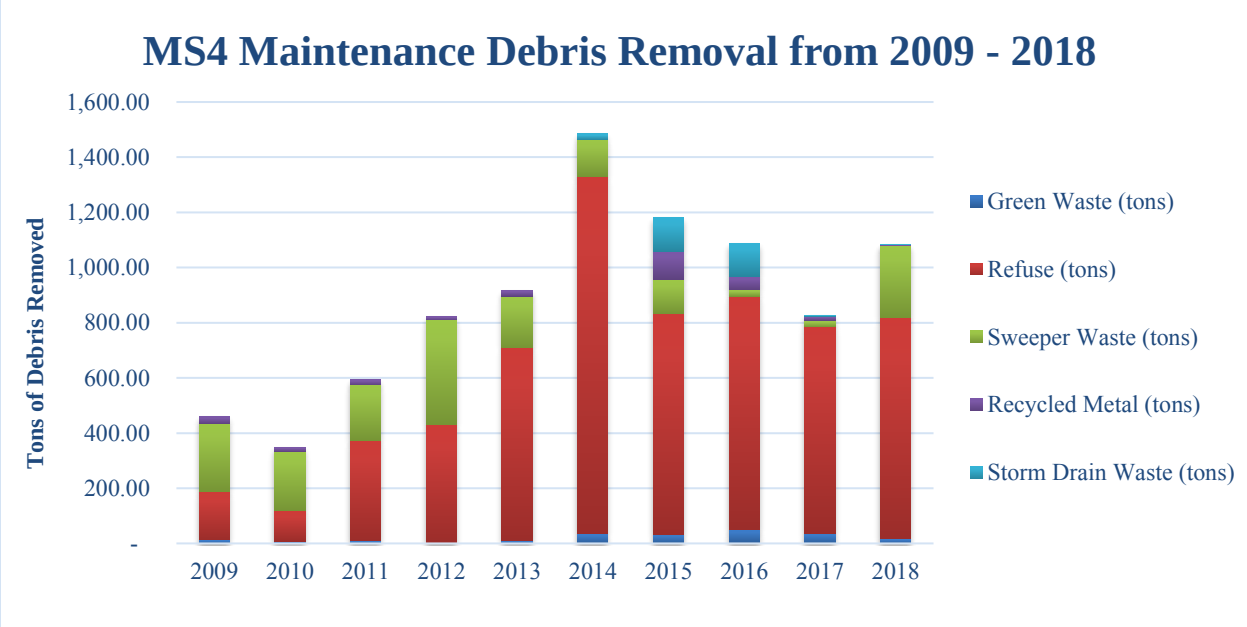


Figure 7. MS4 Maintenance and Debris Removal from 2009- 2018

ATTACHMENTS

The information collected and analyzed for this report is contained in the following attachments at the end of this document, and supplied on the CD. For convenience, attachments are organized by program.

Public Education, Outreach, and Involvement

Attachment 1. Newspaper Advertisement Describing Harbors Pollution Prevention Efforts
Attachment 2. Volunteer Information and Waste Removal Statistics
Attachment 3. Outreach Handouts
- a. BMP Handouts
- b. Pollution Prevention (P2) Brochures
- c. Construction Brochure
- d. Post-Construction Brochure

Training

Attachment 4. Tenant Training
- a. Training Notice Letter with BMP Sheets and Questionnaire
- b. Presentation Slides
- c. Sign-In Sheets
- d. Tenant Environmental Manager of the Year (TEMY) Awards
- e. Training Feedback Summary and Completed Surveys
- f. Questionnaires Results Summary and Completed Questionnaires

Attachment 5. Construction and Post Construction Training
- a. Presentation Slides
- b. Sign-In Sheets
- c. Completed Surveys

Attachment 6. Harbors Employee Survey and Results Summary
Attachment 7. IDDE Training
- a. Presentation Slides
- b. Sign-In Sheets & Completed Questionnaires

Attachment 8. Inspector Training
- a. Tenant Inspection Manual (TIM) Presentation Slides
- b. Completed Questionnaires

Illicit Discharge Detection and Elimination

Attachment 9. Tenant Inventory, Risk Rank and Inspection Summary
Attachment 10. Outfall Reconnaissance Inventory (ORI)
- a. ORI Inspection Form
- b. 2018 ORI Wet Weather Report
- c. 2018 ORI Dry Weather Report

Attachment 11. Illicit Discharge Investigations
- a. Tenant
- b. Miscellaneous

Construction / Post-Construction

Attachment 12. Construction Project Inventory and Inspection Summary
Attachment 13. Reviewed Harbors Division Projects
Attachment 14. Reviewed Tenant Projects

Miscellaneous Information

Attachment 15. Kalaeloa Barbers Point Harbor Stockpile Inspection Report
Attachment 16. MS4 Inspection Log
Attachment 17. Permanent BMP Inspection Log
Attachment 18. Street Sweeper Log
Attachment 19. Photographic Documentation
Attachment 20. PEAR 2 Draft and Final Reports for Honolulu Harbor and Kalaeloa Barbers Point Harbor
Attachment 21. PEAR 3 Draft and Final Reports for Honolulu Harbor and Kalaeloa Barbers Point Harbor

Attachment 1

Newspaper Advertisement Describing Harbors Pollution Prevention Efforts

AFFIDAVIT OF PUBLICATION

IN THE MATTER OF
[illegible]

STATE OF HAWAII)
) SS.
City and County of Honolulu)

Doc. Date: OCT 12 2018 **# Pages:** 1

Notary Name: COLLEEN E. SORANAKA First Judicial **Circuit**

Doc. Description: Affidavit of Publication

OCT 12 2018

Notary Signature Date

COLLEEN E. SORANAKA NOTARY PUBLIC No. 90-263 STATE OF HAWAII

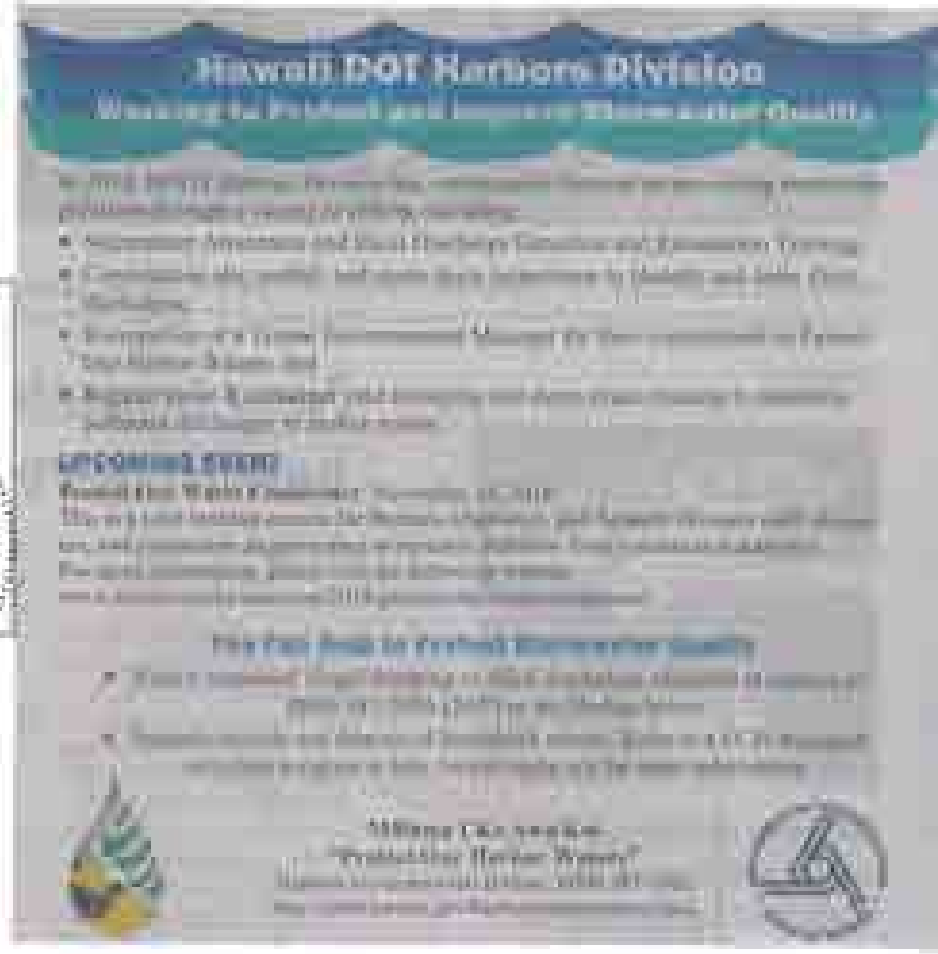
[illegible] being duly sworn, deposes and says that she is a [illegible] of Oahu Publications, Inc. publisher of The Honolulu Star-Advertiser, MidWeek, The Garden Island, West Hawaii Today, and Hawaii Tribune-Herald, that said newspapers are newspapers of general circulation in the State of Hawaii, and that the attached notice is a true notice as was published in the

Honolulu Star-Advertiser 10/12/2018	1	times on
MidWeek	0	times on
The Garden Island	0	times on
Hawaii Tribune-Herald	0	times on
West Hawaii Today	0	times on
Other Publications:	0	times on

And this affiant is not a party to or in any way interested in the above entitled notice.

Gwyn Tang

COLLEEN E. SORANAKA



Attachment 2

Volunteer Information and Waste Removal Statistics

05.19.2018 Leahi Soccer Club

Adopt-A-Harbor
Barbers Point

Categorized Items	Land	Underwater	Watercraft	Total Items	Percentage of Total
Most Likely To Find Items					
Cigarette Butts	500	0	0	500	42.09%
Food Wrappers (candy, chips, etc.)	65	0	0	65	5.47%
Take Out/Away Containers (Plastic)	16	0	0	16	1.35%
Take Out/Away Containers (Foam)	14	0	0	14	1.18%
Bottle Caps (Plastic)	70	0	0	70	5.89%
Bottle Caps (Metal)	59	0	0	59	4.97%
Lids (Plastic)	37	0	0	37	3.11%
Straws, Stirrers	29	0	0	29	2.44%
Forks, Knives, Spoons	44	0	0	44	3.70%
Beverage Bottles (Plastic)	47	0	0	47	3.96%
Beverage Bottles (Glass)	82	0	0	82	6.90%
Beverage Cans	65	0	0	65	5.47%
Grocery Bags (Plastic)	18	0	0	18	1.52%
Other Plastic Bags	48	0	0	48	4.04%
Paper Bags	28	0	0	28	2.36%
Cups & Plates (Paper)	13	0	0	13	1.09%
Cups & Plates (Plastic)	28	0	0	28	2.36%
Cups & Plates (Foam)	25	0	0	25	2.10%
Category Totals	**1188**	**0**	**0**	**1188**	**100.00%**
Fishing Gear					
Fishing Buoys, Pots & Traps	2	0	0	2	0.15%
Fishing Net & Pieces	3	0	0	3	0.00%
Rope (1 yard/meter = 1 piece)	15	0	0	15	0.54%
Fishing Line (1 yard/meter = 1 piece	8	0	0	8	3.00%
Category Totals	**28**	**0**	**0**	**28**	**3.69%**
Packaging Materials					
6-Pack Holders	3	0	0	3	0.04%
Other Plastic/Foam Packaging	39	0	0	39	0.00%
Other Plastic Bottles (oil, bleach, etc	2	0	0	2	0.04%
Strapping Bands	7	0	0	7	0.65%
Tobacco Packaging/Wrap	13	0	0	13	1.11%
Category Totals	**64**	**0**	**0**	**64**	**1.84%**
Other Trash					
Appliances (refigerators, washers, e	0	0	0	0	0.00%
Balloons	0	0	0	0	0.04%
Cigar Tips	43	0	0	43	7.68%
Cigarette Lighters	9	0	0	9	0.08%
Construction Materials	5	0	0	5	2.30%
Fireworks	1	0	0	1	0.00%
Tires	4	0	0	4	0.00%
Category Totals	**62**	**0**	**0**	**62**	**10.10%**
Personal Hygiene					
Condoms	0	0	0	0	0.04%
Diapers	0	0	0	0	0.12%
Syringes	3	0	0	3	0.00%
Tampons/Tampon Applicators	0	0	0	0	0.00%
Category Totals	**3**	**0**	**0**	**3**	**0.15%**
TOTAL	**2604**	**0**	**0**	**2604**	**100.00 %**
REPORT ADDENDUM					
Tiny Trash Less Than 2.5cm					

05.19.2018 Leahi Soccer Club

Adopt-A-Harbor
Barbers Point

Foam Pieces	25	0	0	25	0.290697674
Glass Pieces	10	0	0	10	0.11627907
Plastic Pieces	51	0	0	51	0.593023256
Category Totals	**86**	**0**	**0**	**86**	**100.00%**

LEAHI SOCCER CLUB 2002
5-19-18

SUMMARY

TRASH COLLECTED

Citizen scientist: Pick up all trash and record all items you find below. No matter how small the items, the data you collect are important for Trash Free Seas.®

Please DO NOT use words or check marks
Only **numbers** are useful data

Plastic Bags

[illegible]	500+	[illegible]	47
[illegible]	65	[illegible]	82
[illegible]	26	[illegible]	65
[illegible]	14	[illegible]	18
[illegible]	70	[illegible]	48
[illegible]	59	[illegible]	28
[illegible]	37	[illegible]	13
[illegible]	29	[illegible]	2[illegible]
[illegible]	44	[illegible]	25

FISHING GEAR:		[illegible]	
[illegible]	2	[illegible]	3
[illegible]	3	[illegible]	39
[illegible]	15	[illegible]	2
[illegible]	8	[illegible]	7
		[illegible]	13

OTHER TRASH:		[illegible]	
[illegible]		[illegible]	
[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	3
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]		
[illegible]	[illegible]		

TINY TRASH LESS THAN 2.5CM:	
[illegible]	23
[illegible]	10
[illegible]	57

2.5cm (actual size)

[illegible]	[illegible]	ENTANGLED	TYPE OF ENTANGLEMENT ITEM
BIRD / FISH	[illegible]	[illegible] NO	

CLEANUP SUMMARY (circle units)

Number of Trash Bags Filled 16 Weight of Trash Collected 400 Distance Cleaned: 1

300

LEAH 1 02
5-19-18

TRASH COLLECTED

Citizen scientist: Pick up all trash and record all items you find below. No matter how small the items, the data you collect are important for Trash Free Seas.

Plastic Bags

Please DO NOT use words or check marks
Only **numbers** are useful data.

FISHING GEAR:

PACKAGING MATERIALS:

OTHER TRASH:

PERSONAL HYGIENE:

TINY TRASH LESS THAN 2.5CM:

Dead Injured

ITEMS

CLEANUP SUMMARY

Number of Trash Bags Filled: Weight of Trash Collected Distance Cleaned

- Sport
- Fishing
- Shirts
- Food
- Straws

TRASH COLLECTED

Citizen scientist: Pick up all trash and record all items you find below. No matter how small the items, the data you collect are important for Trash Free Seas.®

EXAMPLE:

Plastic Bags: 𝍸 III

Please DO NOT use words or check marks
Only **numbers** are useful data.

MOST LIKELY TO FIND ITEMS:

[illegible]	33	[illegible]	10
[illegible]	11	[illegible]	25
[illegible]	9	[illegible]	14
[illegible]	4	[illegible]	2
[illegible]	8	[illegible]	16
[illegible]	4	[illegible]	3
[illegible]	8	[illegible]	[illegible]
[illegible]	1	[illegible]	4
[illegible]	15	[illegible]	9

FISHING GEAR:

[illegible]	2
[illegible]	[illegible]
[illegible]	4
[illegible]	

PACKAGING MATERIALS:

[illegible]	1
[illegible]	17
[illegible]	2
[illegible]	3
[illegible]	4

OTHER TRASH:

[illegible]	
[illegible]	
[illegible]	
[illegible]	3
[illegible]	
[illegible]	
[illegible]	4

PERSONAL HYGIENE:

[illegible]	1
[illegible]	
[illegible]	
[illegible]	

TINY TRASH LESS THAN 2.5CM:

[illegible]	2
[illegible]	1
[illegible]	4

CLEANUP SUMMARY

Number of Trash Bags Filled	3	Weight of Trash Collected		Distance Cleaned	1

Air freshener 11
Shoes/ 𝍸 / slippers 5
clothes 11 3
[illegible] 1
[illegible] 1

TRASH COLLECTED

Plastic Bags

PACKAGING MATERIALS:

HYGIENE:

TINY TRASH LESS THAN 2.5CM:

Weight of Trash Collected

gm wrapper ||| battery || q tip ||| glove |||

TRASH COLLECTED

[illegible]: Pick up all trash and record all items [illegible] no matter how small the items, the dat[illegible] [illegible]portant for Trash Free Seas.

[illegible]

Plastic B[illegible]s

Plea[illegible]e DO NOT use words or check marks
On[illegible]y [illegible] are useful data

[illegible]

FISHING GEAR:

[illegible]

PACKAGING MATERIALS:

[illegible]

OTHER TRASH:

TOTAL #

[illegible]

PERSONAL HYGIENE:

[illegible]

TINY TRASH LESS THAN 2.5CM:

[illegible]

DEAD/INJURED ANIMAL

Dead [illegible] Injured [illegible]

ITEMS OF LOCAL CONCERN:

[illegible]

[illegible]MARY (circle units)

Number o[illegible] rash Bags Filled		Weight of Trash Collected		Distance Cleaned:	

Cardboard - [illegible]

[illegible]

[illegible]

TRASH COLLECTED

Citizen scientist: Pick up all trash and record all items you find below. No matter how small the items, the data you collect are important for Trash Free Seas®

Please DO NOT use words or check marks
Only numbers are useful data

Plastic Bags

FISHING GEAR:

PACKAGING MATERIALS:

OTHER TRASH:

TINY TRASH LESS THAN 2.5CM:

DEAD/INJURED ANIMAL

Number of Trash Bags Filled | Weight of Trash Collected | Distance Cleaned

Chelsea Iannaccio <ciannaccio@gotoetc.com>

FW: Emailing: IMG_3888.jpg - Pier 38 Clean-up

3 messages

Yim, Spencer K <spencer.k.yim@hawaii.gov> Fri, Jun 1, 2018 at 10:52 AM
To: "Luke, Carter" <carter.luke@hawaii.gov>
Cc: "Zhang, Ying J" <ying.j.zhang@hawaii.gov>, "Freitas, Michele GN" <michele.gn.freitas@hawaii.gov>, "Martello, Mitchell A" <mitchell.a.martello@hawaii.gov>, "Damon Hamura (damon@gotoetc.com)" <damon@gotoetc.com>, Chelsea Iannaccio <ciannaccio@gotoetc.com>

Carter, FYI! Hawaiian Cement (Dane Wurlitzer) conducted their annual volunteer clean-up activity at the Commercial Fishing Village on Saturday, May 19th. Dane explored other harbor areas to clean with his volunteers - e.g., Honolulu Piers 5 & 6 and Kalaeloa Piers 8 and beyond Pier 10 - but decided to clean the accessible Commercial Fishing Village areas again. We are looking into more public outreach activities to do with ETC later this year. Will keep you posted.
Mahalo, Spencer

-----Original Message-----
From: Wurlitzer, Dane [mailto:Dane.Wurlitzer@hawaiiancement.com]
Sent: Friday, June 01, 2018 8:11 AM
To: Yim, Spencer K <spencer.k.yim@hawaii.gov>
Subject: Emailing: IMG_3888.jpg - Pier 38 Clean-up

Spencer,

Harbor clean-up was performed May 19 by Leahi Soccer Club 2002 Maile. It was good timing just prior to the POP Fishing Expo. Approximately 15 bags of rubbish were collected.

Dane Wurlitzer
Hawaiian Cement
(808)532-3407

Your message is ready to be sent with the following file or link attachments:

IMG_3888.jpg

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

2 attachments

IMG_3888.jpg
232K

Data Adopt Harbor 5-2018.pdf
498K

Attachment 3

Outreach Handouts -
a. BMP Handouts

Stormwater Management
BEST MANAGEMENT PRACTICES

Vehicle and Equipment Washing

Wash water from vehicle and equipment cleaning activities performed outdoors or in areas where wash water flows onto the ground can generate dry weather runoff contaminated with detergents, heavy metals, oils and greases, toxic substances, sediments, and other pollutants.

Releasing pollutants directly or indirectly into the storm drain system or the harbor by vehicle or equipment washing is a violation of the Harbor Municipal Separate Storm Sewer System (MS4) General Permit. Proper employee training, BMP implementation, and pollution prevention methods are required for compliance with the Harbor's Stormwater Management Plan (SWMP).

BMP Implementation

Primary Option: Off-site Washing

Facilities with small fleets should consider contracting with a commercial car wash. Commercial car wash facilities often recycle their water or are required to treat their wash water discharge prior to release into the sanitary sewer system. Pressure cleaning and steam cleaning should be done off-site to avoid generating runoff with high pollutant concentrations.

Secondary Option: On-Site Washing

NOTE: ON-SITE WASHING IS ALLOWED ONLY AFTER WASHING PROCEDURES ARE SUBMITTED TO THE HDOT HARBORS DIVISION FOR FORMAL APPROVAL

Vehicle and equipment washing should be conducted only in designated areas specifically designed to collect and hold generated wash and rinse water.

"For small jobs, berm the area surrounding the vehicle and use a wet/dry vacuum to capture the wash water for discharge to the sanitary sewer. For larger jobs, use a combination of berms and a vacuum truck, such as those used to clean storm and sanitary sewer systems, to capture and safely dispose of wash water. If detergents are used, clean the pavement to prevent this material from being carried to the storm drain during the next rainstorm." [1]

The contained wash water effluent should be recycled, discharged to the sanitary sewer system (permit may be required) or collected for off-site disposal at a permitted facility. Additionally, designated wash areas should be paved and contained using berms and a sump. Use hose nozzles with automatic shut off and bio-degradable soaps where appropriate. Inspect paved surfaces within the wash area and clean periodically to remove buildup of particulate matter or other pollutants. Vehicle maintenance, chemical storage, and other activities that could release pollutants are prohibited in washing areas. Train employees on proper cleaning, maintenance, and wash water disposal procedures. Documentation of this training should include a list of attendees, the date, the topic covered, and signatures of attendees.

[1] EPA Municipal Vehicle and Equipment Washing BMP Fact Sheet

The State Department of Transportation, Harbors Division has developed the Stormwater Management Plan (SWMP) in compliance with the National Pollutant Discharge Elimination System (NPDES) and the State of Hawaii Municipal Separate Storm Sewer System (MS4) General Permit requirements.

The SWMP is administered by the Environmental Section under the Engineering Branch.

Phone: 808-587-1962

Website: ***http://www.hidot.hawaii.gov/harbors/malamaikeawakai***

Stormwater Management
BEST MANAGEMENT PRACTICES

Vehicle and Equipment Fueling

Transfer and storage of bulk petroleum products (i.e. gasoline, diesel fuel, and motor oil) have the potential to pollute stormwater run-off. Implementation of BMPs is required to prevent or reduce petroleum pollutants from entering the stormwater drainage system. Both administrative controls, such as employee training and inspections, and structural controls, such as an automatic shut-off device and secondary containment, are necessary for an effective pollution prevention program.

BMP Implementation

Primary Option: Off-site Fueling

Utilize off-site commercial fueling facilities whenever feasible.

Secondary Option: On-Site Fueling

Vehicle fueling should be conducted only in designated areas specifically designed to contain spills and prevent contact with stormwater.

- Avoid positioning upstream or adjacent storm drainage features.
- Utilize impervious surfaces and containment designed to prevent stormwater run-on/off.
- Ensure spill kits are available (immediately clean up and properly dispose of used absorbent materials).
- Equip dispensing nozzles with automatic shut-off controls.
- Utilize drip pans if remote or mobile fueling is required.

Secondary containment must be provided for aboveground storage tanks if the facility's aggregate shell capacity of containers 55 gallons or greater exceeds 1,320 gallons.

- Containment required to be 110% of largest tank capacity.
- Containment required to have locking drain valve.
- Record containment inspections and uncontaminated rain water discharges.
- Develop Spill Prevention, Control, and Countermeasures (SPCC) Plan required per Federal/State regulations.

Periodic inspections should be performed of petroleum handling equipment and other structural controls. Train employees (document) on proper fueling and spill response responsibilities. Report all spills in accordance with the Hawaii Department of Health's (HDOH) Spill Reporting and Emergency Response requirements and document response actions.

EPA Website for SPCC Guidance
http://www.epa.gov/oem/content/spcc/

HDOH Spill Reporting and Emergency Response website:
http://hawaii.gov/health/environmental/hazard/spill.html

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Stormwater Management
BEST MANAGEMENT PRACTICES

Outdoor Material Storage

Responsible storage of chemicals, such as paints, solvents, and cleaners can significantly reduce polluted stormwater runoff. Containerized products (such as bottles, cans, and drums) and bulk material must be handled properly in all stages of storage, use, and disposal. In many cases, businesses can implement simple housekeeping practices in order to store materials more effectively. Proper storage practices reduce the likelihood of accidental spills or releases of hazardous materials during storm events. In addition, health and safety conditions at the facility will improve.

BMP Implementation

Outdoor material storage should be placed only in designated areas specifically designed to contain spills and prevent contact with stormwater. Store liquids in an area where containers cannot be knocked over and releases can be contained.

- Avoid positioning upstream or adjacent to storm drainage features.
- Place bagged materials on pallets and under cover.
- Utilize impervious surfaces and containment devices (e.g., dikes, curbs) to contain possible leaks and prevent stormwater run-on/off.
- Store all containers under cover to protect from rain and sun.
- Close and secure any opened containers,and utilize drip pans for dispensing from containers.
- Cover stockpiles with plastic or comparable material when not in use or at the end of each day.
- Provide physical diversion to protect stockpiles from concentrated runoff.
- As necessary, place silt fence, fiber filtration tubes, or straw wattles around stockpiles.

Appropriate spill response procedures, including notification, initial response and follow-up actions, should be developed and posted.

- Keep a spill kit appropriate for the materials in a readily accessible location, stocked, and ready for use (re-stock after each use).
- Clean up spills immediately using absorbent material or containment booms for liquid spills. Immediately sweep up and properly dispose of used absorbent materials.
- Always use dry methods to clean spills (sweeping) and never hose down the spill area.

Periodic inspections should be performed to verify that the conditions of containers, secondary containment devices, and other structural controls are acceptable. Train employees (document) on proper storage, handling and spill response responsibilities. Report all spills in accordance with the Hawaii Department of Health Spill Reporting and Emergency Response requirements (http://hawaii.gov/health/environmental/hazard/spill.html).

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Stormwater Management
BEST MANAGEMENT PRACTICES

General BMPs for Businesses

The storm drainage system at our harbor facilities collects rainfall from storm events and releases it directly, without treatment, into the harbor. As rainfall travels over surfaces such as roofs, roads, and parking lots, it picks up oils, metals, fertilizers, pesticides, sediments, and other contaminants before entering the harbor. Stormwater pollution degrades our waters and reduces the quality of natural habitats for fish and wildlife.

Implementing Best Management Practices (BMPs) and good housekeeping practices will help maintain water quality in the harbors.

BMP Implementation

Cleaning

- Use non-toxic substitutes for chemicals whenever possible.
- Control litter by sweeping and picking up trash regularly.
- Dry sweep floors, processing and storage areas, access roads, parking lots, and sidewalks. Do not wash down with a hose.
- Properly contain and dispose of mop water and sweepings.

Maintenance

- Inspect vehicles and equipment for leaks regularly.
- When draining fluids, use a drip pan and/or funnel to prevent spills.

Landscaping

- Whenever possible, use environmentally safe alternatives or low-toxicity chemicals.
- Use landscaping pesticides and fertilizers in the smallest amounts necessary and never apply immediately before or during rainfall.

Spill Response

- Keep a spill kit appropriate for materials in-use readily available and stocked. Re-stock when used.
- Clean up spills immediately to minimize safety hazards and prevent spills from reaching a storm drain inlet.
- Use absorbent materials to clean small spills rather than hosing down the area. Remove the absorbents promptly and dispose of properly.

Train employees (document) on proper storage, handling and spill response requirements. Report all spills in accordance with the Hawaii Department of Health (HDOH) Spill Reporting and Emergency Response requirements and document response actions.

HDOH Spill Reporting and Emergency Response website:
http://hawaii.gov/health/environmental/hazard/spill.html

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Stormwater Management
BEST MANAGEMENT PRACTICES

Solid and Hazardous Waste Management

Maintenance activities can generate a variety of hazardous waste that cannot be disposed as routine trash, garbage or other solid waste. Hazardous waste and other regulated material and debris shall be disposed in the proper manner and in accordance with all applicable federal and state laws. Examples of hazardous wastes are:

- Waste oil, used or spent hydraulic fluid, and other petroleum-based fluids.
- Waste paint and paint debris (used brushes, rollers, chips, rags).
- Used or spent paint thinners and other industrial solvents.
- Rags and other cleaning materials that are contaminated with grease, oil, paint, thinners, or other industrial chemicals.
- Discarded electronic equipment (may contain lead or mercury).

Arrangements must be made with a licensed vendor to remove these items prepare the necessary documentation for disposal, and to remove them from the piers and adjacent state property. Do not discard hazardous wastes and other regulated debris in state provided dumpers or anywhere else on state property. All tenants must provide documentation to Harbors Division demonstrating that prior arrangements have been made for the proper disposal of all generated hazardous waste.

Note: The only Hazardous Materials allowed to be used and stored on state property are those needed in the course of your business, in accordance with the terms and conditions of your lease or revocable permit and, if required, after review and approval from Harbors Division.

BMP Implementation

Primary Option:

- Schedule general maintenance activities on a more frequent basis to eliminate the need for large-scale maintenance, the use of large amounts of hazardous materials, and the generation of large amounts of hazardous waste.
- Only use recyclable items for maintenance and routine operations to reduce solid waste generation. Recycle such items as batteries, petroleum-based liquids (e.g., engine oil, gear lube, hydraulic fluid), cardboard, rags, glass and plastic containers, newspaper, and electronic devices.

Secondary Options:

- Only use environmentally friendly materials for maintenance to reduce the need for regulated disposal.
- Reduce the inventory of hazardous materials stored on site to avoid regulated disposal due to shelf-life expiration. **REMEMBER – If you do not need it, do not store it!**

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Stormwater Management
BEST MANAGEMENT PRACTICES

Material Delivery and Handling

Responsible management of material delivery and handling can significantly reduce pollution to stormwater runoff. Bulk and containerized products (such as bottles, cans, and drums) must be handled properly in all stages of delivery, use and storage. Proper delivery and handling practices reduce the likelihood of accidental spills or releases of hazardous materials during storm events. Proper practices will also improve health and safety conditions at the facility.

BMP Implementation

Material delivery and handling should take place only in designated areas situated near warehouse entrances and staging/storage areas and distant from site drainage inlets and watercourses. The best locations for deliveries are where risks of accidents are reduced and any releases can be contained.

- Maintain accurate and up-to-date records of materials delivered and stored on-site.
- Minimize on-site inventory and handling of hazardous materials.
- Stage containers on pallets, under cover, and, when possible, in secondary containment.

Employees with emergency spill cleanup training should be present during unloading of dangerous materials or liquid chemicals. Appropriate spill response procedures should be developed and posted. Additionally:

- Keep a spill kit appropriate for the received materials readily available, stocked, and ready for use (re-stock after each use).
- Clean up spills immediately using absorbent material or containment booms for liquid spills. Immediately sweep up and properly dispose of used absorbent materials.
- Always use dry methods to clean spills (sweeping) and never hose down the spill area.

Periodic inspections should be performed to verify that the conditions of containers, stockpiles, secondary containment devices, and other structural controls are acceptable. Train employees (document) on proper material delivery, handling and spill response requirements. Report all spills in accordance with the Hawaii Department of Health's (HDOH) Spill Reporting and Emergency Response requirements and document response actions.

HDOH Spill Reporting and Emergency Response website:
http://hawaii.gov/health/environmental/hazard/spill.html

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http://www.hidot.hawaii.gov/harbors/malamaikeawakai

Stormwater Management
BEST MANAGEMENT PRACTICES

Building and Remodeling

The storm drainage system at our harbor facilities collects rainfall from storm events and releases it directly, without treatment, into the harbor. Sediment is the pollutant of most concern during construction due to the removal of soil cover. Heavy metals and nutrients attach to soil particles that, if allowed to reach the storm drain, degrade water quality. Other items of concern include paints, thinners, mortars and construction rubble/debris.

Implementing Best Management Practices (BMPs) and good housekeeping practices will help maintain water quality in the harbor.

NOTE: SUBMITTAL OF BUILDING OR REMODELING PLANS TO THE HDOT HARBORS DIVISION FOR FORMAL APPROVAL IS REQUIRED

BMP Implementation

Soil Erosion and Sedimentation

- Minimize removal of existing vegetation.
- Reduce traffic on disturbed soils and divert runoff around them.
- Re-vegetate as soon as possible using native seed mix and mulch.
- Frequently sweep soil back from streets and sidewalks.
- Dry sweep paved surfaces rather than hosing down or using blowers.
- Use sediment control devices, including silt fences, inlet protection, diversion ditches, and swales to minimize off-site migration of soil.

Housekeeping During Work

- Properly store and dispose of materials such as paints and solvents.
- Properly contain and dispose of mop water, sweepings, and sediments.
- Use non-toxic substitutes for chemicals when possible.
- Inspect vehicles and equipment for leaks regularly and fix problems as soon as possible.
- Keep a spill kit of absorbent material, such as kitty litter or sand, and safety equipment, such as safety glasses and gloves, in case a spill does occur. Never hose down an area to clean up after a spill.
- Control litter by sweeping and picking up trash on a regular basis.
- Cover dumpsters and replace leaking ones.

Train employees (document) on proper materials storage, handling and spill response responsibilities. Report all spills in accordance with the Hawaii Department of Health's (HDOH) Spill Reporting and Emergency Response requirements found at the link below and document response actions.
http://hawaii.gov/health/environmental/hazard/spill.html

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Controlling Vessel Discharges
BEST MANAGEMENT PRACTICES

Small Vessel Maintenance Activities

Debris from small vessel maintenance taking place over water can result in detergents, heavy metals, oils and greases, toxic substances, sediments, and other pollutants that fall directly into pristine Hawaiian waters.

Releasing pollutants directly or indirectly into the harbor during hull maintenance activities is a violation of the Clean Water Act. Proper employee training, implementation of best management practices (BMPs), and pollution prevention methods are necessary. Such maintenance activities include:

- Painting
- Grinding and chipping
- Using chemicals for rust and paint removal
- Washing exterior surfaces (with or without chemicals)
- Engine repair

How to Comply (and Implement Best Management Practices):

Preferred: Perform vessel maintenance while vessel is in dry dock, slipway or haul-out facility, or beyond waters under the jurisdiction of the State of Hawaii.

When haul-out or drydock is not possible:

- Wash exterior surfaces with fresh water only; low pressure (<100psi) only. Wet sponges are preferred to rinsing. Never use detergents or other chemicals. Clean with dry methods (sweeping, vacuuming, or damp mopping).
- Painting to be performed on pier side of vessel only.
- Install a tarp or other containment device underneath all painting, grinding, or chipping. Magnets and poles work well to secure the tarps. Properly dispose of all captured debris removed from hull.
- Use anti-foulant paints with less toxic ingredients and never those with Tributyltin (TBT). Anti-foulant paints and other compounds containing TBT are prohibited for use throughout the United States.
- Never use chemicals, such as Naval Jelly (Phosphoric Acid) for rust or paint removal while vessel is still afloat.
- Never use any compounds that contain Tetrachloroethylene (TCE) for hull maintenance.
- Maintain the hull and all exterior surfaces more frequently to prevent the build-up of rust, marine growth, and aquatic nuisance species (invasive species).
- On Oahu, radio or call Marine Traffic Control at (808) 587-2076 BEFORE painting begins to allow for inspection by DOT Harbors. On Maui: Call 873-3350; On the Island of Hawaii: 933-8850; On Kauai: 241-3750.

*The EPA issued a draft **Small Vessel General Permit (sVGP)** in December 2011, but the moratorium on new regulations is in effect until December 2014. If finalized, it would authorize discharges incidental to the normal operation of **non-military and non-recreational vessels less than 79 feet in length and commercial fishing vessels**.*

*The draft permit specifies best management practices for several categories including **fuel management, engine and oil control, solid and liquid maintenance, gray water management, fish hold effluent management, and ballast water management**.*

Website for more info: ***http://water.epa.gov/polwaste/npdes/vessels/index.cfm***

Stormwater Management
BEST MANAGEMENT PRACTICES

Building Power Washing

Building power washing, using a high-pressure water system, generates wash water (wastewater), which could contain contaminants (such as detergents, oils, dirt, greases, paint chips, metals, and grime). The discharge of these contaminants into a storm drain is considered an "Illicit Discharge." No wastewater should be discharged into storm drains.

Detergents, even biodegradable ones, can be poisonous to fish. Phosphates, an ingredient in some detergents, are plant nutrients that can cause excessive growth of nuisance plants in the water. Building power washing also removes debris that, if discharged, can clog storm drain inlets and grates and reduce or even prevent stormwater drainage to the collection system.

Note: Building power washing, without proper containment and prior written consent from HDOT Harbors Division, is prohibited. It is also NOT acceptable to let wastewater from washing sit in areas such as parking lots, driveways, or walkway to evaporate, because contaminants can accumulate and flow into storm drains or state waters during the next rainfall event.

BMP Implementation

Primary Option:

- Apply dry wash methods (e.g., wiping with wet rags, wet mopping) that do not generate wastewater or cause wastewater to flow freely to the ground. Rinse water must be disposed of properly (e.g., into the sanitary sewer).

Secondary Option:

- Power washing with a (portable) containment system to completely contain and capture the wastewater. The system must be adequately designed to prevent water from entering a storm drain or from running off-site. A containment pad, berms, and pump system can be used to capture wastewater and divert it to a holding tank for proper disposal (see below).

Other Things To-Be-Considered:

- Building power washing is allowed only after the BMPs are approved in writing by HDOT Harbors Division.
- When power washing old paint off a building, the wastewater will contain paint chips that need to be collected, evaluated, and disposed of properly. Old paint stripped off commercial buildings may contain heavy metals (such as Pb, Cr, Cd, or Hg), and may need to be disposed of as a hazardous waste.
- Options for wastewater disposal include: (1) obtaining permission to direct the wastewater to the City's publicly owned treatment works [POTW] through a sanitary sewer on-site; (2) collecting the wastewater from the site and arranging for disposal at a POTW or industrial waste disposal facility.

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Phone: 808-587-1962

Website: ***http://www.hidot.hawaii.gov/harbors/malamaikeawakai***

Stormwater Management
BEST MANAGEMENT PRACTICES

Sidewalk and Walkway Power Washing

Unpainted concrete sidewalk/walkway power washing, using a high-pressure water system, generates wash water, which could contain contaminants (such as oils, dirt, greases, and grime). Power washing also removes debris that, if discharged, can clog storm drain inlets and grates and reduce or even prevent stormwater drainage to the storm conveyance system. Therefore, wash water from sidewalk/walkway power washing must be properly handled.

Note: Before wash water enters storm conveyance system, the discharger must use appropriate Best Management Practices [BMPs] to reduce pollution associated with non-stormwater discharges, to the Maximum Extent Practicable [MEP]. The discharger is responsible for complying with HDOT, City, State, and Federal rules and regulations.

BMP Implementation

Recommended Washing Procedure:

- Sweep and/or clean the surface of any visible pollutants and dispose of the collected material in trash containers. Clean surface oil with rags or absorbents. If using granular material (e.g., cat litter), thoroughly sweep and properly dispose of before washing.
- After visible pollutants are removed, use water ONLY to clean the area (i.e., no soap, acids, or other additives). Generated wash water should be properly drained or disposed of (e.g., directed to landscape or permeable areas within the premises, filtered through geotextile filter at the drain inlet then discharged into the storm drain).
- If any visible pollutants remain in the residual wash water, collect all water and pump into the City's publicly owned treatment works [POTW] through a sanitary sewer on-site. Approval by the City is required.

Other Things To-Be-Considered:

- If there is no storm drain system nearby and discharge on a paved lot or street will create a nuisance or hazardous condition, the effluent may be disposed of at a POTW or industrial waste disposal facility.
- Discharge to a POTW requires approval by the City.
- If sidewalk/walkway is painted and power washing has the potential to remove the paint, please refer to the **Building Power Washing BMP** flyer.

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Stormwater Management
BEST MANAGEMENT PRACTICES

Storm Drain Inlet Protection

Stormwater runoff occurs naturally. As the runoff flows over land or impervious surfaces (such as paved streets, parking lots, and building rooftops), it can collect debris, chemicals, sediment and other pollutants that could adversely affect water quality if discharged untreated. Storm drain inlet protection measures prevent potential pollutants from entering inlets and eventually our coastal receiving waters.

Storm drain inlet protection can consist of an impounding area around or upstream of a storm drain inlet and/or a sediment filter. The impounding area temporarily ponds runoff to allow sediment to settle, before entering the storm drain. Sediment and debris can also be removed by filtering.

ONLY RAIN AND PERMITTED DISCHARGES ARE ALLOWED TO ENTER HARBORS STORMWATER CONVEYANCE SYSTEMS.

Harbors Tenants shall implement following BMPs for drain inlets located exclusively within the leased area.

- Stencil catch basins and inlets to warn against dumping of pollutants into the storm drainage system.
- Install fabric filter at each on-site storm drain inlet. The fabric should overlap the sides of the inlet.
- Clean on-site catch basins and storm drain inlets in high pollutant load areas as frequently as needed and before the wet season to remove sediment and debris.
- Notify Harbors Division if repairs are needed for deteriorated storm drains and their piping.
- For storm drain inlet protection as part of construction project, please refer to Harbors Construction Site Runoff Control Program.

Inspection and Maintenance:

- If the fabric becomes clogged, torn, or degraded, it should be replaced.
- Properly dispose of wastes collected from storm drain inlet cleaning activities.

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Attachment 3

Outreach Handouts -
b. Pollution Prevention (P2) Brochures

PROTECT OUR WATER

HOUSEHOLD GUIDE TO PREVENTING STORM WATER POLLUTION

Did you know that storm drains lead directly to the ocean?

That's right! Unlike a sanitary sewer system, anything that goes into a storm drain will end up in the ocean without any treatment. Storm drain contamination is one of the major causes of pollution in our streams, harbors, and other waterways. This is why it is important for **everyone** to be aware of the dangers of pollutants entering the storm drains and to do their part to prevent pollution.

I don't dump anything into storm drains so I'm okay, right?

Not necessarily. When it rains, the water that goes down the storm drain is called storm water runoff. Storm water runoff itself does not usually harm the environment. However, the routes storm water runoff flow through (such as driveways, sidewalks, streets, construction sites, and even rooftops) may contain accumulated pollutants. Typical pollutants include litter, motor oil, yard clippings, animal wastes, soapy wash water, fertilizers and pesticides, and eroded sediment from construction sites. The storm water runoff carries these pollutants off your property and flows into our storm drains where they pollute our streams and the ocean.

Then why do we have storm drains?

Well, when it rains, water seeps into the ground, adding to Oahu's water supply. At times, it rains so much that the ground cannot absorb it all (like a kitchen sponge that is filled to its capacity). Storm water runoff occurs when excess rainwater flows over the ground surface until it finds its way to the ocean through the storm drain system, which helps convey runoff to a channel, stream, harbor, or other waterway. This prevents flooding of personal property and/or damages to public infrastructure, including roads.

So how can I help?

This brochure includes some helpful tips you can use to **prevent storm water pollution**.

Help protect the marine life and coastal ecosystems of Hawaii!

PROTECT OUR WATER:

HOW CAN I HELP?

IN THE GARAGE

- Avoid power washing your garage, driveway, and carport floor. When cleaning oil and gunk off the floor, mop or wipe it up using a degreaser and rags. Dispose of used rags in the trash bin.
- Do not dump automotive fluids (e.g., antifreeze, brake fluid, used motor oil) into storm drains or let them run down the street where the rain could carry them into the storm drain. Doing this would have the same result as dumping the pollutants directly into our ocean!

AROUND THE HOUSE

- Properly dispose of household chemicals, such as insecticides, pesticides, weed killers, cleaners, paints, solvents, used motor oil and other auto fluids. Don't pour them on the ground, into roadway gutters, or into storm drains.
- Check with your local city and/or county for advice on how to dispose of unwanted household chemicals. All counties host household hazardous waste drop-offs.

IN THE GARDEN

- Fertilizers and grass clippings can cause algae to overgrow, which depletes oxygen in the water. This harms fish, coral, and stream life because they cannot survive in water with low oxygen levels.
- Use pesticides, herbicides, and fertilizers only as needed and never apply them during windy or rainy weather conditions. This will save you money and help reduce pollutants from washing down the storm drain.
- After mowing your lawn, rake up the grass clippings and throw them in the green waste bin to prevent rain from carrying them into the storm drain.

HOME IMPROVEMENTS

- If possible, work with your contractor to reduce the amount of soil excavated. It will save you money and minimize sediment generated.
- If you decide to do-it-yourself rather than hire a contractor, educate yourself on the types of permits that are required. Install perimeter best management practices to prevent pollutants from discharging off of your property.

PET CARE

- Always remember to pick up after your pet.
- Use litter made of recycled wood shavings or paper to absorb pet waste.
- Use non-toxic and biodegradable pet shampoos to bathe your pet and drain wash water to the sanitary sewer, or wash your pet on the lawn.

For more information, please visit DOT Harbors Division storm water management program at:
http://hidot.hawaii.gov/harbors/library/storm-water-management/.

PROTECT OUR WATER

A LANDSCAPING/GARDENING GUIDE TO PREVENT STORM WATER POLLUTION

HARBORS DIVISION
PROTECT
OUR HARBOR WATERS
MĀLAMA I KE KAI
STATE OF HAWAII DEPARTMENT OF TRANPORTATION

Did you know that storm drains lead directly to the ocean?
That's right! Unlike a sanitary sewer system, anything that goes into a storm drain will end up in the ocean without any treatment. Storm drain contamination is one of the major causes of pollution in our streams, harbors, and other waterways. This is why it is important for **everyone** to be aware of the dangers of pollutants entering the storm drains and to do their part to prevent pollution.

Gardening can have an impact on water pollution.

When you use chemicals on your lawn and your plants, rain can wash it into the storm drain. You may not use a lot of chemicals, but 500,000 residents fertilizing their lawn on Saturday can cause a problem when it rains on Sunday morning. Since storm drains lead directly into the ocean, the chemicals that we use on our lawn can end up polluting our ocean.

What are the harmful effects of using lawn and garden chemicals?

Overuse of pesticides, herbicides, and fertilizers can potentially affect our drinking water supplies. Storm water runoff containing these chemicals can enter into surface water bodies and change the natural ecosystem by killing or damaging a wide variety of organisms, or by increasing plant and microbial growth. The chemicals can collect and accumulate in the food chain, becoming more concentrated the further up the food chain they move.

So how can I help?

Follow the helpful tips found in this brochure to **prevent storm water pollution**.

PROTECT OUR WATER:

HOW CAN I HELP?

LANDSCAPING TIPS

- Use pesticides, herbicides, and fertilizers only as needed and follow the manufacturer's instructions. This will save you money and help reduce the amount of chemicals that could potentially be washed down the storm drain.
- After mowing your lawn, rake up the grass clippings and throw them in the green waste bin so the rain does not carry them into the storm drain. Fertilizers and grass clippings can cause algae to overgrow, which depletes oxygen in the water. This harms fish, coral, and stream life because they cannot survive in water with low levels of oxygen.
- Use rain barrels to collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden areas. This will also help retain rainwater on-site for infiltration and therefore minimize runoff.
- When you're designing your garden, try to use native plants which require less water usage and lower maintenance. In addition, rainwater from the rooftop or paved areas can be diverted into these areas to help minimize runoff.
- Use native grass or plants along the edge of roadways or streams. When it rains, these plants work well to trap any excess chemicals or dirt in the rainwater as it flows across driveways and streets, ensuring that less of these harmful substances flow into drains.

GARDEN AND LAWN MAINTENANCE TIPS

- Leave all landscaping waste in approved green waste containers for pick-up and composting.
- Avoid over-fertilizing, especially near storm drain inlets or paved areas.

For more information, please visit DOT Harbors Division storm water management program online at:
http://hidot.hawaii.gov/harbors/library/storm-water-management/.

DEPARTMENT OF TRANSPORTATION • STATE OF HAWAII •

MĀLAMA I KE KAI –
Protect Our Harbor Waters

PROTECT OUR WATER

A RESIDENT'S GUIDE TO HOUSEHOLD HAZARDOUS WASTE

What Is Household Hazardous Waste?

Some jobs at your home may require the use of products containing hazardous components. Household Hazardous Waste is the discarded, unused, or leftover portion of these products. These wastes CANNOT be disposed of as regular garbage. Any product which is labeled POISONOUS, TOXIC, FLAMMABLE, CORROSIVE, REACTIVE, or EXPLOSIVE should be considered hazardous.

The following is a list of potential household hazardous wastes:

- **Automotive Items**

  Antifreeze
  Brake & transmission fluid
  Corrosion and rust inhibitors
  Car wax / polish
  Gasoline & other fuel
  Automotive batteries

- **Household Items**

  Cosmetics
  Wood preservatives
  Household batteries
  Latex & oil based paints
  Stains
  Drain cleaners
  Household polishes and cleaners
  Floor wax
  Insect repellants
  Rat poisons
  Florescent light bulbs
  Nail polish and removers
  Paint thinners & strippers
  Solvents
  Photochemicals
  Ammonia based cleaners
  Oven cleaners
  Deodorizers
  Aerosol sprays
  Mothballs
  Adhesives
  Broken thermometers

- **In Your Backyard**

  Insect Spray
  Swimming pool chemicals
  Fertilizers
  Weed killers
  Pesticides
  Fungicides

Oh no! What are the dangers of improper disposal?

Household hazardous wastes are sometimes disposed of improperly by individuals pouring wastes down the drain, on the ground, into storm drains, or putting them out with the trash. The dangers of such disposal methods may not be immediately obvious, but certain types of household hazardous waste have the potential to:

- Pollute water bodies when they enter storm drains that eventually empty into the ocean;
- Contaminate groundwater, our source of drinking water;
- Cause physical injury to sanitation workers and contaminate septic tanks or wastewater treatment systems if poured down drains or toilets; and
- Present hazards to children and pets if left around the house.

PROTECT OUR WATER:

HOW CAN I HELP?

What can I do to reduce household hazardous waste risks?

Here are some tips for safe storage, handling, and disposal:

- When possible, buy products with less harmful ingredients or buy nonhazardous alternatives that do the same job.
- If you need to use products with hazardous components, buy and use only the amount needed.
- Reuse the products by donating unused portions to relatives, friends, or community organizations.
- Recycle leftover household hazards that are recyclable and dispose of the others safely by participating in a local household hazardous waste collection program. Certain household hazards, such as used automobile batteries and oil, are accepted by auto-part stores and service stations.
- **Never** leave household hazards within reach of children or pets to prevent accidental ingestion.
- **Never** store hazardous products in food containers. Keep them in their original containers and never remove labels.
- **Never** mix hazards with other products. This may cause a chemical reaction or even an explosion!
- To prevent accidents at home, always follow instructions for use and storage as provided on the product's label.
- Remember, even empty containers of household hazards can be hazardous due to product residual.

Where can I get more information?

The City and County of Honolulu has a program that can help dispose of household hazardous waste. Contact them at 768-3201 or visit their website at http://www.opala.org/solid_waste/Household_Hazardous_Waste.html to find out how to dispose of household hazards. Information for each county is listed below:

Oahu - http://www.opala.org/
Maui - http://www.mauicounty.gov/index.aspx?NID=771
Hawaii - http://www.recyclehawaii.org/household-hazardous-waste.html
Kauai - http://www.kauai.gov/hhw

For more information, please visit DOT Harbors Division storm water management program online at:
http://hidot.hawaii.gov/harbors/library/storm-water-management/.

DEPARTMENT OF TRANSPORTATION • STATE OF HAWAII •

MĀLAMA I KE KAI –
Protect Our Harbor Waters

Attachment 3

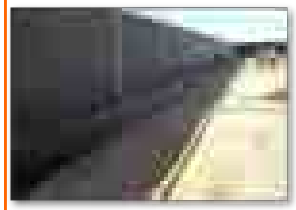
Outreach Handouts -
c. Construction Brochure

Examples of Good BMPs

BMPs should be installed and maintained in accordance with the ***City and County of Honolulu Storm Water BMP Manual for Construction***. Here are examples of good BMPs:

Stabilized construction entrance.

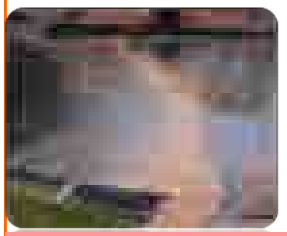
Drain inlet protected.



Properly installed silt fence

Properly contained stockpile.

Examples of Illicit Discharges



Illicit Discharge: Non-stormwater discharge that poses a risk to the environment.

Sediment leached off-site.

Improper handling of paint products.

Non-compliance are subject to enforcement.

Contact the **State of Hawaii Department of Health, Clean Water Branch** to see if your project requires an **NPDES Permit**.

Environmental Compliance

Required by your contract or by a tenant revocable permit / lease agreement.

ALL construction projects are **REQUIRED** to comply with **ALL** Local, State and Federal **ENVIRONMENTAL LAWS**. Enforcement for non-compliance may include:

- Oral or Verbal Warning
- Written Warning
- Notice of Violation
- Stop Work Order
- Summons/Citation

Training Requirements

Initial and annual refresher construction training are REQUIRED for Harbors Division engineers, inspectors, and design & construction consultants. A training video is posted online at Harbors Storm Water Management website —
http://www.hidot.hawaii.gov/harbors/malamaikeawakai

Qualified Inspectors must receive necessary training and conduct at least three on-the-job inspections.

Mailing Address:
Hawaii Dept of Transportation, Harbors Division
Hale Awa Ku Moku Building
79 South Nimitz Highway
Honolulu, Hawaii 96813-4898

Report Suspected Illicit Discharges

- Harbors Environmental Hotline: **(808) 587-1962**
- Harbors Construction Section: **(808) 587-1866**
- Harbor Traffic Control (24/7): **(808) 587-2076**
- **Hawaii Department of Health, Clean Water Branch: (808) 586-4309**

PROTECT OUR HARBOR WATERS
MĀLAMA I KE AWA KAI
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION

Construction activities can contribute pollutants (e.g., sediment) and impact the stormwater runoff, eventually discharging into the harbors and other surface waters. All construction projects conducted on Harbors property at Honolulu, Kalaeloa Barbers Point, and Kahului Harbors are subject to the requirements set forth in **Harbors Construction Site Runoff Control Program**.

Construction is defined as any activity that disturbs land (e.g., clearing, grading, excavating) and construction related activities (e.g., staging areas, stockpiles). The following construction projects can be exempt from the Harbors Construction Site Runoff Control Program:

- Minor land disturbance on a single lot (e.g., landscaping, interior improvement).
- Post, pole, sign, and fencing installation.
- Utility repair work.
- Parking lot and driveway repair.
- Repair and maintenance activities.

HDOT Harbors Construction Site Runoff Control Program Manual is online at
http://www.hidot.hawaii.gov/harbors/malamaikeawakai

PROTECT OUR HARBOR WATERS

MĀLAMA I KE AWA KAI

ALL construction projects must be reviewed by HDOT Harbors Division to ensure the following are completed and/or submitted, when applicable.

NOTE: Tenant shall obtain consent from HDOT Harbors Division prior to the beginning of any improvement project.

Pre-Construction Meeting (HDOT Harbors Projects Only)

HDOT Harbors Division Engineering Branch will review the project and proposed Best Management Practices (BMPs) to ensure they are adequate for proposed construction activities.

Discharge/Connection Permit (Tenant Projects Only)

Tenants must complete the Discharge/ Connection Permit application and submit to Harbors Environmental Section for review and evaluation, when applicable.

NPDES Permits

Submit permit application to the State of Hawaii Department of Health per Hawaii Administrative Rules 11-55. Proof of application and permit must be furnished to Harbors Engineering Branch.

Construction General Permit
Required for sites disturbing land of one acre or more.

Dewatering Permit
Required for projects dewatering to the storm drain and/or receiving water.

To apply for NPDES permits, please visit https://eha-cloud.doh.hawaii.gov/epermit/

PLAN SUBMITTAL AND REVIEW

The following forms must be submitted for plan review. These forms are available on the HDOT Harbors Division Storm Water Management website in the *Construction Site Runoff Control Program Manual* and *Post-Construction Stormwater Management Manual.* (http://www.hidot.hawaii.gov/harbors/malamaikeawaka)

For Non-Exempt Sites Less Than One Acre:

- Complete Notification Form.
- BMP Plan with narrative of proposed work, site plan, and applicable BMPs.
- Discharge/Connection permit application when applicable (**tenant projects only**).

For Sites Subject to NPDES NOI-C Program:

- Complete Construction Site Design Review Checklist.
- Complete Permanent Post-Construction BMP Plan Checklist.
- Construction Drawings/Plans.
- SWPPP
- Post-Construction Stormwater Mitigation Plan
- Copies of NPDES Permit Applications
- Any Other Applicable Applications (e.g., Section 401 Certification).

HDOT Harbors Division Engineering Branch Environmental Section will review the submittal to ensure the impact of the construction project has been limited to the maximum extent practicable.

Harbors will issue approval to allow the project to proceed once all plan review comments have been addressed. **Approval will be contingent upon the installation of BMPs and an initial inspection**.

HARBORS INSPECTION

Construction site Best Management Practices must be installed per construction plans or the SWPPP (when applicable). Inspections will be conducted by Environmental Section and/or designated & qualified inspector(s). Results will be recorded on *Construction Site Best Management Practices Inspection Checklist* and provided to the contractor for correction (if any).

Initial Inspection: To ensure that BMPs have been installed and are adequate. **No other construction activities should commence until this inspection is conducted and deficiencies are addressed**.

Recurring Inspection: Will be conducted throughout the duration of the construction project to ensure BMPs are maintained. Frequencies are:

- Every two weeks from October to March
- Every two months from April to September

Final Inspection: Will be conducted upon completion of construction activities to ensure the following:

- Disturbed soil has been stabilized.
- Temporary BMPs are removed.
- Permanent BMPs are installed, where applicable.

CONSTRACTOR SELF-INSPECTION

In addition, construction contractor must conduct self-inspections per requirements set forth in HAR 11-55, Appendix C.

Other References:

◊ CCH Rules Relating to Water Quality & Related Resources at http://www.honoluludpp.org/ApplicationsForms/StormWaterQuality.aspx

◊ CCH Storm Water Best Management Practice Manual for Construction (dated November 2011).

Updated on 9/14/2018

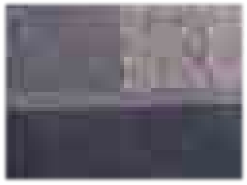
Attachment 3

Outreach Handouts -
d. Post-Construction Brochure

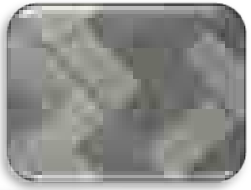
Common Post-Construction BMPs

BMPs should be installed and maintained in accordance with ***CCH Storm Water BMP Guide***. Typical post-construction BMPs include the following:

Minimize Impervious Surfaces

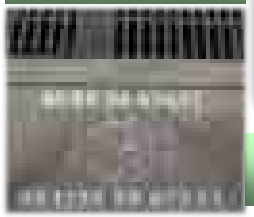


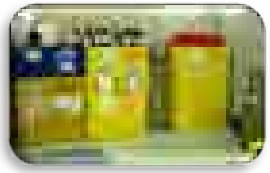
Install Permeable Pavers



Direct Runoff to Landscaped Areas

Stencil Storm Drain Inlets





Store Hazardous Substances Indoors or Under Cover

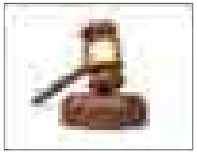
Cover Fueling Areas

Environmental Compliance

Required by your contract or by a tenant revocable permit / lease agreement.

ALL projects are **REQUIRED** to comply with **ALL** Local, State and Federal **ENVIRONMENTAL LAWS**. Enforcement for non-compliance may include:

- Oral or Verbal Warning
- Written Warning
- Notice of Violation
- Stop Work Order
- Summons/Citation



Training Requirements

Training is a major component of any successful stormwater program.

HDOT Harbors Division provides annual training session for Designers, Plan Reviewers, Engineers, Inspectors, Construction Managers, Contractors, and Operators involved in the implementation of the Harbors Post-Construction Stormwater Management Program. A training video is online at Harbors Storm Water Management website — http://www.hidot.hawaii.gov/harbors/malamaikeawakai

Mailing Address:
Hawaii Dept of Transportation, Harbors Division
Hale Awa Ku Moku Building
79 South Nimitz Highway
Honolulu, Hawaii 96813-4898

Report Suspected Illicit Discharges

- Harbors Environmental Hotline: **(808) 587-1962**
- Harbors Construction Section: **(808) 587-1866**
- Harbor Traffic Control (24/7): **(808) 587-2076**
- **Hawaii Department of Health, Clean Water Branch: (808) 586-4309**

At Honolulu, Kalaeloa Barbers Point, and Kahului Harbors, all new and redevelopment projects (resulting in a land disturbance of one acre or more) under HDOT Harbors Division jurisdiction, are subject to the Harbors Post-Construction Stormwater Management Program.

This program complements the ***Harbors Construction Site Runoff Control Program***. It is primarily for:

- Harbors Staff tasked with plan review and approval for capital projects and tenant improvement projects.
- Harbors Staff tasked with construction oversight, inspection, and maintenance of post-construction Best Management Practices [BMPs].
- Harbors tenants who wish to perform new construction, reconstruction, and modification of their premises.
- Development community including engineers and architects tasked with creating/submitting construction plans for approval.

HDOT Harbors Post-Construction Stormwater Management Program Manual is online at http://www.hidot.hawaii.gov/harbors/malamaikeawakai

PROTECT OUR HARBOR WATERS

MĀLAMA I KE AWA KAI

Urban runoff from a developed site may contain pollutants, such as trash, oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens to the stormwater conveyance system and receiving waters.

New Development is defined as new construction or installation of a building or structure, or the creation of impervious surfaces **that disturbs one acre or more, or less than one acre if it is part of a larger common plan of development or sale that disturbs one acre or more**.

Redevelopment is development that would create or add an impervious surface area on an already developed site. Redevelopment includes, but is not limited to, any construction project that requires demolition or complete removal of existing structures or impervious surfaces at a site and replacement with new impervious surfaces.

Program Exemptions

HDOT Harbors Division **may exempt certain types of projects from this program** that pose a minimum risk of stormwater pollution including, but not limited to:

- Maintenance activities such as top-layer grinding, repaving (where all pavement is not removed) and reconfiguring surface parking lots.
- Reroofing.
- Interior remodeling and improvement.
- Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility.
- Trenching and resurfacing associated with utility work.
- Replacement of damaged pavement.
- Emergency construction activities required to immediately protect public health and safety.

GENERAL PROJECT REQUIREMENTS

In Design Phase:

1. Incorporate post-construction BMP into project design (Section 2.0* and ***City and County of Honolulu [CCH] Storm Water BMP Guide***).
2. Submit *Permanent Post-Construction BMP Plan Checklist* (Appendix B*).
3. Apply for necessary permits (Attachments 1 and 2 of ***Construction Site Runoff Control Program*** manual).
4. Submit plans including Post-Construction Stormwater Mitigation Plan [PSMP] for review (Section 3.0*)
5. Submit O&M Plan, if applicable, for review (Section 5.1*)
6. Wait for concurrence and **Notice to Proceed**.

In Construction Phase:

1. Install Post-Construction BMP according to approved PSMP.
2. Monitor/Inspect installation and inventory (Attachment 4 of ***Construction Site Runoff Control Program***).
3. Enforcement if necessary.
4. Submit O&M Plan for review (Section 5.1*).

In Post-Construction Phase:

1. Conduct long-term O&M of post-construction BMPs, if applicable (Section 5.0*).
2. Inspect post-construction BMP regularly (Section 5.3*)
3. **For Tenant projects, tenant must submit annual O&M and inspection report to Harbors when applicable (Section 5.2*).**
4. Enforcement if necessary (Section 6.0*).

References:

- ◊ **CCH Rules Relating to Water Quality & Related Resources** at http://www.honoluludpp.org/ApplicationsForms/StormWaterQuality.aspx
- ◊ ***HDOT Harbors Division Post-Construction Stormwater Management Program Manual**.

BMP REQUIREMENTS & SELECTION

To comply with Harbors small Municipal Separate Storm Sewer System permits and to minimize water quality impacts from new development and redevelopment, all Regulated Projects shall consider and apply post-construction BMPs, as appropriate.

POST-CONSTRUCTION BMPS

Low Impact Development [LID] Site Design Strategies:

- Reduce the hydrologic impacts of development and incorporating techniques that maintain or restore the site's hydrologic and hydraulic functions.

Source Control:

- Prevent pollutants from coming in contact with runoff, and prevent polluted runoff from discharging into stormwater conveyance system and receiving waters.

Treatment Control:

- LID Retention - Retain runoff on-site.
- LID Bioinfiltration - Remove pollutants from runoff by filtering through vegetation and soils.
- Other Treatment - Remove pollutants from runoff by mechanical methods.

Updated on 9/14/2018

Attachment 4

Tenant Training –
a. Training Notice Letter with BMP Sheets and Questionnaire

July 31, 2018

TO: HARBORS DIVISION TENANTS

FROM: DARRELL T. YOUNG
DEPUTY DIRECTOR
DEPARTMENT OF TRANSPORTATION - HARBORS DIVISION

SUBJECT: 2018 STORMWATER AWARENESS TRAINING FOR HARBORS TENANTS
***MĀLAMA I KE KAI* (PROTECT OUR HARBOR WATERS)**

Our annual stormwater awareness training will be held at the **Honolulu Harbor Pier 19 Terminal** this year. **Two identical training sessions will be held on August 30 and September 20, 2018, both from 9:30 am to 11:30 am**. Please send at least one representative from your company to attend one or both training sessions. Check-in starts at about 9:00 am. **Parking is available at the Pier 19 Cruise Terminal parking lot at no charge (see attached map).**

Please note that attending this annual training is mandatory for all Harbors Division tenants on the Island of Oahu.

http://hidot.hawaii.gov/harbors/library/storm-water-management/

We have enclosed a brochure to further enhance your knowledge regarding stormwater awareness and pollution prevention. If you have questions, please contact Mr. Spencer Yim of our Engineering Branch Environmental Section at (808) 587-1963.

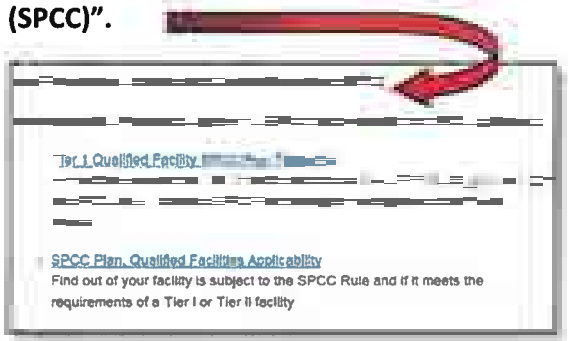
Enclosure

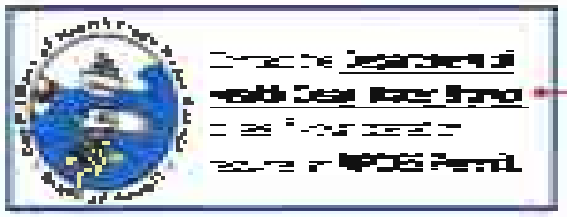
2018 HDOT Harbors Division Tenant Stormwater Awareness Training
Location Map

Date and Time: August 30 and September 20, 2018 (09:30 am to 11:30 am)
Location: Honolulu Harbor Pier 19 Terminal
(Light refreshments and coffee will be provided)
Parking: Please park at the open lot south of Pier 19 Terminal and annotated as **Parking Area** on the Map.
When this area is fully occupied (due to cargo operations), please proceed to **Alternate Parking Area** (accessible through North Nimitz Hwy by turning right at Sign **Piers 18-20**).

Select Harbors Division **SCROLL DOWN** the webpage and find **BMP Flyers** under:

SCROLL DOWN further to find "**Spill Prevention Control & Counter Measures (SPCC)**".





ENVIRONMENTAL COMPLIANCE IS REQUIRED IN YOUR REVOCABLE PERMIT OR LEASE

All tenants are **REQUIRED** to comply with **All** local, State and Federal **ENVIRONMENTAL LAWS** applicable to the activities on the permitted or leased Premises during and/or after the execution or termination of the Revocable Permit or Lease. Failure of tenant to comply with any Environmental Laws constitutes a breach of the agreement, which may result in **TERMINATION** of the Revocable Permit or Lease and **LEGAL REMEDIES**, including, but not limited to, remediation at tenant's sole cost. **Questions Call: (808) 587-1962.**

Non Compliance could result in **CITATIONS** and **FINES** issued by the Hawaii State Department of Health (DOH) and/or the Environmental Protection Agency (EPA). Let's work together to keep our environment clean.

REPORT ILLICIT DISCHARGES

- Harbors Environmental Sector (M-F 8:00 AM to 4:30 PM) (808) 587-1962
- Harbors Traffic Control (24/7) (808) 587-2076
- U.S. Coast Guard (808) 842-2600
- Hawaii Department of Health, Clean Water Branch. (808) 586-4309
- U.S. EPA (808) 541-2731

Storm water pollution affects us all. Storm drains are not connected to the wastewater treatment plant *(sewer system)*, so everything flowing into the storm drain goes directly into our ocean UNTREATED!

Storm water pollution comes from a variety of sources including

- Oil, fuel, machinery fluids, etc.
- Litter, pesticides, fertilizers, etc.
- Construction materials, such as, cement, paints, solvents, cleaners, detergents, metal, insulation, wood, etc.
- Bacteria from human and animal waste.
- Wash water from sinks, laundry, showers, vehicle washing, etc.

For More Information Call:

(808) 587-1962

PROTECT THE HARBOR WATERS

We are all responsible to make sure that pollutants don't end up in our ocean. To prevent "Illicit Discharges" into the storm water drainage system, there are Good Housekeeping activities and/or **Best Management Practices (BMPs)** that must be incorporated into your operations.

Sweep, Rake, Vacuum & Mop vs. Washing
Do NOT hose off sidewalks, parking areas and garages. Sweep, Rake, Vacuum & Mop and properly dispose of debris.

Use Non-Toxic Products
Choose non-toxic products over toxic ones. If needed, use them sparingly and properly dispose of unused portions. Minimize quantities stored on site.

NO Vehicle Washing
Unless authorized in writing by DOT Harbors. When washing vehicles, use soap sparingly and divert water runoff to landscaping or the sanitary sewer. Wash water should be collected in a bucket and poured in a sink. Do not allow soapy water to go onto the ground or into storm drains.

Reduce Use of Landscape Chemicals
Minimize the use of lawn and garden products, pesticides, herbicides, fertilizers and other chemicals. Avoid over-irrigating.

In general, BMPs can be followed by incorporating the 4 C's

[illegible]

[illegible]: Isolate your work area to prevent any potential flow or discharge from leaving the area.

Control It: [illegible] storm [illegible] prevent [illegible] discharging into them.

Capture It: Be prepared with clearly marked up bins in appropriate areas to contain spills. Capture debris from storm water runoff, cover trash, sweep, rake, vacuum and mop versus wash. Properly dispose of debris in trash receptacles.

Communicate It: Report illicit discharges, suspected discharges, and pollution concerns to Harbors Environmental Hotline at (808) 587-1962 or to contacts listed in the **REPORT ILLICIT DISCHARGES** box. (BACK PAGE)

Best Management Practices (BMPs) for your industry can be found on the DOT Website:

http://hidot.hawaii.gov/harbors/library/storm-water-management/

Attachment 4

Tenant Training –
b. Presentation Slides

Hawaii Department of Transportation, Harbors Division

2018 Tenant Stormwater Awareness Training

Agenda

- **Welcome Address**
  - Darrell Young, Deputy Director, DOT Harbors Division
- **TEMY Award Presentations**
  - Spencer Yim, Environmental Section Head
- **Administrative Remarks**
  - Spencer Yim, Environmental Section Head
- **DOT Compliance Audit**
  - Spencer Yim, Environmental Section Head
- **Stormwater Awareness Training Part 1**
  - Vijaya Tummala, EnviroServices & Training Center, LLC

10 min Break

- **Stormwater Awareness Training Part 2**
  - Vijaya Tummala, EnviroServices & Training Center, LLC
- **Questionnaire Distribution**
- **Guest Speaker**
  - Jason Mehlinger, Department of Land and Natural Resources (DLNR) Division of Aquatic Resources (DAR)
- **Training Questionnaire and Evaluation**

Welcome Address

Darrell Young

Deputy Director, DOT Harbors Division

TEMY Awards

Spencer Yim

Environmental Section Head,
DOT Harbors Division

Honorable Mentions

2018 Tenant Environmental Manager of the Year

Ms. Sara Daniels
Asphalt Hawaii

Mr. Freedom Dennis
FOSS Maritime Company

Mr. Frank Roznerski
Hawaii Stevedores, Inc.

Mr. Dane Wurlitzer
Hawaiian Cement

Honorable Mentions

2018 Tenant Environmental Manager of the Year

Mr. Joshua Ibrao
Jems Enterprises, LLC
(aka Hawaiian Ice Co)

Mr. Stephen Hinton
Marisco, Ltd.

Mr. Neil Kanemoto
Pacific Ocean Producers, Inc.

Mr. Tor Harris
Sea Engineering, Inc.

Honorable Mentions

2018 Tenant Environmental Manager of the Year

Mr. Kern Nishioka
State of Hawaii Department of the Attorney General

Mr. Daniel Otani
United Fishing Agency, Ltd.

Mr. Freedom Dennis
Young Brothers, Ltd

.

2018
Tenant Environmental Manager of the Year

Congratulations to

Mr. Ross Barnes

University of Hawai‘i Marine Center

Administrative Remarks & DOT Compliance Audit

Spencer Yim

Environmental Section Head,

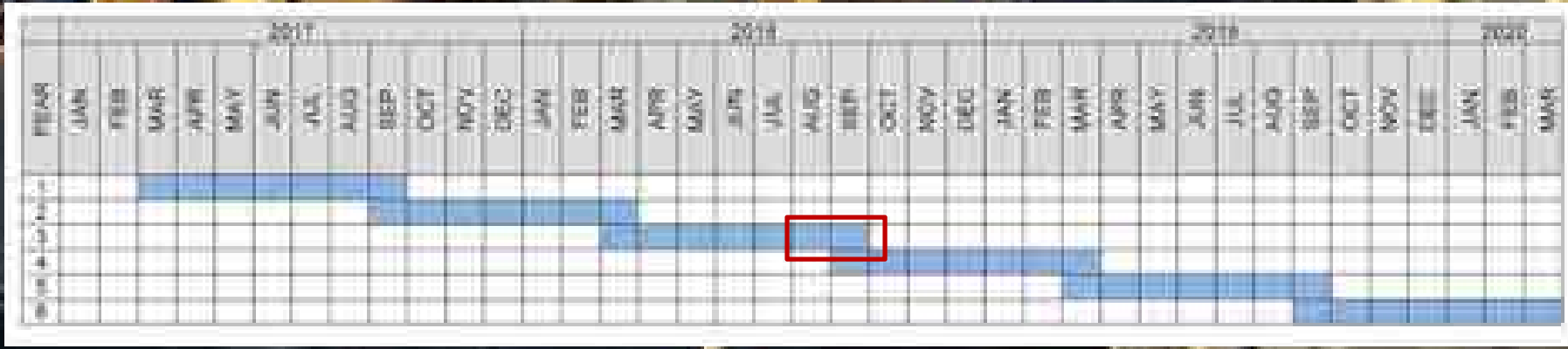
DOT Harbors Division

DOT Compliance Audit

- Required by 2014 Consent Decree
- Covers Harbors, Airports, Highways
- **P**rogram **E**lement **A**udit **R**eports (PEAR)
- ENV Consultant: Kennedy/Jenks Consultants

Audit Schedule

1. ~~Post-Construction / Permanent Best Management Practices~~
2. ~~Construction Site Runoff Control~~
3. ~~Public Outreach / Public Involvement~~
4. **Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program**
5. Pollution Prevention / Good Housekeeping Program
6. Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability



Harbors Findings from PEAR 1- 3

- PEAR 1: One Potential Violation and Four Deficiencies
- PEAR 2: No Major Findings
- PEAR 3: One Potential Violation and Two Deficiencies

PEAR 4: Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program

- September 2018 – March 2019

Stormwater Awareness Training

Vijaya Tummala, P.E., CISEC

EnviroServices & Training Center, LLC

Stormwater Awareness Training
Part 1 Outline

- Consent Decree
- Regulatory Background
- NPDES Permit Requirements
- Know Other Requirements & Regulations
- Storm Drain System
- Pollutants of Concern
  - Zinc in Stormwater: Galvanizing Business Solutions Video
- Inspection Success

Consent Decree

- In November 2014, Harbors Division entered into a Consent Decree with DOJ/EPA/DOH
- Consent Decree available on Harbors website

  http://hidot.hawaii.gov/harbors/files/2013/01/Consent-Decree.pdf
- Stormwater compliance with:
  - Clean Water Act
  - National Pollutant Discharge Elimination System (NPDES) Permits for Small Municipal Separate Sewer Systems (MS4) and Stormwater Management Plan (SWMP)

Regulatory Background

- DOH administers the NPDES Small MS4 permits in Hawaii under **HAR 11-55 Appendix K**
- DOH issued general permits to DOT Harbors authorizing the discharges of stormwater and certain non-stormwater discharges from Harbor's MS4s
  - Honolulu Harbor permit HI 03KB482
  - Kalaeloa Barbers Point Harbor permit HI 03KB488

HAR 11-55 Appendix K lists allowable discharges under these permits

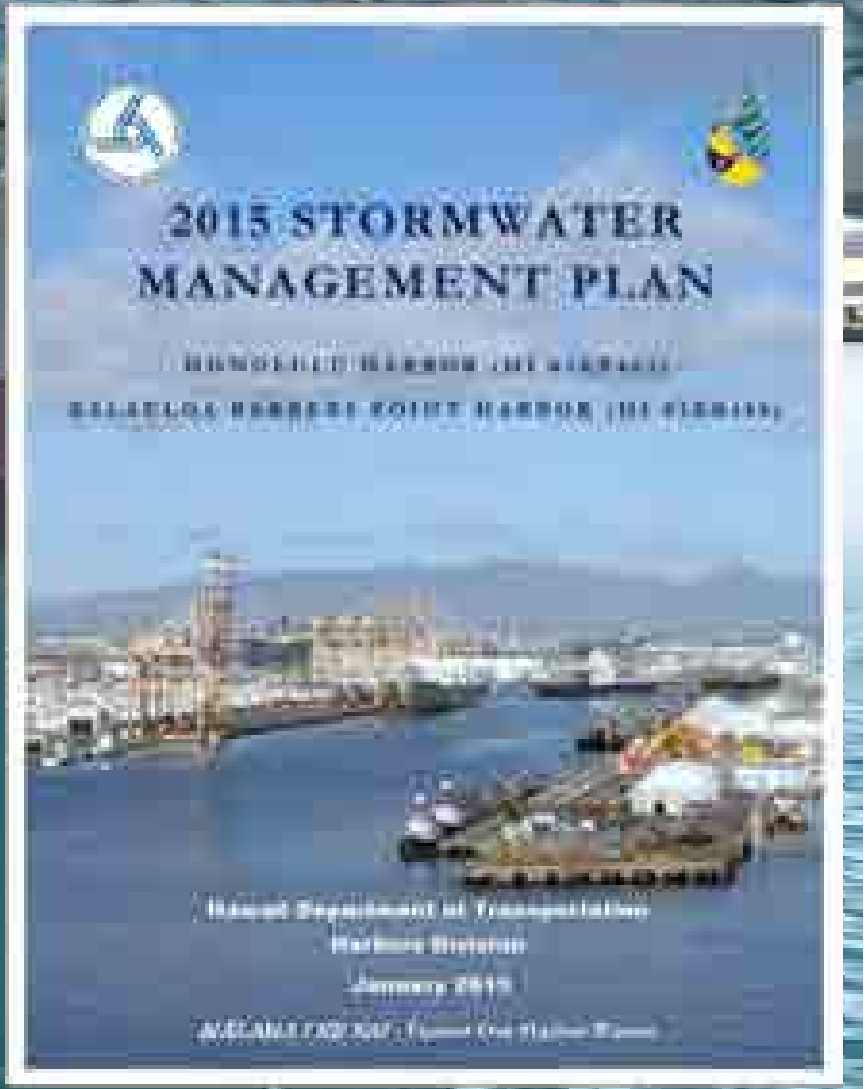
Allowable Non-stormwater Discharges

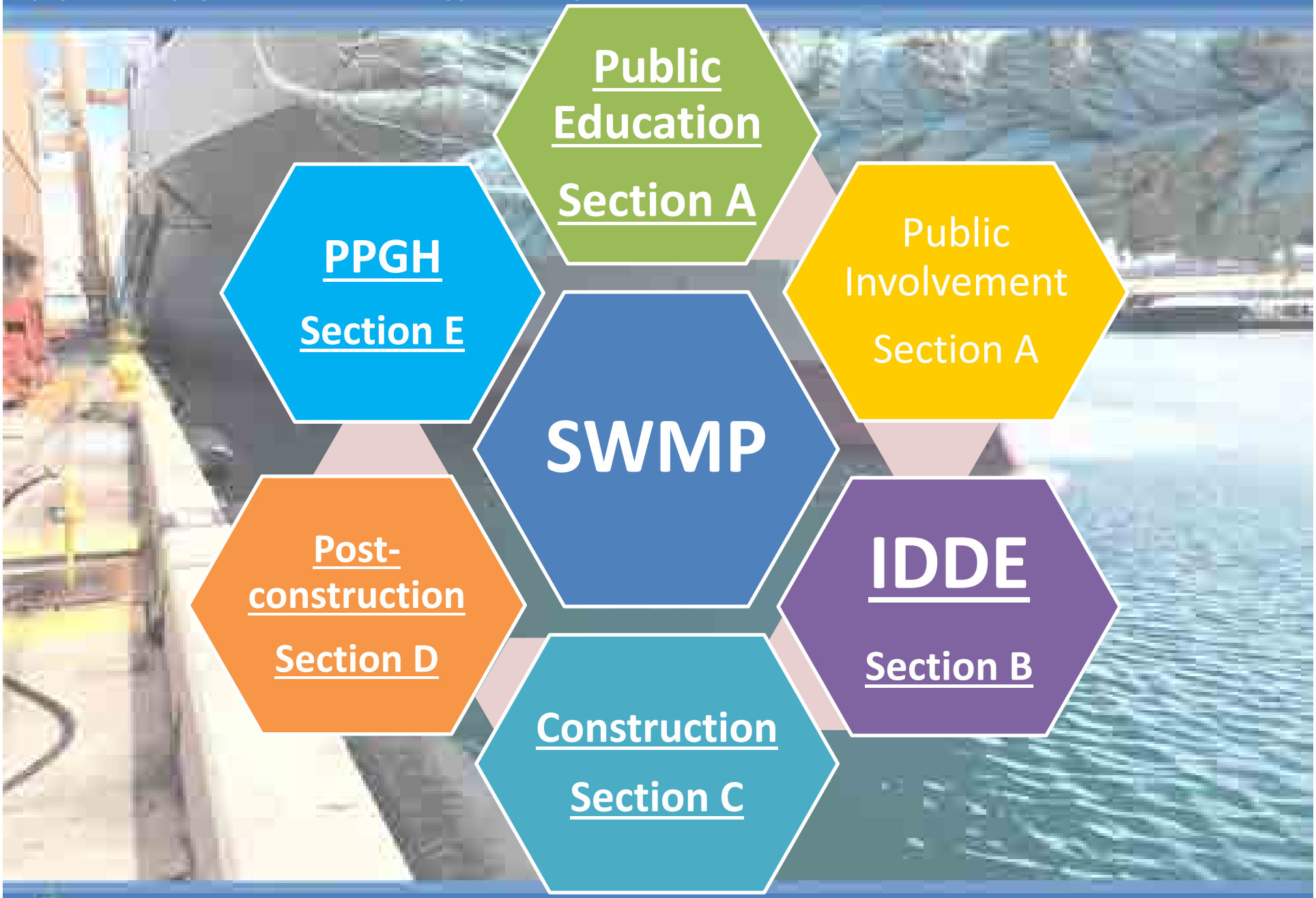
- Daily Operations
  - Water line flushing
  - Uncontaminated AC Condensate
  - Landscape irrigation
  - Discharges from potable water sources and foundation drains
  - Water from crawl space pumps and footing drains
- Groundwater (uncontaminated)
- Natural Origin
  - Springs
  - Diverted stream flows
- Emergencies
  - Discharge from fire fighting activities

NPDES Permit Requirements

- Implementation of SWMP for MS4s at Honolulu and Kalaeloa Barbers Point Harbors
- SWMP currently being revised

http://hidot.hawaii.gov/harbors/files/2013/01/Final-SWMP-150325.pdf




Public Education
Section A
PPGH
Section E
Public Involvement
Section A
SWMP
Post-construction
Section D
IDDE
Section B
Construction
Section C

Know Other Requirements & Regulations

1. Industrial NPDES Permit
2. Harbors Washing Approval
3. Hazardous Waste
4. Universal Waste

1. Industrial NPDES Permit

- Administered by DOH (**<u>HAR 11-55 Appendix B</u>**) and allows discharge of stormwater associated with industrial activities such as:
  - Material Handling and Storage
  - Equipment Cleaning
  - Maintenance and Repair
  - Fueling
  - Washing
  - Sanding and Painting

1. Industrial NPDES Permits

- Conditions of the Permit
  - Stormwater Pollution Control Plan (SWPCP)
    - Includes BMPs that control pollutants generated
  - Stormwater Monitoring
  - Submittal of a Discharge Monitoring Report (DMR)
  - No violation of water quality (HAR 11-54, State Water Quality Standards)

2. Harbors Washing Approval

- All washing areas must be approved by Harbors Environmental Section
- **Wash water must be collected and is <u>not</u> permitted to be discharged to the storm drain system or any surface water (e.g. Honolulu Harbor)**

3. Hazardous Waste

- RCRA and HAR 11-260
- Record the quantities generated each month. **Know your generator status!**
- Have records available for inspectors

Label and **store drums properly**!

4. Universal Waste

- HAR 11-273
- Examples
  - Fluorescent lamps
  - Batteries
  - Anything with mercury
- Label container and include accumulation start date
- Dispose within a year

Storm Drain System

Municipal Separate Storm Sewer System (MS4)

- Publicly-owned conveyance or systems of conveyances *(including but not limited to streets, ditches, catch basins, curbs, gutters, and storm drains)* that is designed or used for collecting or conveying stormwater and discharges to surface waters.

Storm Drain System

Stormwater picks up debris, chemicals, sediment and other pollutants.

Stormwater flows into a storm sewer system.

Collected stormwater eventually drains to the ocean through outfalls, **with no treatment.**

Pollutant

Any type of material or waste that degrades **water quality, public health, the environment or the beneficial uses of receiving waters.**

Pollutants of Concern

Stormwater is often the main cause of surface water pollution. Polluted waterways can lead to restrictions on boating, swimming, and fishing in recreational areas.

- Sediment
- Nutrients (leaves, trash, etc.)
- Bacteria and other pathogens
- Debris and garbage
- Chemicals and Hydrocarbons (insecticides, pesticides, paints, solvents, oil, automobile fluids)
- Metals (zinc, iron, aluminum)
- Polluted drinking water source

Short Film

ZINC in Stormwater: Galvanizing Business Solutions Video

https://vimeo.com/99672983

Effects of Pollution

Can you prevent this?

Inspection Success

The EPA and DOH can inspect a tenant property at any time

Be Prepared!

Let's Work Together!

http://hidot.hawaii.gov/harbors/files/2013/01/2014-Tenant-Inspection-Manual_Final1.pdf

Harbors Inspections

Identify:

- **How** to reduce pollutants
- **Share** information between Harbors personnel and tenants

Tenants are inspected based on their risk ranking:

High risk ranked tenants are inspected **every 6 months**

Medium risk ranked tenants are inspected **once a year**

Low risk ranked tenants are inspected **every five years**

General Inspection Items

- Paperwork *(permits, plans, training logs, etc.)*
- Storage and Handling *(petroleum, waste, chemicals)*
- Container Labels
- Fueling BMPs
- Washing BMPs
- Maintenance BMPs and record keeping
- Spill response BMPs and record keeping
- General Housekeeping BMPs

Short Break (10 min)

Stormwater Awareness Training Part 2 Outline

- Best Management Practices (BMPs)
  - Stormwater Strategies: Purpose of Housekeeping Video
  - Stormwater Strategies: Sweeping BMPs Video
  - Stormwater Strategies: Washing and Wash Water Contamination Video
- Correct Deficiencies
- Escalating Enforcement
- Illicit Discharge
  - Illicit Discharge Video
- Allowable non-stormwater discharges
- Spill Response
  - Stormwater Strategies: Spill Scenario Video
- Construction Program and PBMPs
- Resources and Contacts
- **Training Questionnaire and Evaluation**
  (Required to complete to get credit for class)

Best Management Practices (BMPs)

- **What is a BMP?**
  - Structural device or system
  - Operational or procedural practice
    - BMPs are specific to a facility's operation
- **Where are BMPs found?**
  - Facility SWPCP or BMP Plan
  - DOT-Harbors Tenant Inspection Manual
  - Harbors Stormwater Management Website
  - Environmental Protection Agency BMP Menu

Common BMPs

- General BMPs for Business (Good Housekeeping)
- Storm Drain Inlet Protection
- Vehicle and Equipment Washing
- Vehicle and Equipment Fueling
- Material Delivery and Handling
- Solid and Hazardous Waste Management
- Outdoor Material Storage
- Building and Remodeling
- Building Power Washing
- Sidewalk and Walkway Power Washing

Good Housekeeping

Stormwater Strategies: Housekeeping,
Purpose of Housekeeping

– *A video published by County of San Diego*

https://www.youtube.com/watch?v=UxOam2GEVgQ

General BMPs for Business (Housekeeping)

- Unlabeled
- Stored outside without secondary containment (this is an issue if the drum contains liquid)

- Properly labeled as “empty”

General BMPs for Business (Housekeeping)

- Overflowing trash bin

- Trash bins are covered

Good Housekeeping

Stormwater Strategies: Housekeeping, *Sweeping*

– *A video published by County of San Diego*

https://www.youtube.com/watch?v=UxOam2GEVgQ

General BMPs for Business (Housekeeping)

- Staining observed
- Facility should implement proper BMPs to prevent staining and should remove stains

- Utilizing a containment device, however the leak expands larger than the device

Vehicle and Equipment Washing

Stormwater Strategies: Housekeeping, *Washing and Wash Water Contamination*

– *A video published by County of San Diego*

https://www.youtube.com/watch?v=UxOam2GEVgQ

Vehicle and Equipment Fueling

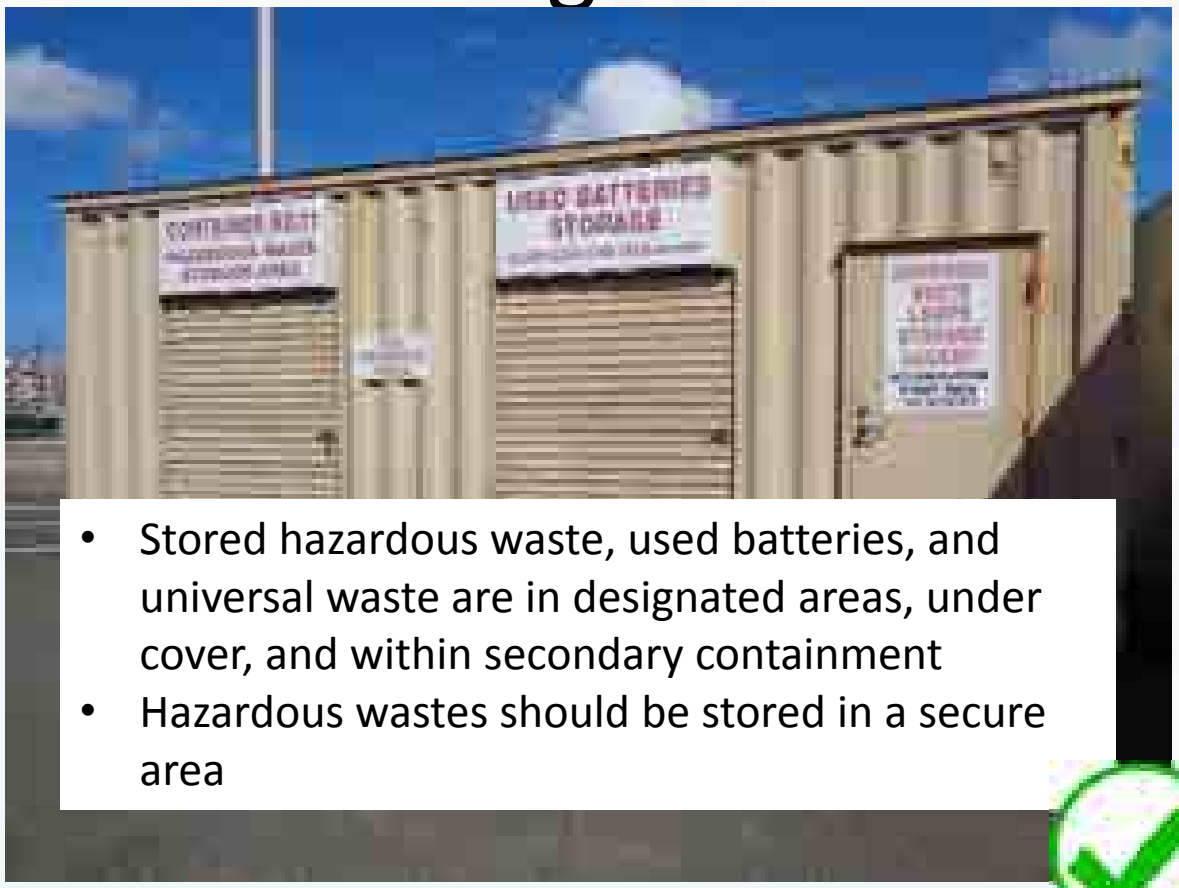
- Fuel in a contained area when practicable.
- Protect storm drains during fueling.

Solid and Hazardous Waste Management

- Designate a hazardous waste accumulation area at your facility.
- Store in a secured area to protect from damage
- Store under cover and within secondary containment

- Stored under cover and within secondary containment

Solid and Hazardous Waste Management



- Stored hazardous waste, used batteries, and universal waste are in designated areas, under cover, and within secondary containment
- Hazardous wastes should be stored in a secure area

Outdoor Material Storage

- Store under cover to protect from the rain or sun

Spill Kit

- Place spill kits in high risk areas

Harbors Inspection Reports

Inspection Report includes

1. Checklist
2. Updated risk ranking
3. Photo log
4. Findings
   - Tenants are encouraged to **fix minor discrepancies** during inspections, otherwise tenants have 30 days to fix discrepancies.
   - Violations (Class I and Class II)

Tenants can provide photos to document corrective actions

Escalating Enforcement

An environmental violation may lead to penalties

1. Oral or Verbal Warning
2. Written Warning (Inspection Report + Letter)
3. Notice of Apparent Violation
4. Notice of Finding of Violation and Order
5. Termination of Lease / Revocable Permit

What is an Illicit Discharge?

Any non-stormwater discharge that poses a risk to the environment.

Short Film

Illicit Discharge Video

https://www.youtube.com/watch?v=9LT10kVk-1s

Spill Response

1. **Assess the Risk**
2. Select PPE
3. Contain the Spill
4. Stop the Source
5. Clean-up
6. Decontaminate and Dispose of Wastes
7. Complete Required Reporting Documents

Spill Prevention and Response

Stormwater Strategies: Housekeeping,

Spill Scenario

– A video published by County of San Diego

https://www.youtube.com/watch?v=UxOam2GEVgQ

Illicit Discharge and Spill Reporting

Notify Harbors of spills.

Harbor Traffic Control Unit (24/7): 808-587-2076

Harbors Environmental Hotline: 808-587-1962

- What to report:
- Location of incident, date and time
- Description of incident
- Responsible party & cause of incident
- Type of media that received the discharge

Construction Site Runoff Control Program

- Tenant construction projects need approval from Harbors and must obtain all necessary permits
- Harbors will ensure temporary BMPs are sufficient in the design review phase
- Harbors will inspect non-exempt project sites
- Tenant is ultimately responsible for the project

Review and Approval Requirements

- Notification Form for projects less than one acre

OR

- Construction Design Review Checklist
- Completed NPDES application
- Construction BMP plan sheet and details
- Stormwater Pollution Prevention Plan (SWPPP)

Compliance and Inspections

Harbor Inspections

- Initial Inspection
  - Ensure BMPs are installed properly
  - Deficiencies must be corrected prior to the start of other construction work
- Regular Inspections
  - **October – April (Wet Season):** Every two weeks
  - **May – September (Dry Season):** Every two months
  - Inspectors will provide the contractor with a report within five (5) calendar days
  - Deficiencies must be corrected or enforcement will commence

Compliance and Inspections

Harbor Inspections

- Final Inspection
  - When all the following conditions are met:
    - Construction is inactive
    - Exposed soil has been stabilized
    - Remaining activities have minimal impact on stormwater runoff
  - Document the conditions are met
  - Ensure that permanent BMPs are properly installed, if applicable
  - Deficiencies must be corrected

Post-Construction BMP

Projects that result in land disturbance of 1 acre or more (regulated projects) **must** include post construction BMPs.

Post-Construction BMP

- Low Impact Development (LID)
  - …"mimic predevelopment site hydrology by using site design techniques that store, infiltrate, evaporate, and detain runoff…"
  - Goal: Keep stormwater on-site and treat it as a resource instead of a waste.
- Source Control
  - Goal: Keep potential pollutants from coming into contact with stormwater
- Treatment Control
  - Goal: Remove pollutants from stormwater runoff.

You can prevent stormwater pollution!

- Consider stormwater impacts from your daily operations
- Practice Good Housekeeping Measures
- Implement Source Control BMPs
- Respond to spills promptly
- Report illicit discharges and spills

Mahalo!

Any questions?

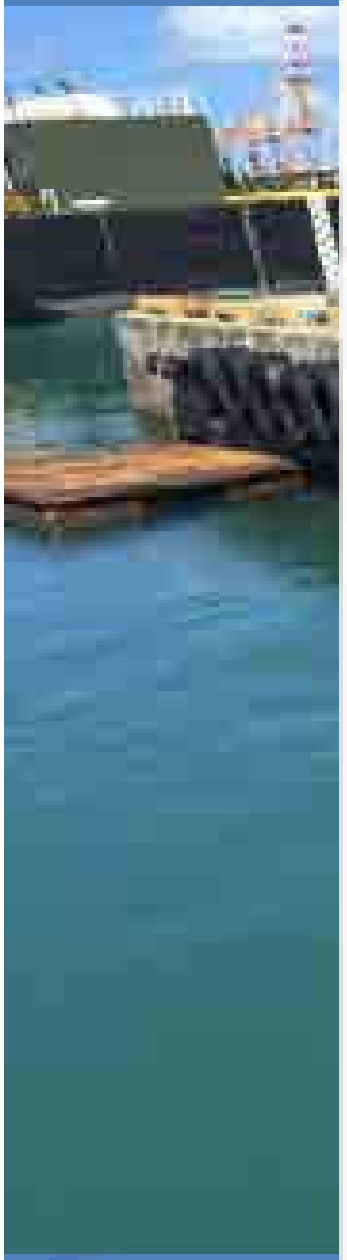
Jason Mehlinger

Division of Aquatics Resources

Resources and Contacts

Harbors Stormwater Website:
http://hidot.hawaii.gov/harbors/library/storm-water-management/

- Harbors Division Environmental Contacts:
  - Report Suspected Illicit Discharge: 587-2076 (Harbor Traffic Control) or 587-1960 (Environmental Hotline)
  - Spencer Yim, P.E., 587-1963 Spencer.K.Yim@hawaii.gov
  - Joy Zhang, P.E.: 587-1960, ying.j.zhang@hawaii.gov
  - Michele Freitas: 587-1976, michele.gn.freitas@hawaii.gov
  - Mitchell Martello: 587-1969, mitchell.a.martello@hawaii.gov
- Harbors Division Property Management Contacts:
  - Calvert Chun, 587-1944, calvert.jt.chun@Hawaii.gov
  - Eric Leong, 587-1943,eric.leong@Hawaii.gov
  - Carl Young, 587-1945, carl.g.young@hawaii.gov



"Mālama i ke Kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: _____ Company: _____ Date: _____

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076.
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment.
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coming on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties.
    a. True
    b. False

Mahalo!

Please return your questionnaire and training evaluation form before you leave

Required to complete to get credit for class

Attachment 4

Tenant Training –
c. Sign-In Sheets

HDOT Harbors Annual Tenants Stormwater Awareness Training Sign-in Sheet

Date: August 30, 2018 Trainer: Mayo Tummala, CTC

No.	Name	Company	E-mail Address	Phone #	Initials
1	Frank Kay	Matson	fkay@matson.com	216-6935	FK
2	Edgar Ugale	CRD - AG	edgar.ugale@hawaii.gov	586-1217	[illegible]
3	Nathan McCormick	CRD - AG	nathan.m.mccormick@hawaii.gov	586-1111	[illegible]
4	Diego Rivera	Atlantis Adv.		485-314-4475	DR
5	Kekua Kali	Atlantis Adv.		808-386-0123	KK
6	Jim Mehlhaus	Wind & Sea Charters	jmh@lava.net	808-220-7675	[illegible]
7	Jay Dawsett	Friends of Hokulea & Hawaiiki		256-1[illegible]	[illegible]
8	Gerald Cambalamo	Family Tibbitts Builders		564-2272	[illegible]
9	Frank Rozneczek	Hawaii Stevedores Inc	frozneczek@hawaiistevedores.com	864-4638	FN
10	Jonathan Sutre	AML	Jsutre@lyndon.com	748-7890	JS
11	Shawn Hayasaka	Grace Pacific	shayasaka@gracepacific.com	3484895	SH
12	Randy Leong	City & County Hon	rleong@honolulu.gov	768-4304	RL
13	Joe Vele	DHX Inc.	joe.vele@dhx.com	590-3208	[illegible]
14	Jim Gomes	Hawaiian Cement	jim.gomes@hawaiiancement.com	284-7576	[illegible]
15	Trevor Kuo	Pusko - Hawaii Stevedores	tkuo@hawaiistevedores.com	294-3765	TK
16	Blake Edwards	American Marine	blake@amarinecorp.com	222-2463	BE
17	Eric Leong	HAR - PM	eric.leong@hawaii.gov	587-1943	EF
18	Derek Higa	Fresh Island Fish	Derek@freshislandfish.com	479-0007	[illegible]

HDOT Harbors Annual Tenants Stormwater Awareness Training Sign-in Sheet

Date: August 30, 2018 — Instructor: Gayle Tummala/ETC

No	Name	Company	E-mail Address	Phone #	Initials
1	Yasuo Kitatani	Nike Beach	[illegible]	[illegible]	[illegible]
2	Mike Lefton	American Marine Corp	lefton@amarinecorp.com	479-8517	[illegible]
3	James Perkins Jr.	Kirby Offshore Marine	James.Perkins@kirbygroup.com	808-208-1089	JP
4	Lola Kan	Ko Olina Kai Resort	lola96744@hotmail.com	808 781 3666	[illegible]
5	Rodney Yee	Pioneer Machinery Inc	pioneermach@gmail.com	371-4597	[illegible]
6	Scott Sevadjian	Grace Pacific	ssevadjian@gracepacific.com	375 2374	[illegible]
7	John Power	Healy Tibbitts Builders	jpower@healytibbitts.com	808-364-4102	[illegible]
8	Stephen Sasaki	MATSON	ssasaki@matson.com	848-1241	[illegible]
9	Andrew Jones	McCabe Hamilton & Renny	andrewjones@mhrcorp.com	479-0356	[illegible]
10	Raymond Rodriguez	VAK Fisheries LLC	support@vakfisheries.com	8432229	[illegible]
11	Daniel Sullivan	Hawaiian Cement	dan.sullivan@hawaiiancement.com	564-0175	[illegible]
12	Rodney Tamanaha	Anna Ship SVC.	stinkybiggie2@yahoo.com	478-8732	[illegible]
13	Bruce McCowan	Friends of Ewa Beach	bmccowan@hawaii.rr.com	367-1141	[illegible]
14	David Dougherty	American Marine Corp	ddougherty@amarinecorp.com	792-1162	[illegible]
15	Kimo Byrd	U.S.I.	kbyrd@usiinc.com	[illegible]	[illegible]
16	Jessie Galaviz	Retrospect	OPS@Retrospect.net	536-6081	[illegible]
17	Carl Young	DOT Harbors	carl.g.young@hawaii.gov	587-1945	[illegible]
18	DC Carter	PEAKO	DC@PEAKO.ORG	792-1181	[illegible]

HCDT Harbors Annual Tenants Stormwater Awareness Training Sign-in Sheet

Date: August 30, 2019 Trainer: Nyaya Tammala/ETC

No.	Name	Company	E-mail Address	Phone #	Initials
1	M Sidensky	Sea Engineering	msidensky@seaengineering.com	808 953 9009	MS
2	Robert Straub	Sause Bros	R.STRAUB22@hotmail.com	(808) 741-3099	[illegible]
3	Ronald Chun	Honolulu Marathon	jchun@honolulumarathon.org	808 255 2602	[illegible]
4	Greg Bull	Pacific Shipyards	GBull@pacificshipyards.com	808 366 1191	[illegible]
5	Phillip Bustamante	Pacific Shipyards International	pbustamante@pacificshipyards.com	808 787 3372	[illegible]
6	Michael Watanabe	C&C of Honolulu	mwatanabe2@honolulu.gov	808 768-2450	[illegible]
7	Steve Himmon	Marisco	shimmon@marisco.net	808-306-5935	[illegible]
8	Joseph Bieniek	BEI Hawaii	jbieniek@beihawaii.com	808-265-0911	[illegible]
9	Linda Goldstein	HC&D	linda.goldstein@hcdhawaii.com	808-333-6844	[illegible]
10	Nelson Bonilla	United Fishing Agency	nelson.bonilla@unitedfishingagency.com	536 2146	NA
11	Clint Kagami	Kagami Inc	ckagami@hotmail.com	808 376 5779	[illegible]
12	Kenyi Kuwamura	Matson Nav. Co	KKuwamura@matson.com	808 592 4485	[illegible]
13					
14					
15					
16					
17					
18					

HDOT Harbors Annual Tenants Stormwater Awareness Training Sign-in Sheet

Date: August 30, 2018 Trainer: Vijaya Lummala - ETC

No	Name	Company	E-mail Address	Phone #	Initials
1	Floyd Otani	United Fishing Agency	f.otani@unitedfishingagency.com	536-2148	[illegible]
2	Dan Otani	United Fishing Agency	[illegible]@gmail.com	536-2146	[illegible]
3	Glenn Jinbo	HFFC	glenn.jinbo@sfs.com	(30-0572)	
4	MICHAEL SHEA	MATSON	mshea@MATSON.COM	225-1343	M.S.
5					
6					
7					
8					
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HDOT Harbors Annual Tenants Stormwater Awareness Training Sign-in Sheet

Date: September 20, 2018 Trainer: Mayo Tummala (ETC)

No	Name	Company	E-mail Address	Phone #	Initials
1	Herb Nahim	Hawaii Pilots		537-7220	HN
2	Bryan Matsunobu	Grace Pacific	bmatsunobu@gracepacific.com	216-2456	BM
3	David Zeidler	Hawaiian Cement	david.zeidler@hawaiiancement.com	347-5868	[illegible]
4	Guy Fujita	Hawaiian Cement	guy-fujita@hawaiiancement.com	306-8861	[illegible]
5	Neil Kanemoto	PUP / NICO'S	nwilapup-hawaii.com	478-9602	[illegible]
6	Ralph Vyn	Wyndham Center	[illegible]@hawaii.edu	228-2059	RV
7	Ralph Dewitt	Pearl Water Taxi	ralph.dewitt@icloud.com	554-3476	RD
8	Daniel Wright	Pacific Shipyards	dwright@pacificshipyards.com	634-6767	DW
9	Megan Rycraft	Young Brothers / Foss Hi	mrycraft@foss.com	937-9377	[illegible]
10	Ross Dolle	Hawaiian Cement		330-3914	RD
11	Guy Hicks	Paradise Cruise	ghicks@starofhonolulu.com	726-1884	[illegible]
12	Denise Kaheaku	Sause Bros.	denisek@sause.com	670-6696	[illegible]
13	Julie Kuo	DAR	julie.c.kuo@hawaii.gov	348-7025	JK
14	A.K. Colburn	Hawaii Gas	acolburn@hawaiigas.com	808 351 9720	[illegible]
15	Tiffany Whitworth	HB	tiff@hbyb.com	808-927-4729	[illegible]
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"Mo'omaiwa awa ka" Protect our harbor waters

HDOT Harbors Annual Tenants Stormwater Awareness Training Sign-in Sheet

Date: September 20, 2018 Trainer: Maya Tummala (EPC)

No.	Name	Company	E-mail Address	Phone #	Initials
1	Dawna Hokama	Hawaii Stevedores Inc.	dhokama@hawaiistevedores.com	440-2146	[illegible]
2	KALI RICARDO	Pacific Environmental Corp.	KALI@PENCO.ORG	590-1285	[illegible]
3	Kyle Hirano	Jas. W. Glover, Ltd.	kyleh@glover.ltd.com	690-1170	[illegible]
4	Kendall Kwock	Hawaii Stevedores, Inc.	kkwock@hawaiistevedores.com	842-5334	[illegible]
5	PAUL FUKUNAGA	PF MARINE	PF MARINE @ AOL.COM	220 9425	PF
6	Marty Sands	MSRC/Hawaii Response	SANDS@MSRC.ORG	630-1571	MS
7	Reid Tamashiro	Sauer Brothers / Thomas Transport	reid@thomastransportservice.com	931-0049	
8	Calvert Chun	DOT-H	calvert.jr.chun@hawaii.gov	587-1944	[illegible]
9	ALi WANG	INCHCAPE SHIPPING/ONE	AL.WANG@ISS-SHIPPING.COM	218-2188	AW
10	Kelly White	Container Storage of Hawaii	kelly@cs-io.com	841-5555	KW
11	Keith Okumura	Star of Honolulu	Keith.Okumura@star	780-1940	[illegible]
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"Welcome to the Hawaii Project our harbor waters"

HDOT Harbors Annual Tenants Stormwater Awareness Training Sign-in Sheet

Date: September 20, 2018 Trainer: Vijaya Tummala (LTC)

No.	Name	Company	E-mail Address	Phone #	Initials
1	ERIC PADILLA	Customs & Border Protection	[illegible]	[illegible]	[illegible]
2	James Nixon	Paradise Cruises Ltd	JNIXON@STAROFHONOLULU.com	4173650226	[illegible]
3	Terry N. Aquino	Hawaiian Ice Company	taquino@hawaiii.com	538-6918	[illegible]
4	Richard Bautista	Asphalt Hawaii	RBautista@asphalthawaii.com	927-5372	[illegible]
5	PETE ZERR	UH MARINE CENTER	PZERR@HAWAII.EDU	377-0423	[illegible]
6	Randall Honke	Hawaii Pacific University	randall.honke@hpu.edu	753 0818	[illegible]
7	CURTIS CHEE	MCA	curtis.chee@mcahawaii.com	589 5585	[illegible]
8	TY PRYNE	HBN	TYPRYNE@GMAIL.COM	4798849	[illegible]
9	Olivia Pham	HDOT Harbors	olivia.n.pham@hawaii.gov	330-5266	[illegible]
10	MICHAEL LESLIE	SAUSE BROS	MIKEL@SAUSE.COM	682-1082	[illegible]
11	VAIPOLOLO TAMANU	MARINE SPILL RESPONSE CORP.	tamanu@msrc.org	673.1831	[illegible]
12	Wade Matsuda	Star of Honolulu	wmatsuda@staroftheonolulu.com	282-6512	[illegible]
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"Malama the Owe for" Protect our harbor waters

Attachment 4

Tenant Training –
d. Tenant Environmental Manager of the Year (TEMY) Awards

EXECUTIVE CHAMBERS

HONOLULU

August 30, 2018

Mr. Ross Barnes
Marine Operations Superintendent
University of Hawaii Marine Center
965 North Nimitz Highway, Pier 35
Honolulu, Hawaii 96817

Dear Mr. Barnes,

I am pleased to present you with our 2018 State of Hawaii Department of Transportation, Harbors Division, Tenant Environmental Manager of the Year award.

Each year the Harbors Division recognizes the tenant environmental manager who has implemented exemplary environmental and safety practices, and continued efforts to implement and maintain post construction best management practices. I applaud your efforts as a leader in environmental compliance and the future of sustainability in Hawaii.

Your environmental program was selected from 55 tenant programs evaluated after our 2017 Storm Water Compliance Inspections. This award acknowledges the continuous positive contributions that you and the University of Hawaii Marine Center have made toward protecting our valuable ocean resources. The initiatives taken at your facility to include promoting proactive environmental awareness and reducing environmental risks as key components of the University of Hawaii Marine Center culture are truly noteworthy. Your program is a positive example for others to follow.

Congratulations and please continue to work with the Harbors Division and your fellow tenants in protecting our harbor waters for future generations. Mālama i ke kai!

With warmest regards,

David Ige
Governor, State of Hawaii

THE STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISON

presents the

2018 TENANT ENVIRONMENTAL MANAGER OF THE YEAR

to

ROSS BARNES

University of Hawai‘i Marine Center

for

Exemplary Management of a Tenant Stormwater Program
Designed to Protect Harbor Water Quality

“Mālama I Ke Kai” – Protect Our Harbor Waters

Attachment 4

Tenant Training –
e. Training Feedback Summary and Completed Surveys

2018 DOT Harbors Tenant Training Feedback
8/30/2018 and 9/20/2018

			Average Rating 4.48				Average Rating 3.97		Average Rating 4.46	
			1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors?		**2. What were the strong points of the training course that we should keep & improve upon for next year?**	**3. What were the weak points of the training course that we should improve upon next year?**	**4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience?**		**5. Please provide an overall ranking of the Pier 19 Terminal facility used for this training course in terms of conditions conductive to the tenant audience such as comform (air conditioning & lighting), hearing (audio), refreshments, restrooms & parking.**	
Name	**Company**	**Date**	**Rate**	**Comments**	**Comments**	**Comments**	**Rate**	**Comments**	**Rate**	**Comments**
Lola Kau	Oceani Kaimamala	8/30/2018	5	yes	Sustainability of our aquatic resources	Handout a 1-page list of names & phone numbers to call.	5			Excellent place - Thank you for the refreshments & the time given to update.
Yasuhiro Kinuhata	Norko Marine Agency Inc.	8/30/2018	5							
Rodney Tamamoto	Aala Ship Service	8/30/2018	5		To be aware of what goies into the storm drain.	Better visual presentation	5	Very educated speakers	5	We used P-20 facility for 2018.
Jessie Galaviz	Petrospect, Inc.	8/30/2018	4		DAR presentation	Fix videos	4		5	
Edgar Ugale	CRD - AG	8/30/2018	5	Introducing the 5 ways to help with storm drains.	More examples of BMPs	Sound - can't hear or understand. Hard to see the slides.	4		5	Slide presentation hard to see from the back.
Unknown	Unknown	8/30/2018	5				3	Pictures were hard	4	Audio off and on.
Unknown	Unknown	8/30/2018	4			Videos didn't work	4	Make sure all speakers effectively use the microphone.	4	Projector was dim & hard to see at times.
James Pontin Jr.	Kirby Offshore Marine	8/30/2018	4		All points were very informational.	None I can think of.	4		5	Pier 19 is a lot more spacious &
Raymond Rodriguez	VAK Fisheries	8/30/2018	5			Video did not run.	3	Power Point slides were blurry and some pictures.	5	

Name	Company	Date	Rate	Comments	Comments	Comments	Rate	Comments	Rate	Comments
Rober Stravis	Sause Bros.	8/30/2018	5	Lots of useful information	Safe/good BMP practices	Use of good examples	4		4	Good hearing & temperatures. Screen slides were a little difficult to see especially when displaying pictures
Ronald Char	Honolulu Marathon	8/30/2018	5		All areas of presentation	Poor video presentation	4		4	
Jim Hermann	Wind & Sea Charters	8/30/2018	3		Always good to hear how to better maintain clean and safet sites.	Audio/visual should be checked out before presentation. PIER not PEAR.	4		5	
J. Gomes	Hawaiian Cement	8/30/2018	4		2nd presenter	Audio visual not working	2	IT issues	4	
Diego Rivera	Atlantis Submarines	8/30/2018	5		Use of projector	Technical issues, preparations	3		5	
Rodney Yee	Pioneer Machinery	8/30/2018	3	Audio visuals are bad, speakers are hard to understand. Put program on a disc.			0	Hard to understand, create a hard copy to follow along.	0	Bad acoustics & hard to see presentation. Runs too long. Not well prepared. Handouts should be all included in a
Clint Kagami	Kagami Inc.	8/30/2018	5		DAR Presentation is a good reminder	Nothing - everything is a good reminder.	4		4	Could not see slides very well.
Gerald Cobb-Adams	Healy Tibbitss Builders	8/30/2018	5		The guest speakers have been good the past 2 years.		3	Videos didn't work.	5	
John P. Orr	Healy Tibbitss Builders	8/30/2018	5		List of recordkeeping notes	Video, better screen quality. Have a back up to class can be completed.	3	Need stronger speakers (personnel)	5	
Unknown	Unknown	8/30/2018	5			Videos not working	4		4	
Scott Sevdjian	Grace Pacific	8/30/2018	5		Nice into to most important basics	Videos didn't work	4	Videos didn't work. Good slides	4	Good space but projector too dim.

Name	Company	Date	Rate	Comments	Comments	Comments	Rate	Comments	Rate	Comments
David W. Griffith	American Marine Corporation	8/30/2018	4	Missing videos	Overall information is very useful. Good memory refresher.	Videos	4	Videos	3	Slides hard to see on wall. Video issues. Chairs are
Unknown	Unknown	8/30/2018	2.5	Technical difficulties/no videos. Hard to see presentation (lighting)	Bullet pont/inspection requirements.	Lighting/powerpoint, video, overtime.	3		5	Bad for powerpoint.
Joe Vele	DHX Inc.	8/30/2018	5	None/very good	Information and education on safe maintenance practices on run off	None	5	None/Very good	5	None/very good.
Glenn Jinbo	Signature Flight	8/30/2018	5		Over all good.	1. Facility, 2. Video very difficult to see, 3. Presentation went over time.	5		5	Video presentation should be improved.
Randy Leong	C&C of Honolulu	8/30/2018	5		The aquatic presentation was well done.	The sound system, video preentation, and the dull pics need to be improved. Either move chairs up to the wall or get a portable projector screen closer to the chairs	3	Her presentation was poor because of the low quality screen and pictures.		Facility was fine.
Michael Watanabe	C&C of Honolulu	8/30/2018	4			A/V hard to see slides. Video didn't work.	3		4	
Trevor Kubo	Hawaii Stevedores	8/30/2018	5			Video not prepped	4		4	
Unknown	Unknown	8/30/2018	4		All good information		4		5	
Kimo Bajat	HIS	8/30/2018	4		The info presesnted	No video	3		5	
Phillip Bustamante	PSI	8/30/2018	5		Environmental impact	Training video	3		5	

Name	Company	Date	Rate	Comments	Comments	Comments	Rate	Comments	Rate	Comments
Steve Hinton	Marisco	8/30/2018	5		DLNR/DAR role and responsibility	NA	4		5	
D. Carter	Penco	8/30/2018	4	A movie screen would allow better viewing of slides.	The meeting itself - introducing personnel and plicies is key. We can see and meet the team we are working with.	Hard to see the slides.	3	Slides hard to see. Film didn't run.	3	Pier 19 is good!
Bruce MeEwan	Friends of Falls of Clyde	8/30/2018	5		PEAR Steps 4 & 5	Not always able to hear clearly when speakers presented.	4	Videos would have worked.	4	Lighting made it somewhat difficult to see slide details.
Greg Ball	Pacific Shipyard	8/30/2018	4		Good presentation	Technical difficulties. Practice	3		4	
Linda Goldstein	HC&D	8/30/2018	5	It gets better every year & now that we have gone through several sessions we appreciate DOT going into depth on select topics.	Discussion of inspection process & areas of improtance to DOT.	No weak points perhaps discussion of joint efforts between DOH/EPA & DOT would be useful.	5	5 = Trainers, 3 = Slide difficult to see, 0 = Videos we missed.	5	Excellent venue - no need to improve.
Paul Kau	Matson	8/30/2018	4	Provide a business card with the important response phone numbers to call for folks to keep in their wallets	All points were good and important.	Provide a copy of the presentation (hard copy)	4	Poor visibility. Did not make the presesntation effective.	5	
Mike Lofton	American Marine Corporation	8/30/2018	5				5		5	

Name	Company	Date	Rate	Comments	Comments	Comments	Rate	Comments	Rate	Comments
Stephen Sasaki	Matson	8/30/2018	5		Content, audit presurvey as tied to risk	Better screen. Please produce a video so we can share it with people in our facility.	5		4	Parking, accessibility. Thank you for the snacks and coffee.
Floyd Otani	United Fishing Agency	8/30/2018	4		Slide are good	DAR presentation, can't see reference.	3	Hard to evaluate without video presentation	2	Hard to see visual presentation due to lighing conditions.
Derek Higa	Fresh Island Fish	8/30/2018	5		None	None	5		5	
Nelson Aberilla	United Fishing Agency	8/30/2018	5		Keep having knowledgeable speakers to conduct training.	Just the technical difficulties, other than that all is good.	5		5	
Michael Shea	Matson	8/30/2018	4		Dept. of Aquatic Resources was informative.	Technical difficulties with video equipment.	4		3	Hard to see pictures on the wall.
Frank Roznenski	Hawaii Stevedores	8/30/2018	4	Unfortunately you experienced difficulties on the video segment.	Update on consent decree & upcoming inspection was helpful.	Sound was difficult to hear due to echo. Visual aid was hard to see due to lighting.	3	For me its usually a refresher.	3	Venue is great but challenges on audio & visual components of training.
Carl Young	DOT Harbors	8/30/2018	4			It was not smooth. Lots of glitches. The presentation should be respectful of business people's time. It needs to be more faster.	1	Too many bullet points & not enough photos. Picture are woth 1,000 words. Projected images were not big enough. PIER spelt "PEAR" conveys the wrong message.	5	

Name	Company	Date	Rate	Comments	Comments	Comments	Rate	Comments	Rate	Comments
Julie Kuo	DLNR, DAR	9/20/2018	4	Kind of heard to hear Vajaya at first. Jason was easier to hear. Very easy to understand presentation, appreciate the handouts especially the slide printout.	See response #1. I liked the clean venue & clean bathrooms. I liked the quiz at the end.	Larger projector screen.	5		4.5	Recommend larger projector, slightly louder speakers but not too loud. Good food. Thank you and drinks too. Great speakers and agenda. Thank you for allowing me to attend.
Paul Fukunaga	PF Marine		5		All good	None	5		5	
Eric Padilla	CBP		3		Prevention and maintenance of spills		3		5	
AK Colburn	Hawaii Gas		4	Good stuff!		Blend the videos in so Adam does not have to go back to the last slide. Hands-free mic should be improved.	4		5	
Daniel Wright	Pacific Shipyard		5		All of the handouts for review, retention and implementation.	Sound system	5		5	AC was loud, though.
Ralph DeWitt	P&R Water Taxi		5		Page by page handout	None	5		5	
Ty Pryne	HBN		2				2		4	
Megan Rycraft	Young Bros.		4	Good over all information.	Reviewing the inspection process and requirements.	Covering resources available locally, example: vendors who specialize in storm water management.	5	Good speakers - Div. of Aquatics Resources Jason Mehlinger is good.	5	Beautiful facility! I had never been inside and was super impressed!

Name	Company	Date	Rate	Comments	Comments	Comments	Rate	Comments	Rate	Comments
Kyle Hirano	Jas. W. Glover, Ltd.		5		Multiple speakers, like the handouts.	None	5		4	Was a little confused about thte parking situation. The sweeper was sweeping in the parking area.
Randall Honke	Hawaii Pacific University		4	Good overview of Stormwater Management Plan and BMPs.	Jason Mehlinger of DAR. Highlights some of why there is SWMP.	Screen on small side, made it difficult at times to see example of good and bad practices.	4		4	Convenient location
Neil Kanemoto	POP Pier 38		5	Guest presenter for DAR was informational.		A/V - sound system	4		5	
Guy Hicks	Paradise Cruise Ltd.		3		Identifying BMPs	Identifying BMPs was noticeable but would like to see more detail info.	3		3	
Reid Tamashiro	Sause Bros.		5		All	None	5		5	
Michael Leslie	Sause Bros.		3				3		5	
Kelly White	Container Storage of Hawaii Ltd.		4	I'm glad to know our co-tenants are trained and aware of potential damage.	Guest speaker - Division of Aquatic Resources	For those of us who come every year it is a bit repetative - change the content/videos up a bit.	3		4	Cool, open, bright.
Ali Wang	Inchcape Shipping Services		5		BMP	NA	5		5	

Name	Company	Date	Rate	Comments	Comments	Comments	Rate	Comments	Rate	Comments
Unknown			5							Hearing (audio) - needs work - heard jason good. Parking, restrooms, refreshments - good.
James Nixon	Paradise Cruise Ltd.		5		I liked the BMP handouts.	Content was just right.	5		5	Very nice facility
Terry Aquino	Hawaiian Ice Company				Housekeeping	Videos - Could not hear	5		5	
Wade Matsuoka	SOH		5				5		5	
Kendall Kwock	Hawaii Stevedore		5		Strong point - presentation	Need to improve the speaker system. Could barely hear in the back.	4		4	
Richard Bautista	Asphalt Hawaii		5		Points were strong	None	5		5	
Guy Fujita	Hawaiian Cement		4	Handouts of inspection sheets, smaples of stickers needed and where to get them.	Speakers and sheets	Computer flow was interupted by system not working or computer not prepared. Head set not tested before used.	4	Like the shets and applicable shots.	4	Saying Pier 19 was not accurate as 19 gate closed. Ensure to mention this.
Keith S. Okumura	Star of Honolulu		4		It's a good reminder	None	5		5	
Curtis Chee	MC&A		5		Everything was good and worth keeping	None	5		5	
Pete Zerr	UH Marine Center		4		Outlining BMPs is great		3.5		5	
Robin Vye	UH Marine Center		5		Good presentation and explanation	Run entire videos rather than snippets.	4		5	

Name	Company	Date	Rate	Comments	Comments	Comments	Rate	Comments	Rate	Comments
Marty Sands	MSRC		5		All	None	5		5	
Unknown			5		Keep up awareness	None	5		4	Please provide tables for note
Herb Nahinu	Hawaii Pilot		5		BMPs, good housekeeping	All good	5		5	
Ross Dolfo	Hawaian Cement		5		Illicit discharge	None	5		5	

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

   5 yes

2. What were the strong points of the training course that we should keep & improve upon for next year?

   5 sustainability of our aquatic resources

   [illegible]

   [illegible]

   [illegible]

   [illegible]

   Excellent place - thank you for the refreshments [illegible] remind [illegible] us

Mahalo for providing us with your training feedback. See you next year!

Name: [illegible] Kau Ahai FV Kauai Date 8/30/18

Company: [illegible]

TRAINING EVALUATION & FEEDBACK FORM

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Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: [illegible] Date 8/30/18

Company: [illegible]

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

FACILITY FOR 2018

Mahalo for providing us with your training feedback. See you next year!

Name: RODNEY TAKAMOTO Date 8-30-18

Company: AAA STOP SERVICE

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   DAR presentation

3. What were the weak points of the training course that we should improve upon next year?
   Fix videos.

Mahalo for providing us with your training feedback. See you next year!

Name: Jessie Galaviz Date 8/30/18

Company: Petrospect, Inc.

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. _____ Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. _____ Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: _____ Date _____

Company: _____

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: _____ Date _____

Company: _____

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   All Points were very informational.

3. What were the weak points of the training course that we should improve upon next year?
   None I can think of.

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: James Pontin SR. Date 08/30/2018

Company: Kirby offshore Marine

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. [illegible]

4. [illegible]

5. [illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: Raymond Rodriguez VAK Fisheries LLC Date 8/30/18

Company: VAK Fisheries

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

   lots of useful information

2. What were the strong points of the training course that we should keep & improve upon for next year?

   safe / good BMP practices

3. What were the weak points of the training course that we should improve upon next year?

   use of good examples

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Ronald Chun Date 8/30/18

Company: Honolulu Marathon

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 3 Additional comments on the overall training course:

[illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: Jim Hermann Date 8·30·18

Company: Wind & Sea Charters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   2nd Presenter

3. What were the weak points of the training course that we should improve upon next year?

   Audio visual not work

Mahalo for providing us with your training feedback. See you next year!

Name: J. Gomes Date 30 Aug 2011

Company: Hawaiian Cement

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   Use of projector

3. What were the weak points of the training course that we should improve upon next year?
   Technical issues, preparation,

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 3 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Diego Rivera Date 30 · Aug · 18

Company: Atlantis Submarines

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

[illegible]

3. What were the weak points of the training course that we should improve upon next year?

[illegible]

[illegible]

[illegible]

Name: [illegible] Date: [illegible]

Company: [illegible]

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   DAR - Presentation Is good to know

3. What were the weak points of the training course that we should improve upon next year?
   Nothing - everything Is a good reminder

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Clint Kagami Date 8/30/18

Company: Kagami inc

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

[illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: Gerald C[illegible]d[illegible]s Date [illegible]

Company: Healy [illegible] Bilders

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

List of Record Keeping notes

[illegible]

[illegible]

Need stronger speakers (personnel)

[illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: John P. Orr Date 8/30/12

Company: Healy Tibbitts Building, Inc

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. ___5___ Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

   VIDEOS NOT WORKING

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. ___4___ Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: _____ Date _____

Company: _____

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Good speec but projector was bad

Mahalo for providing us with your training feedback. See you next year!

Name: Date

Company:

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

   MISSION VIDEOS

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

   VIDEOS

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 25 Additional comments on the overall training course:

   Technical Difficulties / [illegible] v [illegible]
   Hard to see presentation (lighting)

2. What were the strong points of the training course that we should keep & improve upon for next year?

   Basic Points / Inspection Requirements

3. What were the weak points of the training course that we should improve upon next year?

   [illegible] / Power Point
   [illegible]
   [illegible]

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

   [illegible] 5 [illegible]
   Bad for power point

Mahalo for providing us with your training feedback. See you next year!

Name: _____ Date _____

Company: _____

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

   None / Very Good

   5

Mahalo for providing us with your training feedback. See you next year!

Name: Joe Vehi / Safety Manager Date 08/30/2018

Company: DHX Inc.

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year? Overall Good.

3. What were the weak points of the training course that we should improve upon next year?
1. Facilitate 2. Video very difficult to see
3. [illegible]

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

5. [illegible] 4 [illegible] Improved.

Mahalo for providing us with your training feedback. See you next year!

Name: [illegible] Date 5.30.18

Company: Signature Flight

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   The aquatic Presentation was well done

3. Wha[illegible]

   The [illegible] system, [illegible] presentation, and the dull pics need to be [illegible] portable. Either [illegible] the [illegible] up to the wall [illegible] get a [illegible]

4. [illegible] 3 [illegible]

5. [illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: Randy Leong Date 8/30/18

Company: C&C Hnl

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Michael Watanabe Date 8/30/18

Company: C&C of Honolulu

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?
   Video not prepped

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Trevor Kubo Date 8-30-18

Company: Hawaii Stevedores Inc

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   ALL GOOD INFORMATION

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: _____ Date _____

Company: _____

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   The info Presented

3. What were the weak points of the training course that we should improve upon next year?
   No Video

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 3 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Kimo Bayek Date 8/30/18

Company: H.S.D

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   Environmental impact

3. What were the weak points of the training course that we should improve upon next year?
   Training video

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 3 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Phillip Bustamante Date 08/30/18

Company: PSI

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   DLNR/DAR ROLE AND PRESENTATION

3. What were the weak points of the training course that we should improve upon next year?

   N/A

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: STAN HINTON Date 8/30/18

Company: MARISCO

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

   A MOVIE SCREEN WOULD A[illegible] BE[illegible] VIEWING OF SLIDES

2. What were the strong points of the training course that we should keep & improve upon for next year?

   THE MEETING [illegible] PRESENTATION AND POLICIES IS [illegible] I CAN SEE A MEETING THE TEAM WE ARE WORKING WITH

3. What were the weak points of the training course that we should improve upon next year?

   HARD TO SEE THE SLIDES

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 3 Provide additional comments if you like.

   [illegible] TO SEE FILM DID NOT [illegible]

   [illegible] 19

   PIER 19 IS GOOD!

Mahalo for providing us with your training feedback. See you next year!

Name: [illegible] Date [illegible] AUG 2018

Company: PENCO

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

PEAR STEPS 4+5

COMMENTS ON BEST PRACTICES

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   GOOD PRESENTATIONS

   [illegible]

   [illegible]

   [illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: GREG BA[illegible] Date [illegible]

Company: PACIFIC [illegible]

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Harbors Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all 5 Additional comments on the overall training course

   IT GETS BETTER EVERY YEAR & NOW THAT WE HAVE GONE THROUGH SEVERAL SESSIONS WE AFFECTED GOING INTO DEPTH ON SELECT TOPICS

2. What were the strong points of the training course that we should keep & improve upon for next year?

   DISCUSSION OF INSPECTION PROCESS & AREAS OF IMPORTANCE TO DOT.

3. What were the weak points of the training course that we should improve upon next year?

   NO WEAK POINTS BUT PERHAPS DISCUSSION OF SOLUTIONS BETWEEN COMPLETE & DOT WOULD BE USEFUL

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. Provide additional comments if you like

   - TRAINERS = 5
   - SLIDES = 5 (DIFFICULT TO SEE.)
   - VIDEOS = 0 (DON'T MISS THEM)

5. Please provide an overall ranking of the Pier 3 Terminal Facility used for this training course in terms of conditions conducive to the tenant audience such as comfort (air conditioning & lighting), hearing (audio), refreshments, restrooms & parking. Ranking scale from 0 to 5 where 5 = Very Good overall comfort and concentrate & 0 = Extremely poor overall comfort and concentrate 5 Please provide additional comments to elaborate on your ranking & how we can improve next year

   EXCELLENT VENUE -- NO NEED TO IMPROVE

Mahalo for providing us with your training feedback. See you next year! OK!

Name: LINDA GOLDSTEIN Date 8/30/2018

Company: HC&D

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. [illegible] Please rank the overall course from 1 to 5 where 5 = Most Beneficial & 1 = Not Beneficial at all: 5 [illegible] comments on the overall training course:

   Provide a business card with the [illegible] phone number to call for folks to keep in their wallet.

2. What were the strong points of the training course that we should keep & improve upon for next year?

   Provide a copy of the presentation (hard copy)

3. What were the weak points of the training course that we should improve upon next year?

   All parts were good and important

4. How effective were the [illegible] Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 1 to 5 where 5 = Most Effective & 1 = Not Effective at all: 5 Provide additional comments if you like:

   That your [illegible] did not make the presentation effective

5. [illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: PAUL KAU Date 8/30/18

Company: MATSON

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: [illegible] Date 8/30/18

Company: American Marine Corp.

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

+ [illegible]
[illegible] preparing [illegible] to [illegible]
⊖ better [illegible] Please produce [illegible] we can share with people [illegible]

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

[illegible] 4 [illegible]

⊖ parking ⊖ [illegible]

Mahalo for snacks offer.

Mahalo for providing us with your training feedback. See you next year!

Name: [illegible] Date [illegible]

Company: [illegible]

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   good

3. What were the weak points of the training course that we should improve upon next year?

   D- presentation, can't see reference

   3

   hard to evaluate

Mahalo for providing us with your training feedback. See you next year!

Name: Floyd Otani Date

Company: United Fishing agency

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   NONE

3. What were the weak points of the training course that we should improve upon next year?
   NONE

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: [illegible] Date 8/30-18

Company: Fresh Escape Resort

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

Keep having knowledgeable speakers to conduct training.

[illegible]

[illegible]

[illegible] 5 [illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: [illegible] Date 8/29/18

Company: United Plating Agency

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

[illegible]

Dept of Aquatic Resources was [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] pictures on the w=1

Mahalo for providing us with your training feedback. See you next year!

Name: MICHAEL SHEA Date 8/30/18

Company: MATSON NAVIGATION

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

   Unfortunately you experienced [illegible] collapse of the video segment

2. [illegible]t were the strong points of the training course that we should keep & improve upon [illegible]ext year?

3. What were the weak points of the training course that we should improve upon next ear?

   Sound was difficult to hear due to echo
   Visual aid was hard to see due to lighting

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 3 Provide additional comments if you like.

   For me it is really a refresher

5. [illegible]

   Venue is great but poses challenges on audio & visual components of the training

Mahalo for providing us with your training feedback. See you next year!

Name: Frank Rozewski Date 8/30/18

Company: Hawaii Stevedores Inc.

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

   It was real smooth. Lots of glitches. The presentation should not be respectful of business people's time. It needs to move faster.

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 1 Provide additional comments if you like.

   [illegible] points - not enough photos. Pictures are worth 1000 words. Frequent images were not bright enough. PIER could "PEAR" Convey the wrong message.

   [illegible] 19 [illegible] 5 [illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: Carl Young Date 8/3/[illegible]

Company: DOT Harbors

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

[illegible]

Kind of [illegible] to hear [illegible] Vajaya [illegible] hear. Very [illegible] presentation, appreciate the handouts [illegible] slide [illegible]

2. What were the strong points of the training course that we should keep & improve upon for next year?

S[illegible] response #1, [illegible] had the clear, [illegible]

[illegible]t were the weak points of the training course that we should improve upon next y[illegible]

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

[illegible]

[illegible] large projector, slightly [illegible] speaker [illegible] and [illegible] for great speaker and [illegible] [illegible] attend.

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
ALL GOOD

3. What were the weak points of the training course that we should improve upon next year?
NONE

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: PAUL FUKUNAGA Date 9-20-18

Company: PF MARINE

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 3 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year? prevention and maintenance of spills

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 3 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Eric Padilla Date 9/20/18

Company: CBP

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

   GOOD STUFF!

[illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: A.K. COLBURN Date 9/20/2018

Company: HAWAII GAS

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   All of the handouts — review, retention — [illegible]

3. What were the weak points of the training course that we should improve upon next year?

   Sound system

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Daniel Wright Date 09-20-18

Company: Pacific Shipyards

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. _____ Additional comments on the overall training course:

   5

2. What were the strong points of the training course that we should keep & improve upon for next year?

   Page by Page Hand out

3. What were the weak points of the training course that we should improve upon next year?

   None

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

[illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: Ralph Dewitt Date 9/20/18

Company: PGR Water Taxi

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 2 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 2 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: TIM PRYNE Date 9/20/18

Company: HBN

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

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   good overall information

2. What were the strong points of the training course that we should keep & improve upon for next year?

   Reviewing the inspection process & requirements

3. What were the weak points of the training course that we should improve upon next year?

   Covering resources available locally (example: vendors who specialize in storm water mgmt.)

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

   good speakers - Division of Aquatic Resources
   Jesse Mehlinger is good

5

Beautiful Facility I had never been inside and was super impressed!

Mahalo for providing us with your training feedback. See you next year!

Name: Megan Rycroft Date 9/20/18

Company: Young Brothers / Foss Hawaii

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

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2. What were the strong points of the training course that we should keep & improve upon for next year?
   Multiple speakers, liked the handouts

3. What were the weak points of the training course that we should improve upon next year?
   None

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

[illegible] confused about the [illegible] situation. The [illegible] sweep in the [illegible] area.

[illegible]

[illegible]

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

[illegible]

[illegible]

[illegible]

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

[illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: Randall Hanke Date 9/20/18

Company: Hawaii Pacific University

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

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   GUEST PRESENTATION FOR DAR WAS INFORMATIVE - -

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

   A/V - SOUND SYSTEM

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: NEIL KANEMOTO Date 9/20/18

Company: POP PIER 38

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course
Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 3 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
Identifying BMP's

3 [redacted]

Mahalo for providing us with your training feedback. See you next year!

Name: Gary Peek Date 9/20/18
Company: Paradise Cruise LTD

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   All

3. What were the weak points of the training course that we should improve upon next year?

   none

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Reid Tamashiro Date 9/20/2018

Company: Sause Brothers / Thomas Transport Service

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. ___5___ Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. ___5___ Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: MICHAEL LESLIE Date 9-20-18

Company: SAYSE BROS.

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. [illegible] Please rank the overall course from 1 to 5 where 5 = Most Beneficial & 1 = Not Beneficial at all 4 Additional comments on the overall training course: [illegible] contenants are trained & aware of potential damage

2. What were the strong points of the training course that we should keep & improve upon for next year? Guest Speaker - Division of Aquatic Resources

3. What were the weak points of the training course that we should improve upon next year? For those of us who come every year it is a bit repetitive - change the [illegible] videos up a bit.

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 1 to 5 where 5 = Most Effective & Not Effective at all 3 Provide additional comments if you like

5. [illegible] Ce - pen, bright

Mahalo for providing us with your training feedback. See you next year!

Name: Kelly White Date 09-20-18

Company: Container Storage of Hawaii Ltd.

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   [illegible]

3. What were the weak points of the training course that we should improve upon next year?
   N/A

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: ALi WANG Date 11/20/18

Company: INCHCAPE SHIPPING SERVICES

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. _____ Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: _____ Date _____

Company: _____

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   I liked the BMP handouts.

3. What were the weak points of the training course that we should improve upon next year?
   Content was just right

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: James C. Nixon Date 9/20/18

Company: Paradise Cruises Ltd

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   House Keeping

3. What were the weak points of the training course that we should improve upon next year?
   Video's – could not hear

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

[illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: Terry N Aquino Date 20 SEP 18

Company: Hawaiian Ice Comp

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

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2. What were the strong points of the training course that we should keep & improve upon for next year?

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Wade Matzuda Date 9/20/16

Company: SOH

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

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[illegible]

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

[illegible]

Mahalo for providing us with your training feedback. See you next year!

Name: Kendall Kwock Date 9/20/18

Company: Hawaii Stevedoring

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   [illegible] WERE STRONG

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: RICHARD BAUTISTA Date [illegible]

Company: ASPHALT HAWAII

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. [illegible]

2. [illegible]

3. [illegible]

4. [illegible]

5. [illegible]

[illegible]

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. _____ Additional comments on the overall training course:

   _____

   _____

2. What were the strong points of the training course that we should keep & improve upon for next year?

   _____

   _____

3. What were the weak points of the training course that we should improve upon next year?

   _____

   _____

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. _____ Provide additional comments if you like.

   _____

   _____

   _____

Mahalo for providing us with your training feedback. See you next year!

Name: _____ Date _____

Company: _____

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
it's was a good reminder

3. What were the weak points of the training course that we should improve upon next year?
none

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Keith S. Okumura Date 09-20-2018

Company: Star of Honolulu

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   everything was good and we're keeping

3. What were the weak points of the training course that we should improve upon next year?

   none

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

   4

   5

Mahalo for providing us with your training feedback. See you next year!

Name: [illegible] Date 9/20/18

Company: [illegible]

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course
Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 4 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
outl... of BMP's is great

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 3.5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: PETE ZERR, Port Engineer Date 9/20/18
Company: UH MARINE CENTER

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course
Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   GOOD RECENTATIONS AND EXPLAINATION

3. What were the weak points of the training course that we should improve upon next year?
   RUN ENTIRE VIDEO, RATHER THAN SNIPPETS

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 4 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: ROBIN VYE Date 9/20/18

Company: UH MARINE CENTER

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course
Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
ALL

3. What were the weak points of the training course that we should improve upon next year?
NONE

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: MARTY SANDS Date 9/20/18
Company: MSRC

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
   KEEP UP AWARENESS TRAINING

3. What were the weak points of the training course that we should improve upon next year?
   NONE

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

   [illegible] SIDE TABLES FOR NOTE TAKING / ARM REST

Mahalo for providing us with your training feedback. See you next year!

Name: _____ Date _____

Company: _____

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   [illegible], Good housekeeping

3. What were the weak points of the training course that we should improve upon next year?

   All good!

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Herb Matting Date 9-10-18

Company: Hawaii Pilots

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course
Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?
Informative Dynamic

3. What were the weak points of the training course that we should improve upon next year?
None

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

Mahalo for providing us with your training feedback. See you next year!

Name: Ross Dolf Date 7/20/18
Company: Hawaiian Cement

"Mālama i ke kai" - Protect Our Harbor Waters

TRAINING EVALUATION & FEEDBACK FORM

Annual H-DOT Harbors Tenant Storm Water Training Course

Honolulu Harbor Pier 19 Terminal

1. Was the training course beneficial to you as a Tenant of the Honolulu and Kalaeloa Barbers Point Harbors? Please rank the overall course from 0 to 5 where 5 = Most Beneficial & 0 = Not Beneficial at all. 5 Additional comments on the overall training course:

2. What were the strong points of the training course that we should keep & improve upon for next year?

   well rounded info

3. What were the weak points of the training course that we should improve upon next year?

4. How effective were the Trainer, the Power Point slides & the video in conveying the Harbors Storm Water Management Program information & requirements to the tenant audience? Please rank their overall effectiveness from 0 to 5 where 5 = Most Effective & 0 = Not Effective at all. 5 Provide additional comments if you like.

5. Please provide an overall ranking of the Pier 19 Terminal facility used for this training course in terms of conditions conducive to the tenant audience such as comfort (air conditioning & lighting), hearing (audio), refreshments, restrooms & parking. Ranking scale from 0 to 5 where 5 = Very Good overall comfort and convenience & 0 = Extremely poor overall comfort and convenience. 5 Please provide additional comments to elaborate on your ranking & how we can improve next year.

Mahalo for providing us with your training feedback. See you next year!

Name: Tiff Whitworth Date 10/15/18

Company: Young Brothers Limited

"Mālama i ke kai" - Protect Our Harbor Waters

Attachment 4

Tenant Training –
f. Questionnaires Results Summary and Completed Questionnaires

2018 HDOT Harbors Tenant Training Questionnaire
8/30/2018 & 9/20/2018

	Correct Answer		*c*	*d*	*d*	*d*	*a*	*d*	*d*	*a*	*b*	*a*		
Total	*% Correct*		*95%*	*100%*	*86%*	*99%*	*97%*	*66%*	*99%*	*92%*	*46%*	*95%*		
79	*# Correct*		*75*	*79*	*68*	*78*	*77*	*52*	*78*	*73*	*36*	*75*	*# Correct*	
Name	**Company**	**Date**	**Question 1**	**Question 2**	**Question 3**	**Question 4**	**Question 5**	**Question 6**	**Question 7**	**Question 8**	**Question 9**	**Question 10**		**Comments**
Andrew	*McCabe*	8/30/2018	c	d	d	d	a	d	d	a	c	a	*9*	
Jon Satre	*AML*	8/30/2018	c	d	b	d	a	d	d	a	d	a	*8*	
Lola Kau	*Oceanic Kaimamala*	8/30/2018	c	d	d	d	a	d	d	a	c	a	*9*	Very informational
Yasuhiro Kinuhata	*Norko Marine*	8/30/2018	d	d	d	d	a	d	d	ab	d	a	*7*	
Rodney Tamamoto	*Aala Ship Service*	8/30/2018	d	d	d	d	a	d	d	a	b	a	*9*	
Jessie Galaviz	*Petrospect, Inc.*	8/30/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Edgar Ugale		8/30/2018	c	d	a	d	b	c	d	a	b	a	*7*	It's always good to be trained on storm drains annually
Shawn	*Grace*	8/30/2018	c	d	b	d	a	a	d	a	d	a	*7*	
Mathoni McCormick	*AG/CRD*	8/30/2018	c	d	ad	d	a	cd	d	b	c	a	*6*	I believe some answers were probably in the videos we were unable to watch.
James Pontin, Jr.	*Kirby Offshore*	8/30/2018	c	d	b	d	a	a	d	a	b	a	*8*	
Raymond Rodrigues	*VAK Fisheries*	8/30/2018	c	d	d	d	a	bd	d	b	d	a	*7*	
Robert	*Sause Bros.*	8/30/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Ron chun	*Honolulu Marathon*	8/30/2018	c	d	d	d	a	a	d	a	d	a	*8*	
Jim Helmann	*Wind & Sea*	8/30/2018	c	d	b	d	a	a	d	a	c	a	*7*	
Jim Gomes	*Hawaiian Cement*	8/30/2018	c	d	d	d	a	d	d	a	de	a	*9*	
Diego Rivera	*Atlantis Adventrure Sub.*	8/30/2018	c	d	d	d	a	d	d	a	b	a	*10*	

Kekua Kelii	*Atlantis Adventrure Sub.*	8/30/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Blake Edwards	*American Marine*	8/30/2018	c	d	d	d	a	c	d	b	cd	a	*7*	
Rodney Yee	*Pioneer Machinery*	8/30/2018	c	d	d	d	a	d	d	a	c	a	*9*	
Clint Kagami	*Kagami*	8/30/2018	c	d		d	a	d	d	a	c	a	*8*	
Gerald Cobb-Adams	*Healy Tidbits*	8/30/2018	c	d	d	d	a	a	d	a	b	a	*9*	
John P. Orr	*Healy Tidbits*	8/30/2018	c	d	b	d	a	ac	d	a	c	a	*7*	
May Sudnasky	*Sea Engineerin*	8/30/2018	c	d	d	d	a	d	d	a	e	a	*9*	
Joe Bienier	*BEI Hawaii*	8/30/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Scott Sevadjian	*Grace Pacific*	8/30/2018	c	d	d	d	a	a	d	a	b	a	*9*	
David Griffith	*American Marine*	8/30/2018	c	d	d	d	a	d	d	b	e	a	*8*	
Joe Vele	*DHX Inc.*	8/30/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Glenn Jinbo	*HFFC*	8/30/2018	c	d	d	d	a	d	d	a	c	a	*9*	
Randy Leong	*C&C of Honolulu*	8/30/2018	d	d	d	d	a	a	d	a	d	a	*7*	
Michael Watanabe	*C&C of Honolulu*	8/30/2018	c	d	d	d	a	a	d	a	b	a	*9*	
Trevor Kubo	*Hawaii Stevedore*	8/30/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Kendyl Kuwamura	*Matson Nav.*	8/30/2018	c	d	d	d	a	a	d	a	d	a	*8*	
Kmio Boyet	*HIS*	8/30/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Phillip Bustamante	*PSI*	8/30/2018	c	d	d	d	a	a	d	a	b	a	*9*	
Steve Hinton	*Marisco*	8/30/2018	c	d	d	d	a	a	d	a	d	a	*8*	
DC Carter	*Penco*	8/30/2018	c	d	d	d	a	d	d	a	d	a	*9*	Thanks
Bruce MeEwan	*Friends of Falls of Clyde*	8/30/2018	c	d	d	d	a	d	d	a	c	a	*9*	
Greg Ball	*Pacific Shipyards*	8/30/2018	c	d	d	d	a	a	d	a	c	a	*8*	

Linda Goldstein	*HC&D*	8/30/2018	c	d	d	d	a	a	d	a	b	a	*9*	
Paul Kau	*Matson Nav.*	8/30/2018	c	d	d	d	a	d	d	a	b	a	*10*	1. Invest in a better projector! (Could not see). 2. Run through your slides "piror" to your live audience. (You'll discover your technical difficulties.)
Mike Loffon	*American Marine*	8/30/2018	c	d	d	d	a	d	d	a	d	b	*8*	
Stephen Sasaki	*Matson Nav.*	8/30/2018	c	d	d	d	a	a	d	a	d	a	*8*	
Floyd Otani	*United Fisheries*	8/30/2018	c	d	d	d	a	d	d	a	d	a	*9*	With all handouts, this was the year to provide the bag for everything.
Daniel Otani	*United Fisheries*	8/30/2018	c	d	d	d	a	a	d	a	c	a	*8*	
Derek Higa	*Fresh Island Fish*	8/30/2018	c	d	d	d	a	d	d	a	b	b	*9*	
Nelson Aberilla	*United Fisheries*	8/30/2018	c	d	d	d	a	a	d	a	d	b	*7*	
Michael	*Matson*	8/30/2018	c	d	d	d	a	a	d	a	d	a	*8*	
Frank Roznerski	*Hawaii Stevedore*	8/30/2018	c	d	d	d	a	a	d	a	b	a	*9*	
Carl Young	*DOT - Harbors*	8/30/2018	d	d	d	d	a	d	d	a	d	a	*8*	
Julie Kuo	*DLNR, DAR*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Paul Fukunaka	*PF Marine*	9/20/2018	c	d	d	d	a	d	d	a	c	a	*9*	
Eric Padilla	*Custome Boarder Protection*	9/20/2018	c	d	d	d	a	a	d	a	b	a	*9*	
AK Colburn	*Hawaii Gas*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Daniel Wright	*Pacific Shipyards*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Ralph DeWitt	*P&R Water Taxi*	9/20/2018	c	d	d	d	a	d	d	a	d	b	*8*	
Ty Pryne	*HBN*	9/20/2018	c	d	d	dbcd	a	ad	d	a	b	a	*8*	

Megan Rycraft	*Young Brothers*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Kyle Hirano	*Jas. W. Glover*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Randall Honke	*Hawaii Pacific University*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Guy Hicks	*Paradise Cove*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Neil Kanemoto	*POP/Nico's*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Richard Bautista	*Asphalt Hawaii*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Kali Ricardo	*Penco*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Reid Tamashiro	*Sause Bros.*	9/20/2018	c	d	d	d	a	a	d	a	d	a	*8*	
Michael	*Sause Bros.*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Denise Kaheaku	*Sause Bros.*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Kelly White	*Container Storage Co. of Hawaii,*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	
Ali Wang	*Inchcape Shipping*	9/20/2018	c	d	d	d	b	d	d	a	e	a	*8*	Good training
Donna Hokama	*Hawaii Stevedore*	9/20/2018	c	d	d	d	a	a	c	a	c	a	*7*	
James C. Nixon	*Paradise Cruise*	9/20/2018	c	d	d	d	a	d	d	a	d	a	*9*	
David Zeidler	*Hawaiian Cement*	9/20/2018	c	d	b	d	a	d	d	a	d	a	*8*	This annual review is very helpful and a great reminder of our responsibilities.
Terry	*Hawaiian*	9/20/2018	c	d	b	d	a	d	d	a	c	a	*8*	
Wade Matsueda	*Star of Honolulu*	9/20/2018	c	d	b	d	a	d	d	a	b	a	*9*	
Kendall Kwock	*Hawaii Stevedore*	9/20/2018	c	d	d	d	a	d	d	b	c	a	*8*	
Curtis Chee	*MC&A*	9/20/2018	c	d	d	d	a	d	d	a	b	a	*10*	

Pete Zerr	*UH Marine Center*	9/20/2018	c	d	d	d	a	d	d	a	c	a	*9*	
Robin Vye	*UH Marine Center*	9/20/2018	c	d	d	d	a	d	d	a	d	a	*9*	
Ross Dolfo	*Hawaiian Cement*	9/20/2018	c	d	d	d	a	d	d	a	c	a	*9*	
Herb Nahina	*Hawaii*	9/20/2018	c	d	d	d	a	d	d	a	c	a	*9*	
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"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Julia Kim Company: DLNR, DAR Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Improper at washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Cooling in fences
   b. Tires – significant source
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMP?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath accident containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good pasts construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: PAUL FUKUNAGA Company: PF MARINE Date: 9-20-18

1. What is the definition of an illicit discharge?
   a. Condensate from AC systems
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2026
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance area) filled with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Enrique Padilla Company: CRI Date: 9/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled seaweeds
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Hawaii Cabin, call Harbor Traffic Control Dist at (808) 587-2026
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: A.K. Colmarin Company: Hawaii Gas Date: 9/20/2018

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drains?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu call Harbor Traffic Control Dispatch (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. Tanks are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Cooling on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath any oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance) are at tilted with hydrocarbon bonds is considered a good post construction BMP
   a. True
   b. False

9. The first stage of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Daniel Wright, Company: Pacific Shipyards, Date: 09-[illegible]

1. What is the definition of an illicit discharge?
   - a. Condensate from AC system
   - b. Rain water runoff
   - c. A non-stormwater discharge that poses a risk to the environment
   - d. None of the above

2. Which of the following are not permitted to be discharged into the stormdrain?
   - a. Equipment washing water
   - b. Fish entrails and spilled chemicals
   - c. Petroleum and paint products
   - d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   - a. Prior to this call Harbor Traffic Control Team at (808) 587-2076
   - b. Call Harbors Environmental Hotline at (808) 587-1962
   - c. None of your business
   - d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   - a. Diesel is not a pollutant
   - b. Tanks are properly labeled and equipped with secondary containment
   - c. They are stored under cover
   - d. b and c

5. True or False? In State of Hawaii anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   - a. True
   - b. False

6. A minor source of Zinc pollution comes from
   - a. Coating on fences
   - b. Tires
   - c. Motor oil
   - d. All of the above

7. Which of the following are good examples of BMPs?
   - a. Maintain equipment regularly
   - b. Promptly responding to a spill or leak
   - c. Using a drip pan underneath an oil containing equipment
   - d. All of the above

8. True or False? Stormdrain inlet (in maintenance area) fitted with hydro carbon boom is considered a good post construction BMP
   - a. True
   - b. False

9. The first step of spill response is to
   - a. Complete the required report
   - b. Assess the risk
   - c. Contain the spill
   - d. Stop the source
   - e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    - a. True
    - b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Ralph Dewitt Company: P & R Water Tech Date: 9/23/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Pen-cleans and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Dissolves and a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, any drop that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance area) fitted with hydrocarbon booms is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: HBN Date: 9/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If in Oahu, call Harbor Traffic Control Dept at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1967
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without pretreatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet run in order once areal filled with hydro arbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Megan Bynak Company: Young Bros/HMS Date: 9/22/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain dollar sound?
   c. A [illegible] discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drains?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and polyl products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. [illegible]
   b. Call Harbors Environmental Hotline at [illegible]
   c. [illegible]
   d. a or b

4. The picture below is a great example of Best Management Practice (BMP) because:
   a. [illegible]
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. [illegible]

5. [illegible]
   a. [illegible]
   b. [illegible]

6. A main source of [illegible] is from:
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

8. [illegible]
   a. [illegible]
   b. [illegible]

9. The first view of [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]
   e. [illegible]

10. [illegible]
   a. [illegible]
   b. [illegible]

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. [illegible] the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Tract 1 Control Hour at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. [illegible]

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. [illegible]

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath accord containing equipment
   d. All of the above

8. True or False? Storm drain inlet on maintenance area lined with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

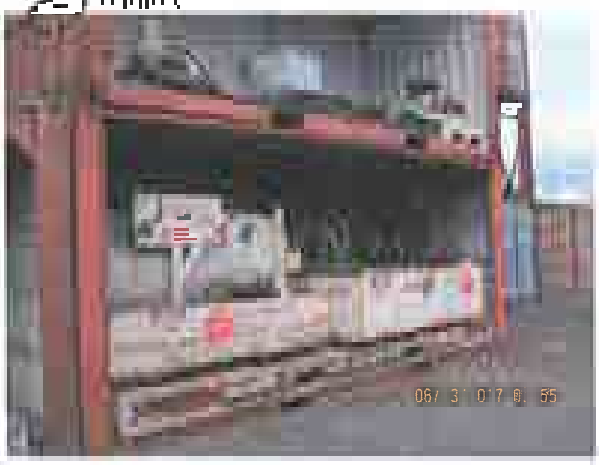
Name: Randall Hanke Company: Hawaii Pacific Marine (A-) Date: 9/10/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fuel entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. [illegible] call [Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In State of Hawaii, anything that goes into a regular storm drain (or) will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boomers considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Guy Hicks Company: Paradise Cove Date: 9/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment.
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP.
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? Are environmental violation
    a. Lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: NEIL KANEMOTO Company: PGP Date: 9/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Dahar, call Harbor Traffic Control Unit at (503) 557-2076
   b. Call Harbor's Environmental Hotline at (808) 587-1967
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped
   c. with secondary containment
   d. They are stored under cover
   e. b and c

5. True or False? To State of Hawaii, anything that goes into a regular storm drain inlet will end up on the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance) steel filled with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: RICHARD BAUTISTA **Company:** ASPHALT HAWAII **Date:** 9/ /

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Roof water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Ilian Oahu call Harbor Traffic Control Unit at (808) 587-2056
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet pit maintenance area filled with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

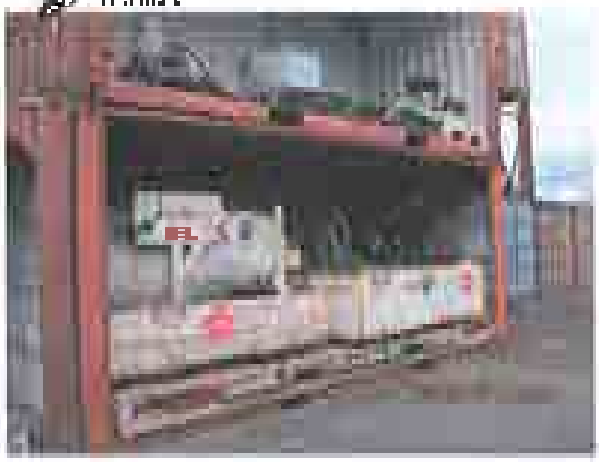
Name: YALI RICARDO Company: PACIFIC ENVIRONMENTAL (PRP, PENOS) Date: 9/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected in your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-7076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In State of Hawaii, anything that goes into a regular storm drain offer will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fixed with hydrocarbon basin is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Reid Tamashiro Company: Sauke/Thomas Tamashiro Date: 9/20/2018

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Immediately call Harbor Traffic Control Dept at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that poses into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of fine pollution comes from:
   a. Coating on fences
   b. Trees
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good positive selection BMP
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

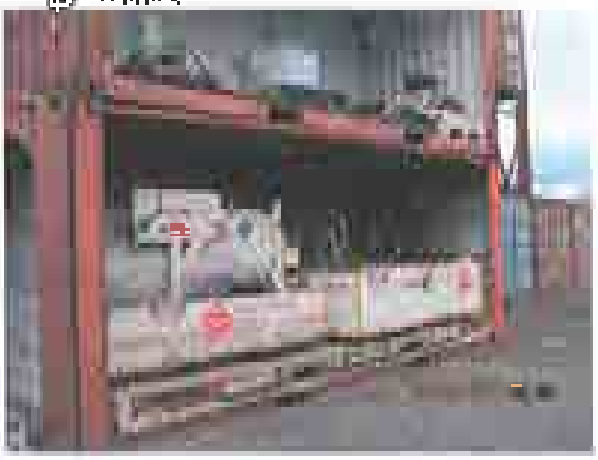
Name: MICHAEL LEHIE Company: SAUSE BROS Date: 9-20-19

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Immediately call Harbor Traffic Control Unit at (808) 587-2036
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pad underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a point post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Denise Kabeakie Company: Queen Pro Date: 09/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2070
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMP?
   a. Maintain equipment regularly
   b. Prompt responding to a spill or leak
   c. Using a drip pan underneath as of containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon booth is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

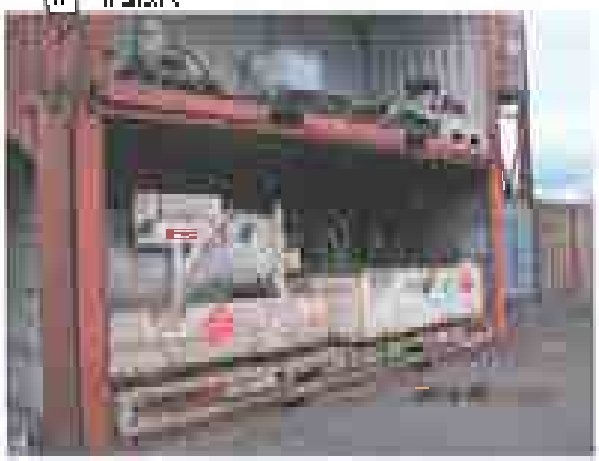
Name: Kelly White Company: Container Storage Co. of Hawaii Ltd Date: 9/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-7076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. Brands



5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? Access to mainstreet violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: INCHCAPE SHIPPING Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly respond to a spill or leak
   c. Using a drip pan underneath and containing equipment
   d. All of the above

8. True or False? Storm drain inlets on maintenance areas fitted with hydrocarbon booms is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? Any incorporated violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

[illegible]

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] **Company:** [illegible] **Date:** 9/20/19

1. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

2. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

3. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

4. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

5. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

6. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

7. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

8. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

9. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]
   e. [illegible]

10. [illegible]
    a. [illegible]
    b. [illegible]

11. [illegible]
    a. [illegible]
    b. [illegible]
    c. [illegible]
    d. All of the above

12. [illegible]
    a. [illegible]
    b. [illegible]
    c. [illegible]
    d. All of the above

13. [illegible]
    a. [illegible]
    b. [illegible]

14. [illegible]
    a. [illegible]
    b. [illegible]
    c. [illegible]
    d. [illegible]
    e. [illegible]

15. [illegible]
    a. [illegible]
    b. [illegible]

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Jamesi . Dow Company: Paradise Cruise Date: 9/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Ham Oahu's all Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan and cocktail on oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet for maintenance, treat filled with hydrocarbon absorbent is considered a good pose construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confirm the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name David Zeidler Company Hawaiian Cement Date 9-30-18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Hon Dahai call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. Is a dike

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boomers considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

THIS ANNUAL REVIEW IS VERY HELPFUL AND A GREAT REMINDER OF OUR RESPONSIBILITIES

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definitional artificial discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollution
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that poses into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet for maintenance area fitted with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Wade Makuda Company: Star of Honolulu Date: 9/20/18

1. What is the definition of an illicit discharge?
   - a. Condensate from AC systems
   - b. Rain water runoff
   - c. A non-stormwater discharge that poses a risk to the environment
   - d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   - a. Equipment washing water
   - b. Fish entrails and spilled chemicals
   - c. Petroleum and paint products
   - d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   - a. If in Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   - b. Call Harbors Environmental Hotline at (808) 587-1962
   - c. None of your business
   - d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   - a. Diesel is not a pollutant
   - b. Tanks are properly labeled and equipped with secondary containment
   - c. They are stored under cover
   - d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   - a. True
   - b. False

6. A major source of Zinc pollution comes from
   - a. Coating on fences
   - b. Tires
   - c. Motor oil
   - d. All of the above

7. Which of the following are good examples of BMPs?
   - a. Manda is equipment regularly
   - b. Promptly responding to a spill or leak
   - c. Using a drip pan underneath an oil containing equipment
   - d. All of the above

8. True or False? Storm drain inlet for maintenance areas filled with hydrocarbon boom is considered a good post-construction BMP
   - a. True
   - b. False

9. The first step of spill response is to
   - a. Complete the required report
   - b. Assess the risk
   - c. Confine the spill
   - d. Stop the source
   - e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    - a. True
    - b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

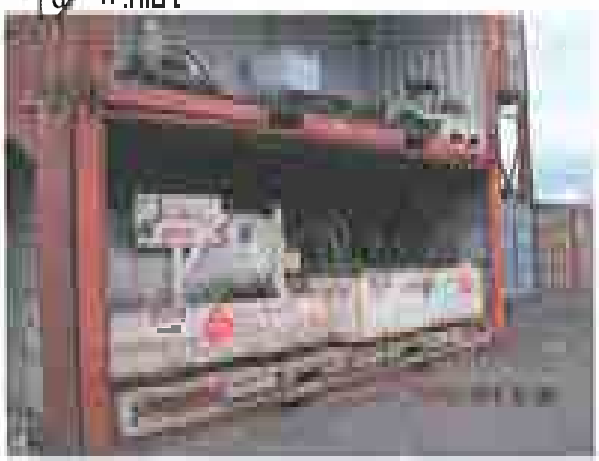
Name: [illegible] Company: Hawaii Stevedores Date: 9/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In Suite of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or) maintenance area filled with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Compile the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: _____ **Confidential:** _____ **Date:** _____

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Pesticides and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Jet of Oahu, call Harbor Traffic Control Center (808) 587-2026
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) filled with fresh cardboard boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

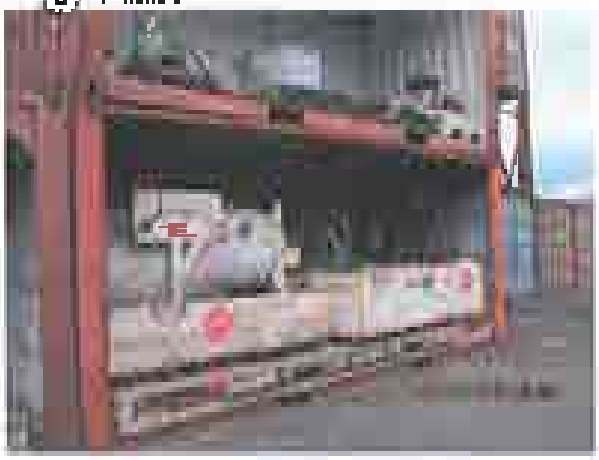
Name: Pete Zeer Company: UH Marine Center Date: 9/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Hotline (808) 587-2026
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath mobile containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) filled with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Robin Vye Company: UH Marine Center Date: 9/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Hon Oahu Call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-2962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment.
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) filled with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Rosa Dallas Company: [illegible] Date: 9/[illegible]/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Dial Oahu call Harbor Traffic Control Unit at (808) 587-2016
   b. Call Harbors Environmental Hotline at (808) 587-1960
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. Family

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will wait up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Trees
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet on maintenance area fitted with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of a illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Dial 0 Dial call Harbor Traffic Control Center at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. Sandle

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment.
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating off leaves
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Stormdrain inlet in marine sanitation area fitted with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" – Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: NB Date: 10/18/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962.
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant.
   b. Tanks are properly labeled and equipped with secondary containment.
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon booms is considered a good post-construction BMP.
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties.
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Andrew Souza Company: Hi Cabe Handling Training Date: 8-30-18

1. What is the definition of an illicit discharge?
   - a. Condensate from AC system
   - b. Rainwater runoff
   - c. A non stormwater discharge that poses a risk to the environment
   - d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   - a. Equipment washing water
   - b. Fish entrails and spilled chemicals
   - c. Petroleum and paint products
   - d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   - a. Boat tube, call Harbor Traffic Control Unit at (808) 587-2076
   - b. Call Harbors Environmental Hotline at (808) 587-1062
   - c. None of your business
   - d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   - a. Diesel is not a pollutant
   - b. Tanks are properly labeled and equipped with secondary containment
   - c. Dies are stored under cover
   - d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment.
   - a. True
   - b. False

6. A major source of Zinc pollution comes from:
   - a. Coating on fences
   - b. Tires
   - c. Motor oil
   - d. All of the above

7. Which of the following are good examples of BMPs?
   - a. Maintain equipment regularly
   - b. Promptly responding to a spill or leak
   - c. Using a drip pan underneath an oil containing equipment
   - d. All of the above

8. True or False? Storm drain inlet may maintenance steam filled with hydrocarbon boom is considered a good post-construction BMP.
   - a. True
   - b. False

9. The first step of spill response is to:
   - a. Complete the required report
   - b. Assess the risk
   - c. Contain the spill
   - d. Stop the source
   - e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties.
    - a. True
    - b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Jon Sate Company: AML Date: 8-29-18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your feeling?
   a. Dial 9-1-1, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. The tanks stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath and sub-containing equipment
   d. All of the above

8. True or False? Storm drain inlet for maintenance area fitted with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Lola Kau Company: Oceana Vairamaha Date: 8/30/18

1. What is the definition of an illicit discharge?
   - a. Condensate from AC system
   - b. Rain water runoff
   - c. A non-stormwater discharge that poses a risk to the environment
   - d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   - a. Equipment washing water
   - b. Fish entrails and spilled chemicals
   - c. Petroleum and paint products
   - d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   - a. From Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   - b. Call Harbors Environmental Hotline at (808) 587-1962
   - c. None of your business
   - d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   - a. Diesel is not a pollutant
   - b. Tanks are properly labeled and equipped with secondary containment
   - c. They are stored under cover
   - d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   - a. True
   - b. False

6. A major source of Zinc pollution comes from:
   - a. Coating on fences
   - b. Tires
   - c. Motor oil
   - d. All of the above

7. Which of the following are good examples of BMPs?
   - a. Maintain equipment regularly
   - b. Promptly responding to a spill or leak
   - c. Using a drip pan and mechanical containing equipment
   - d. All of the above

8. True or False? Storm drain inlet (a maintenance area) lined with hydrocarbon boom is considered a good post construction BMP
   - a. True
   - b. False

9. The first step of spill response is to:
   - a. Complete the required report
   - b. Assess the risk
   - c. Contain the spill
   - d. Stop the source
   - e. Select PPE

10. True or False? Any environmental violation may lead to criminal penalties
    - a. True
    - b. False

[illegible] informational.

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: 8/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath air-oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? All environmental violations may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: 8-30-18

1. What is the definition of an illicit discharge?
   - a. Condensate from AC system
   - b. Rain water runoff
   - c. A non-storm water discharge that poses a risk to the environment
   - (d) None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   - a. Equipment washing water
   - b. Fish entrails and spilled chemicals
   - c. Petroleum and paint products
   - (d) All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   - a. Ban Oahu Call Harbor Traffic Control Unit at (808) 587-2076
   - b. Call Harbors Environmental Hotline at (808) 587-1962
   - c. None of your business
   - (d) a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   - a. Hazel is not a pollutant
   - b. Tanks are properly labeled and equipped with secondary containment
   - c. They are stored under cover
   - (d) b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   - (a) True
   - b. False

6. A major source of Zinc pollution comes from
   - a. Coating on fences
   - b. Tires
   - c. Motor oil
   - (d) All of the above

7. Which of the following are good examples of BMPs?
   - a. Maintain equipment regularly
   - b. Promptly responding to a spill or leak
   - c. Using a drip pan or dismantle and containing equipment
   - (d) All of the above

8. True or False? Storm drain inlet (in maintenance area) filled with hydrocarbon boom is considered a good post-construction BMP
   - (a) True
   - b. False

9. The first step of spill response is to
   - a. Complete the required report
   - (b) Assess the risk
   - c. Confuse the spill
   - d. Stop the source
   - e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    - (a) True
    - b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

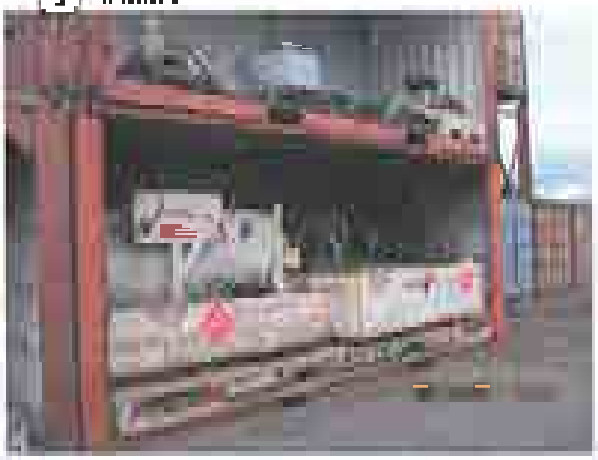
Name: Jessie Galaviz Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected to your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet in maintenance area/ fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

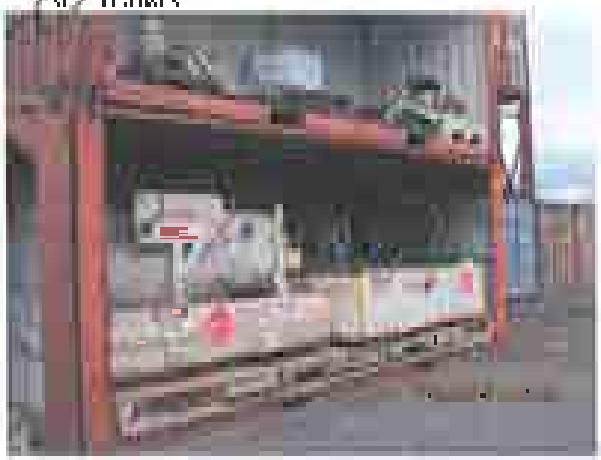
Name: [illegible] Company: [illegible] Date: 8/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2176
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on levers
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan under each air oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? Are its environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

* It's always good to be trained on Storm Drain annually

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Shawn Company: Grace Pacific Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. What is the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2026
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Cooling on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Doing a drip pan and/or oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet in an maintenance area lined with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Continue the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. "What is the definition of an illicit discharge?"
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. None of the above

2. "What is the following are not permitted to be discharged into the storm drain?"
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

3. "What is required to be done [illegible] to suspected at your harbor?"
   a. [illegible]
   b. [illegible]
   c. None of your business
   d. [illegible]

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

5. [illegible]
   a. [illegible]
   b. [illegible]

6. A main source of [illegible] pollutants comes from:
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

7. "What is the following are good examples of BMPs?"
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

8. [illegible]
   a. [illegible]
   b. [illegible]

9. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]
   e. [illegible]

10. [illegible]
   a. [illegible]
   b. [illegible]

Please provide your comments here:

I believe some answers were probably [illegible] we were unable to watch.

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: James Tenant SP Company: Harbor Officer Date: 08/30/2018

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the stormdrain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Hose Odor, call Harbor Traffic Control Unit at (808) 887-2026
   b. Call Harbors Environmental Hotline at (808) 887-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular stormdrain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Stormdrain inlet for maintenance area filled with bottles, silver boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

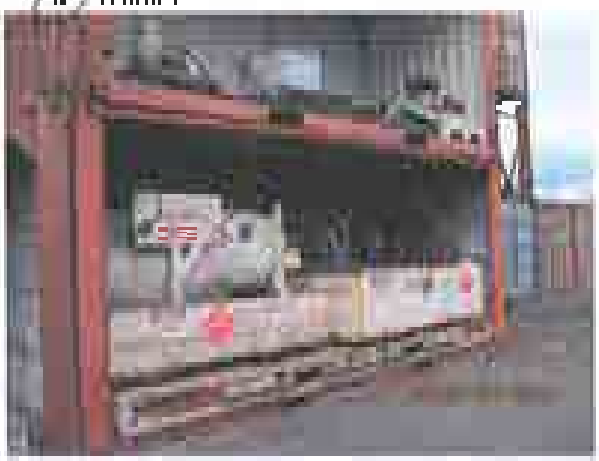
Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Hawaiian Cable Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment.
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet for maintenance areas fitted with hydrocarbon boom is considered a good post construction BMP.
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties.
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an "illicit discharge"?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when a "illicit discharge" is suspected at your harbor?
   a. If on Oahu, Call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Ron Chun Company: Jim Marathon Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected in your harbor?
   a. Ron Dahn, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Trees
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance) area fitted with hydrocarbon boomers considered a good post construction [illegible]
   a. True
   b. False

9. The first stepped spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected in your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet pan maintenance area filled with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confuse the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

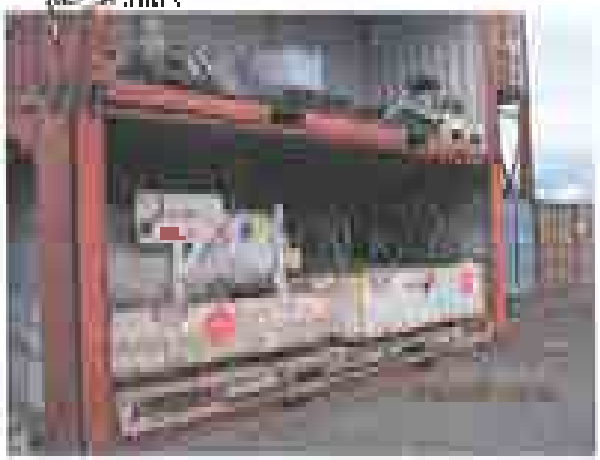
Name: Jim Gomes Company: [illegible] Date: 8/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbor's Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment.
   a. True
   b. False

6. A responsible of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath at-rest containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) rated with hydrocarbon boom is considered a good post construction BMP.
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties.
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Kekua Kai

Name: Diego Rivera Company: Atlantis Aduana (Indonesia) Date: 30-Aug-18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish cereals and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. It is Ok to call Harbor Traffic Control Unit at (808) 587-2016
   b. Call Harbors Environmental Hotline at (808) 882-1962
   c. Notice of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

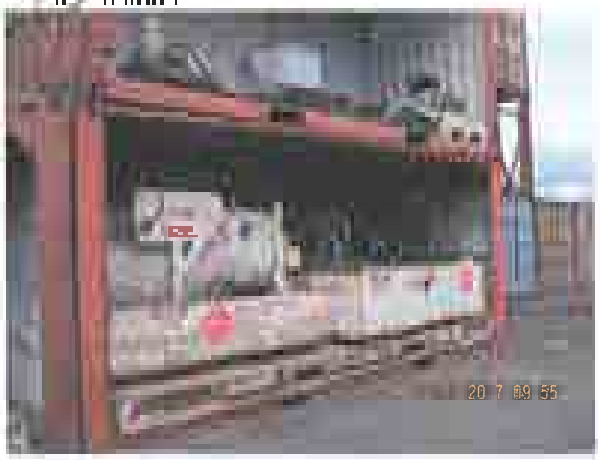
Name: BLAKE [illegible] Company: [illegible] Date: 8-30-2018

1. What is the dominant of an oil in the barge?
   a. Condensate from AC system
   b. Potable water [illegible]
   c. A [illegible] that [illegible] the environment
   d. None of the above

2. Which of the following [illegible] be the [illegible]?
   a. Equipment washing water
   b. Fish [illegible] and spilled chemicals
   c. Petroleum and [illegible]
   d. All of the above

3. What is required when an oil in the barge is suspected in your harbor?
   a. [illegible] Harbor Traffic Control [illegible]
   b. Call Harbor's [illegible] Harbor at [illegible]
   c. None of your business
   d. [illegible]

4. The picture below is a good example of the Management Practice (BMP) because
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]



5. [illegible]
   a. True
   b. False

6. A [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

8. [illegible]
   a. True
   b. False

9. The [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

10. [illegible]
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Rodney Yeb Company: Rowcer Mechanique Date: Aug. 30, 2018

1. What is the definition of an illicit discharge?
   - a. Condensate from AC system
   - b. Rain water runoff
   - c. A non-stormwater discharge that poses a risk to the environment
   - d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   - a. Equipment washing water
   - b. Fish entrails and spilled chemicals
   - c. Petroleum and paint products
   - d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   - a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   - b. Call Harbors Environmental Hotline at (808) 587-1962
   - c. None of your business
   - d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   - a. Diesel is not a pollutant
   - b. Tanks are properly labeled and equipped with secondary containment
   - c. They are stored under cover
   - d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   - a. True
   - b. False

6. A major source of Zinc pollution comes from
   - a. Coating on fences
   - b. Tires
   - c. Motor oil
   - d. All of the above

7. What are the following are good examples of BMPs?
   - a. Maintain equipment regularly
   - b. Promptly respond up to a spill or leak
   - c. Hyrop a drop pan under reactive and containing equipment
   - d. All of the above

8. True or False? Storm drain inlet (or maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP
   - a. True
   - b. False

9. The first step of spill response is to
   - a. Complete the required report
   - b. Assess the risk
   - c. Contain the spill
   - d. Stop the source
   - e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    - a. True
    - b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Chris Kagami Company: Kagami Inc. Date: 4/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected in your harbor?
   a. If in Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. Nandi

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath air oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance area) fitted with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Ham Hahn, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1992
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly respond up to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) filled with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: John P. Orr Company: Healy Tibbitts Date: 8-30-18

1. What is the definition of an illicit discharge?
   - a. Condensate from AC system
   - b. Rain water runoff
   - c. A non-stormwater discharge that poses a risk to the environment
   - d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   - a. Equipment washing water
   - b. Fish entrails and spilled chemicals
   - c. Petroleum and paint products
   - d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   - a. Jump Cable, call Harbor Traffic Control Unit at (808) 587-2076
   - b. Call Harbors Environmental Hotline at (808) 587-1967
   - c. Note of Your business
   - d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   - a. Diesel is not a pollutant
   - b. Tanks are properly labeled and equipped with secondary containment
   - c. They are stored under cover
   - d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   - a. True
   - b. False

6. A major source of Zinc pollution comes from
   - a. Coating on fences
   - b. Tires
   - c. Motor oil
   - d. All of the above

7. Which of the following are good examples of BMPs?
   - a. Maintain equipment regularly
   - b. Promptly responding to a spill or leak
   - c. Using a drip pan underneath an oil-containing equipment
   - d. All of the above

8. True or False? Storm drain inlet the maintenance area fitted with hydrocarbon boom is considered a good post construction BMP
   - a. True
   - b. False

9. The first step of spill response is to
   - a. Complete the required report
   - b. Assess the risk
   - c. Confine the spill
   - d. Stop the source
   - e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    - a. True
    - b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: 8/[illegible]/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A [illegible] discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drains?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Polyethylene and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. [illegible]
   b. Call Harbors Environmental Hotline at [illegible]
   c. Stop [illegible]
   d. [illegible]

4. The picture below is a good example of Best Management Practice (BMP) because
   a. [illegible]
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. [illegible]

5. [illegible]
   a. True
   b. False

6. A [illegible]
   a. [illegible]
   b. Tires
   c. [illegible]
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. [illegible]
   b. Promptly [illegible]
   c. [illegible]
   d. All of the above

8. [illegible] BMP
   a. True
   b. False

9. The best [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]
   e. [illegible]

10. [illegible]
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the stormdrain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Dial Oahu Call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None at your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath or on containing equipment
   d. All of the above

8. True or False? Storm drain inlet on maintenance area filled with hydrocarbon burn is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

[illegible] GRACE PACIFIC [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A [illegible]
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and [illegible]
   d. All of the above

3. What is required when an illicit discharge is suspected of your harbor?
   a. [illegible]
   b. Call Harbors Environmental Hotline at [illegible]
   c. None of your business
   d. [illegible]

4. The picture below is a good example of Best Management Practice (BMP) because
   a. [illegible]
   b. [illegible]
   c. They are stored under cover
   d. [illegible]

5. [illegible]
   a. Title
   b. Edit

6. A major source of Zinc pollution comes from
   a. Cooling on tower
   b. Tires
   c. Motor oil
   d. All of the above

7. What is one of the [illegible] in HMPs?
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

8. [illegible] GMP
   a. Tires
   b. Cabin

9. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]
   e. [illegible]

10. [illegible]
   a. Title
   b. Edit

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: 3 [illegible] 2018

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish contents and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2070
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. [illegible]

5. True or False? In State of Hawaii, anything that goes into a regular stormstrain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Mainstreet
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath inverts continuous equipment
   d. All of the above

8. True or False? Stormstrain inlet (in maintenance area) filled with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: _____ Company: DHX Inc Date: __/__/__

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Hon Oahu, call Harbor Traffic Control Unit at (808) 587-2026
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A minor source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan inside an oil-containing equipment
   d. All of the above

8. True or False? Stormwater inlet (or maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Glenn Tint Company: Sanatori Date: 8.30.18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water pond
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish cleanings and spilled chemicals
   c. Polyethylene and pond products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Hawaii Hotline, call Harbor Traffic Control Plan at [illegible]
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. Both

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Hazard is not a pollutant
   b. Tank cars properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. Both

5. [illegible]
   a. True
   b. False

6. A main source of [illegible]
   a. Engine on [illegible]
   b. Trees
   c. Mouse rod
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment in [illegible]
   b. Promptly responding to a spill or leak
   c. Drain a drip pan underneath an old [illegible]
   d. All of the above

8. True or False? Storm drain [illegible] BMP
   a. True
   b. False

9. The first case of [illegible]
   a. Complete the [illegible]
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. [illegible]
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Randy Lang **Company:** C & C Hawaii **Date:** 4/30

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish carcass and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2026
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance area) lined with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Michael Wetanabe Company: [illegible] Date: 8/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Dial Oahu Call Harbor Traffic Control Center (808) 587-2026
   b. Call Harbor's Environmental Hotline at (808) 587-1961
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Cleaning on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan under oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance area) filled with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2136
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your Business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Hazel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A minor source of Zinc pollution comes from
   a. Coating on fences
   b. Trees
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an air-conditioning equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance area) fitted with hydro-carbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? A [illegible] may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: KENDYE KUWAMURA Company: MATSON NAV. Date: 8/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. Islands

5. True or False? In State of Hawaii, anything that goes into a regular stormdrain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan and rinsate around containing equipment
   d. All of the above

8. True or False? Stormdrain inlet for maintenance area at tilted with hydrocarbons boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: 8/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Rain Oahu, Call Harbor Traffic Control Gate at (808) 582-7026
   b. Call Harbors Environmental Hotline at (808) 582-7062
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (an maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

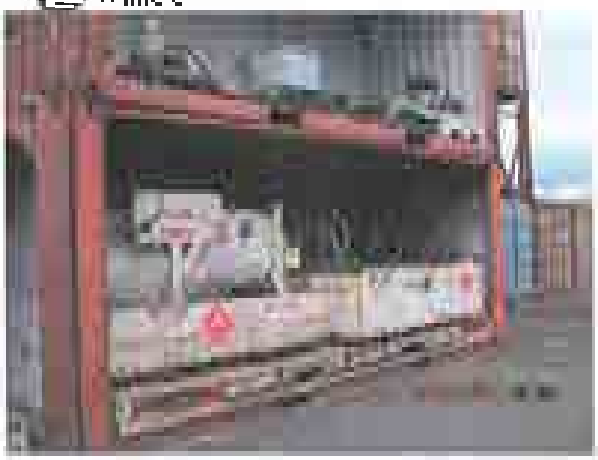
Name: Phillip Bustamante Company: PSI Date: 08/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Hon Oahu call Harbor Traffic Control Hqt at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1960
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In State of Hawaii, anything that goes into a regular storm drain will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Cooling refrences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (by maintenance area) fitted with hydrocarbon beam is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? All environmental violations may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Steve Hinton Company: Marisco Date: 8/30/18.

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If in Oahu, call Harbor Traffic Control Dept at (808) 587-2026
   b. Call Harbors Environmental Hotline at (808) 587-1902
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance area) fitted with bioinsertion boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

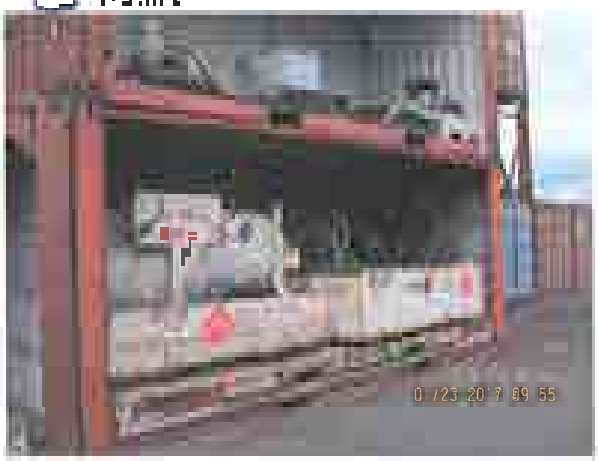
Name: [illegible] Company: [illegible] Date: 30 AUG 2018

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when a illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. Bundle



5. True or False? In State of Hawaii, anything that goes into a regular storm drain or at will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath any oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance area) fitted with hydrocarbon boom is considered a good pan construction BMP
   a. True – [illegible]
   b. False [illegible]

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False – An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here: T HAMAS - [illegible]

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Bruce McBrian Company: Friends of Fine of Cattle Date: 8-30-18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Lubricants and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Ilion Oahu, call Harbor Traffic Control Dispatch (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1967
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Trees
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance area) fitted with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish cutting and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If not [illegible], call Harbor Traffic Control Unit at (808) [illegible]
   b. Call Harbors Environmental Hotline at (808) [illegible]
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A marine source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an air-conditioning equipment
   d. All of the above

8. True or False? Storm drain inlet in maintenance area filled with hydrocarbon boom is considered a good pollution control BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

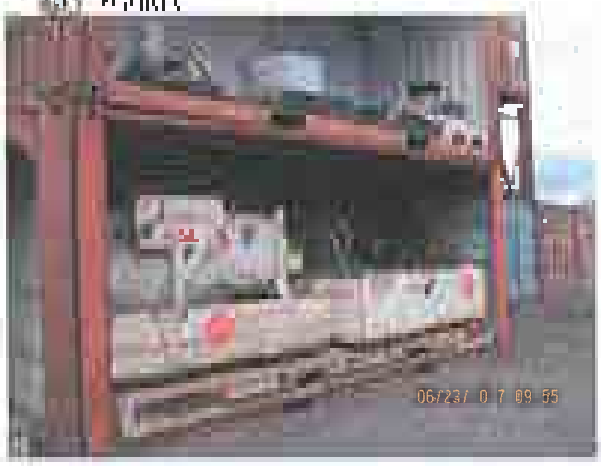
Name: [illegible] Company: [illegible] Date: 8/[illegible]/2018

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? To State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: Paul Kau Company: Matson Date: 8/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Hoa Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain under will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain relief on maintenance area lined with bedrock/rock basin is considered a good post construction BMP
   a. True
   b. False

9. The best step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
   a. True
   b. False

Please provide your comments here:
- Invest in a better projector! (Could NOT See)
- Practice Running Through the slides "prior" to your live audience (You'll discover your Technical Difficulties)

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: American Marine Date: 9/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a renal or storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet for maintenance area fitted with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: 8/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 532-7076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain (if it will end up in the ocean without treatment)
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath as an containing equipment
   d. All of the above

8. True or False? Storm drain inlet (or maintenance area) fitted with hydrocarbon barrier is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC systems
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Food grounds and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2096
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating surfaces
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly respond to a spill or leak
   c. Using a drip pan underneath an oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet for maintenance area lined with hydrocarbon boom is considered a good post-construction BMP
   a. True
   b. False

9. The first step of spill response is:
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:
with all handouts, this was the year to provide the bag for everything

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Item Oahu, call Harbor Traffic Control Unit at (808) 587-2026
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. Tanks are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment.
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an inst-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with hydrocarbon booms is considered a good post construction BMP.
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Contain the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties.
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: 8/20/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water (spout)
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath and containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) lined with hydrocarbon board is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

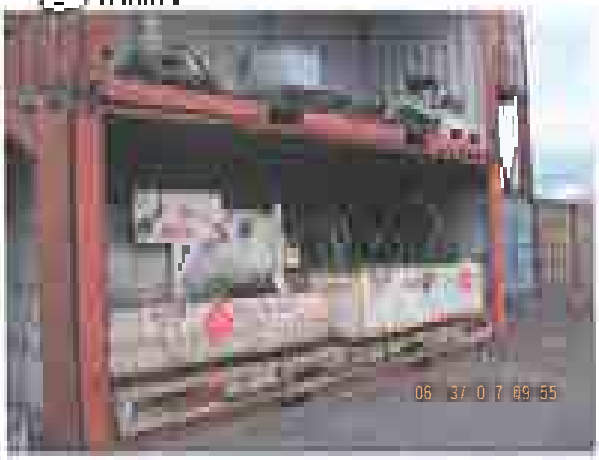
Name: [illegible] Company: [illegible] Date: 8/30/18

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. b and c



5. True or False? In State of Hawaii, anything that poes into a regular storm drain inlet will end up in the ocean without treatment
   a. True
   b. False

6. A major source of Zinc pollution comes from
   a. Coating on fences
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly respond to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) filled with hydrocarbon boom is considered a good post construction BMP
   a. True
   b. False

9. The first step of spill response is to
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: M. [illegible] Company: [illegible] Date: 8-30-18

1. What is the definition of an illicit discharge?
   - a. Condensate from AC system
   - b. Rain water runoff
   - c. A non-stormwater discharge that poses a risk to the environment
   - d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   - a. Equipment washing water
   - b. Fish entrails and spilled chemicals
   - c. Petroleum and paint products
   - d. All of the above

3. What is required when an illicit discharge is suspected in your harbor?
   - a. If not false, call Harbor Traffic Control Center (808) 532-2076
   - b. Call Harbors Environmental Hotline at (808) 532-1962
   - c. None of your business
   - d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because
   - a. Diesel is not a pollutant
   - b. Tanks are properly labeled and equipped with secondary containment
   - c. They are stored under cover
   - d. b and c

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment
   - a. True
   - b. False

6. A minor source of Zinc pollution comes from
   - a. Flaring on fences
   - b. Tires
   - c. Motor oil
   - d. All of the above

7. Which of the following are good examples of BMPs?
   - a. Maintain equipment regularly
   - b. Promptly responding to a spill or leak
   - c. Using a drip pan underneath an oil-containing equipment
   - d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with fresh sandbags is considered a good post construction BMP
   - a. True
   - b. False

9. The first step of spill response is to
   - a. Complete the required report
   - b. Assess the risk
   - c. Confine the spill
   - d. Stop the source
   - e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties
    - a. True
    - b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: [illegible] Company: [illegible] Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Condensate from AC system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum and paint products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control Unit at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. Candy

5. True or False? In State of Hawaii, anything that goes into a regular storm drain inlet will end up in the ocean without treatment.
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating on fences
   b. Tires
   c. Moist soil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maintain equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath as oil containing equipment
   d. All of the above

8. True or False? Storm drain inlet (in maintenance area) fitted with bolts, which bonds is considered a good past construction BMP.
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the required report
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? Air environmental violation may lead to criminal penalties.
    a. True
    b. False

Please provide your comments here:

"Mālama i ke kai" - Protect Our Harbor Waters

2018 HDOT Harbors Tenant Training Questionnaire

Name: CARL YOUNG Company: DOT HARBORS Date: [illegible]

1. What is the definition of an illicit discharge?
   a. Complete [illegible] system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment
   d. None of the above

2. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails and spilled chemicals
   c. Petroleum coal point products
   d. All of the above

3. What is required when an illicit discharge is suspected at your harbor?
   a. Beer Oahu, call Harbor Traffic Control Unit at (808) 587-2926
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. None of your business
   d. a or b

4. The picture below is a good example of Best Management Practice (BMP) because:
   a. Diesel is not a pollutant
   b. Tanks are properly labeled and equipped with secondary containment
   c. They are stored under cover
   d. Bandit

5. True or False? In State of Hawaii, anything that goes into a regular storm drain may will end up in the ocean without treatment.
   a. True
   b. False

6. A major source of Zinc pollution comes from:
   a. Coating [illegible]
   b. Tires
   c. Motor oil
   d. All of the above

7. Which of the following are good examples of BMPs?
   a. Maint on equipment regularly
   b. Promptly responding to a spill or leak
   c. Using a drip pan underneath an oil-containing equipment
   d. All of the above

8. True or False? Storm drain inlet [illegible] maintenance [illegible] with hydrocarbon [illegible] is considered a good [illegible] BMP
   a. True
   b. False

9. The first step of spill response is to:
   a. Complete the [illegible]
   b. Assess the risk
   c. Confine the spill
   d. Stop the source
   e. Select PPE

10. True or False? An environmental violation may lead to criminal penalties.
   a. True
   b. False

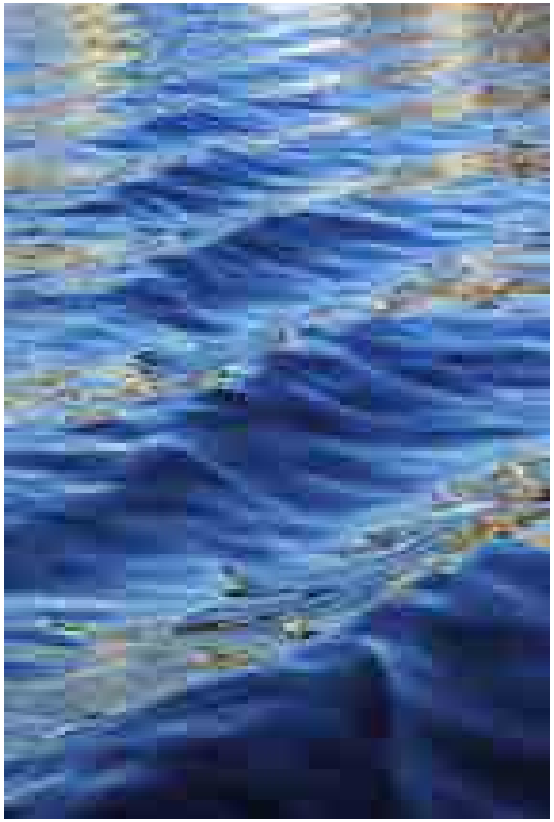
Please provide your comments here:

Attachment 5

Construction and Post Construction Training –
a. Presentation Slides

MĀLAMA I KE AWA KAI - PROTECT OUR HARBOR WATERS

DOT Harbors Construction and Post-Construction Training



Training Objectives

- Goals & Objectives
- Regulatory Background
- NPDES Permitting Program Overview
- Harbors Post-Construction Stormwater Management in New Development and Redevelopment Program
- Harbors Construction Site Runoff Control Program

Goals & Objectives

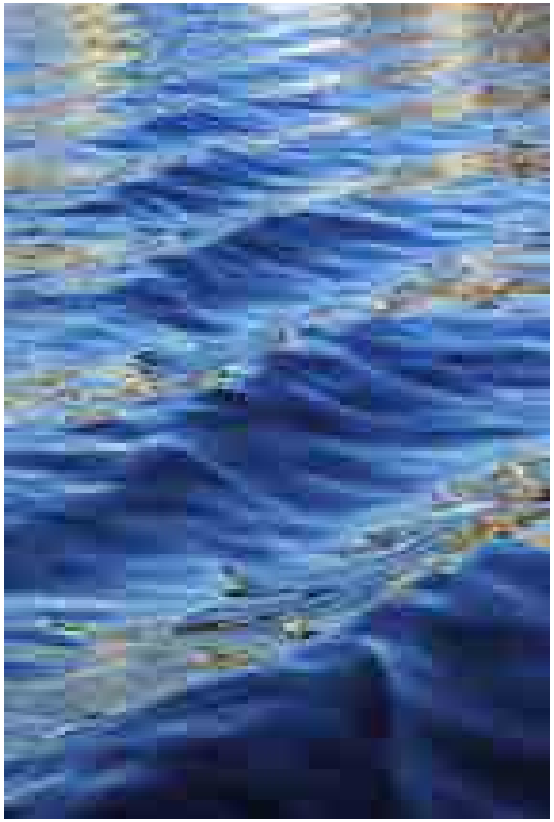
- To be good stewards of the environment
- To protect the environment
- Comply with environmental laws
  - National Pollutant Discharge Elimination System (NPDES) Permits
    - Municipal Separate Storm Sewer System (MS4) – HAR 11-55, Appendix K
    - General Permit Authorizing Discharges of Storm Water Associated with Construction Activity – HAR 11-55, Appendix C
  - Consent Decree

Regulatory Background

- 2003: NPDES permits from DOH for the storm drainage system at Honolulu Harbor and Kalaeloa Barbers Point Harbor.
  - Required to implement programs to minimize pollutants in runoff and the amount of runoff leaving the site.
- January 30, 2006: DOT entered into a consent decree with EPA and DOH.
  - Harbors was required to develop an EMS.
- November 5, 2014: DOT entered into a second consent decree with EPA and DOH.
  - Result is the requirement for increased vigilance in regards to implementation of stormwater programs.
- 2015: NPDES permit from DOH for Kahului Harbor
  - Required to implement programs to minimize pollutants in runoff and the amount of runoff leaving the site.

MĀLAMA I KE AWA KAI - PROTECT OUR HARBOR WATERS

NPDES Program



What is NPDES?

- The Clean Water Act includes the National Pollutant Discharge Elimination System (NPDES) program to regulate the discharge of pollutants from point sources to waters of the United States. Permitted discharges by DOH:
  - Hawaii Administrative Rules (HAR) 11-55:
    - **Appendix K** – NPDES General Permit Authorizing Discharges of Storm Water and Certain Non-Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4)
    - **Appendix C:** NPDES General Permit Authorizing Discharges of Storm Water Associated with Construction Activity

HAR 11-55, Appendix K

- General permit covers storm water and certain non-storm water discharges from small MS4s
- Develop, implement, and enforce a storm water management plan (SWMP)
- DOT Harbors – Small MS4 Permits
  - **HI 03KB482** Honolulu Harbor Permit
  - **HI 03KB488** Kalaeloa Barbers Point Harbor Permit
  - **HI 14KE352** Kahului Harbor Permit

What is an MS4?

- An MS4 is the drainage system that conveys stormwater to the receiving water, including:
  - Storm drain inlets, catch basins, and manholes.
  - Channels / canals.
  - Underground pipeline.
  - Outfalls.

- MS4s are classified based on population size or those located in an urbanized area as defined by the Bureau of Census.

MS4 Permit Requirements

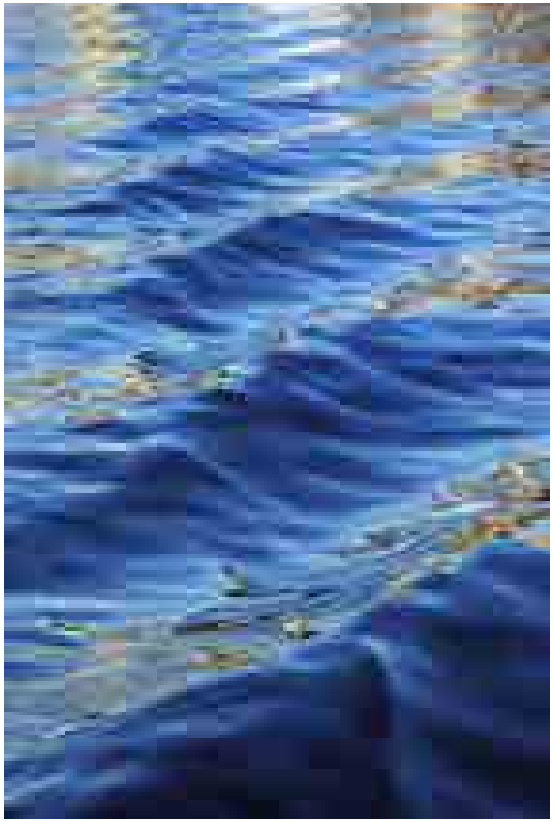
- The Stormwater Management Plan (SWMP) details how DOT Harbors will comply with the permit:
  - Public Education.
  - Public Involvement.
  - Illicit Discharge Detection & Elimination.
  - **Construction Site Runoff Control.**
  - **Post-Construction.**
  - Pollution Prevention / Good Housekeeping.

HAR 11-55, Appendix C

- General permit that covers discharges composed entirely of storm water runoff associated with construction activities
- Develop and implement a storm water pollution prevention plan (SWPPP)
- Construction sites
  - Includes sites that disturb 1 acre or more
  - Includes sites smaller than one acre that are part of a larger common plan of development

MĀLAMA I KE AWA KAI - PROTECT OUR HARBOR WATERS

DOT Harbors Post-Construction SW Management in New Development & Redevelopment Program



Post-Construction Stormwater Management Program

- Projects that result in a land disturbance of 1 acre or more (Regulated Projects) **must** consider the inclusion of post-construction BMPs.
  - Guidance Documents:
    - 2015 Stormwater Management Plan (SWMP)
    - Post-Construction Stormwater Management in New Development and Redevelopment, Honolulu and Kalaeloa Barbers Point Harbors, 2014 (Post-Construction Manual)
    - Storm Water BMP Guide (CCH, 2012; Harbors SWMP, Section D, Appendix C)
    - Rules Relating to Storm Drainage Standards (effective June 2013, CCH, 2000; Harbors SWMP, Section D, Appendix D)

SWMP Post–Construction Definitions

- Land Disturbance:
  - Penetration, turning, or moving of soil.
  - Resurfacing of pavement where the ground is exposed.
  - Grubbing where equipment is used to uproot vegetation.
  - Does <u>NOT</u> include:
    - Grass or weed cutting.
    - Bush or tree trimming that leaves the soil intact.

SWMP Post–Construction Definitions

Exempted project examples (Post-Construction Manual, Section 1.2):

- Maintenance activities such as top-layer grinding, repaving (where all pavement is not removed) and reconfiguring surface parking lots.
- Reroofing.
- Interior remodeling and improvement.
- Routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility.
- Trenching and resurfacing associated with utility work.
- Replacement of damaged pavement.
- Emergency construction activities required to immediately protect public health and safety.

SWMP Post–Construction Definitions

- Post–Construction BMP:

  A BMP that will remain in place following construction to minimize the discharge of pollutants from activities on-site.

SWMP Post – Construction Definitions

- Low Impact Development (LID)

"…mimic predevelopment site hydrology by using site design techniques that store, infiltrate, evaporate, and detain runoff…"

(SWMP Section 3.4.1)

SWMP Post – Construction

“LID” is not just for Storm Water!

Post-Construction Stormwater Management Program

- Include in Design Review Submittal:
  - Post-Construction BMP Plan Checklist.

<u>If PBMPs are required (Regulated Projects):</u>

  - Post-Construction Stormwater Mitigation Plan (PSMP).

Permanent Post-Construction Design Checklist

Hawaii Department of Transportation – Harbors Division

Permanent Post-Construction Best Management Practice Plan Checklist

For a Harbors Project, please fill in this section	
Project Title:	
Project Location:	
Acreage of Site:	Harbors Project No.:
Name of Design Firm:	
Email:	Phone No.:

For a Tenant Improvement Project, please fill in this section	
Tenant Business Name:	Date:
Project Title:	
Project Location:	
Acreage of Site:	TMK No. (if any):

Post-Construction Stormwater Mitigation Plan (PSMP)

Drainage Study and Conditions of Concern → Identify potential pollutants → Identify post-construction BMPs → Complete PSMP

- Required for ”Regulated Projects.”
- Contents (Post-Construction Manual, Section 3.4):
  - Narrative of project.
  - Site map.
  - Description of potential pollutants.
  - Drainage study and conditions of concern.
  - Post-Construction BMPs.
  - Maintenance requirements.

PSMP – PBMP Selection

- Select from these categories (SWMP Section 3.3):
  - Low Impact Development (LID).
    - Goal = Keep the stormwater on-site and treat it as a resource instead of a waste.
    - Example = Conserve vegetated areas.
  - Source Control.
    - Goal = Keep potential pollutants from coming into contact with stormwater runoff.
    - Example = Covering a maintenance area.
  - Treatment Control.
    - Goal = Remove pollutants from stormwater runoff.
    - Example = Hydrodynamic separators.

Order of Preference

PSMP – PBMP Selection and Design

- Refer to City and County of Honolulu resources (Harbors SWMP 2015, Section D):
  - Post-Construction Stormwater Management in New Development and Redevelopment, Honolulu and Kalaeloa Barbers Point Harbors, 2014
  - Storm Water BMP Guide (CCH, 2012; Harbors SWMP, Section D, Appendix C)
  - Rules Relating to Storm Drainage Standards (effective June 2013, CCH, 2000; Harbors SWMP, Section D, Appendix D)

PBMP Installation and Tracking

- Construction Inspection (SWMP Section 4.0)
  - Prior to construction
  - During construction
  - Final Inspection
- Maintenance, Inventory and Recordkeeping (SWMP Section 5.0)
  - Site-specific Operation and Maintenance Plan, guidance provided in CCH Stormwater BMP Guide, or from product manufacturer.
  - PBMPs should be inspected at least annually or as specified in site-specific O&M plan.
  - PBMPs are tracked in Harbor's AMS (Cityworks).

Enforcement

- Oral or Verbal Warning
- Written Warning
- Notice of Apparent Violation (NAV)
- Notice and Finding of Violation Order (NFVO)
- Stop Work Orders (as applicable) e.g. Issuance of Summons or Citation, including fines

Permanent BMP Options

- Conserve Natural Areas, Soils, and Vegetation:
  - Conduct construction activities such that disturbance to existing vegetated areas is minimized, in particular trees.
  - Refer to CCH Storm Water BMP Guide, pg 4.

Ideal Implementation:
- In areas where there is existing vegetation

Permanent BMP Options

- Vegetated Swale:
  - Broad earthen channel vegetated with erosion resistant and flood tolerant grasses.
  - Runoff is typically conveyed through channel, which allows for infiltration and treatment.
  - Refer to CCH BMP Guide, pg 86.

Ideal Implementation:
- Along streets and parking lots.

Permanent BMP Options

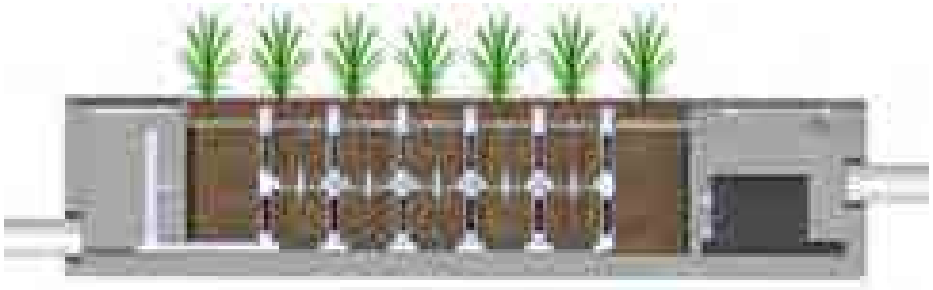
- Permeable Pavement
  - Paved surfaces that infiltrate, treat, and/or store rainwater where it falls.
  - Refer to CCH BMP Guide, Pg 57.

Ideal Implementation:
• Driveways and parking lots.
• Areas where flooding is a problem.

Permanent BMP Options

- Modular Wetlands
  - A treatment system designed to look and function more naturally.
  - Engineered media targets pollutants of concern.
  - Proprietary device, not covered in CCH BMP Guide.

Ideal Implementation:
• Driveways and parking lots.
•Areas that have drain piping and receive surface flow.

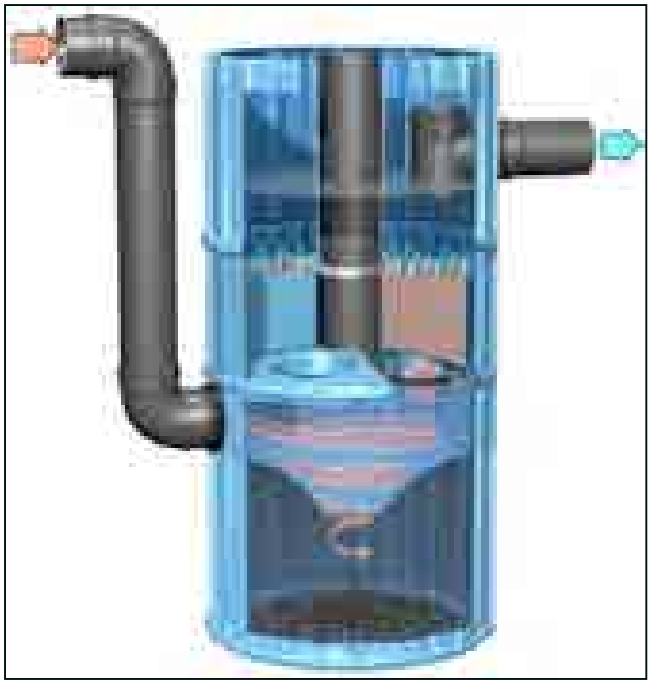


Permanent BMP Options

- Hydrodynamic Separators
  - Flow through structures with a settling or separation unit to remove sediments and other pollutants.
  - Refer to CCH BMP Guide, pg 104.

Ideal Implementation:

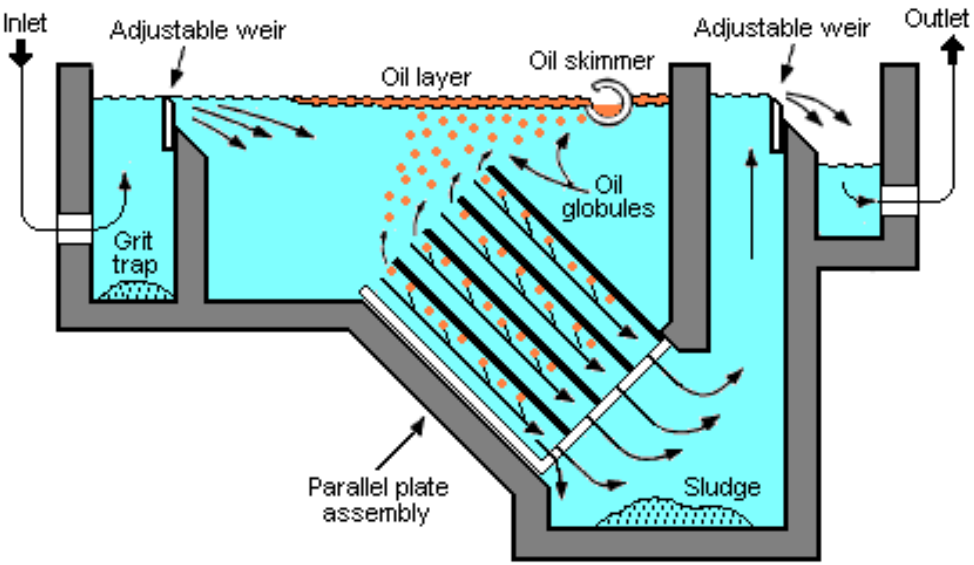
•Areas where materials to be removed from runoff are heavy particulates – which can be settled – or floatables –which can be captured, rather than solids with poor settleability or dissolved pollutants.



Permanent BMP Options

- Oil Water Separators
  - Separates oil from water before discharge.
  - Refer to CCH BMP Guide pg. 15, Vehicle Cleaning.

Ideal Implementation:
•Areas where vehicle repairs or washing take place.



Permanent BMP Options

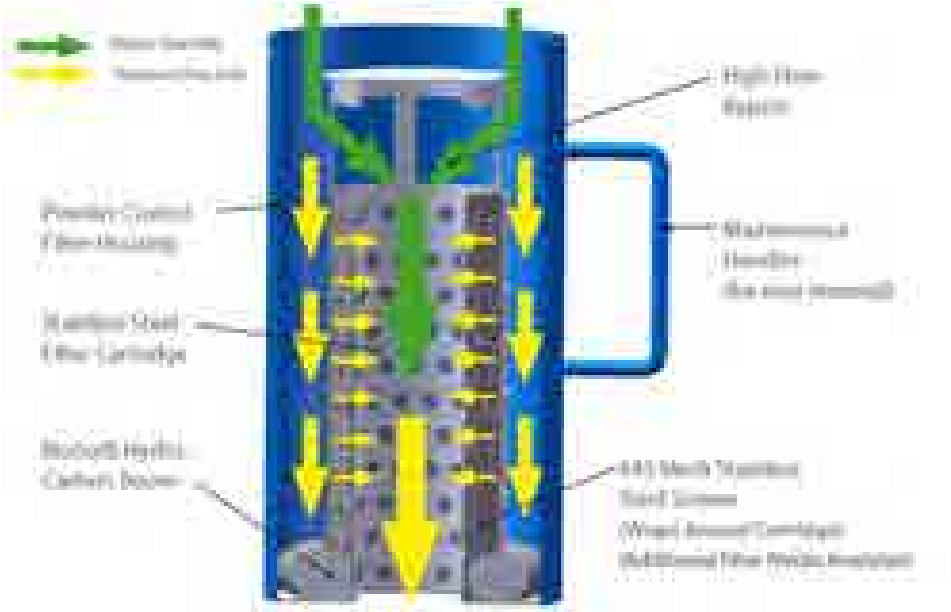
- Trench Drain Filter
  - Designed to absorb high levels of hydrocarbon, oils and grease.
  - Ideal for maintenance yards.
  - Easy to install and replace.

Ideal Implementation:
•Maintenance yards with existing trench drains.

Permanent BMP Options

- Downspout Filter
  - Canister installed in downspout piping.
  - Water is directed outside of the Mesh Stainless Steel Filter Cartridge & Filter.
  - Best for drainage areas with low pollutant loads.

Ideal Implementation:
•Roof drain downspouts.



Permanent BMP Options

- Curb Inlet Screen
  - Blocks larger debris and trash from entering curb inlet structures.
  - Some systems automatically retract during higher flows.
  - Can be used with basket insert.

Ideal Implementation:
•Keeping larger debris out of curb inlets.

Permanent BMP Options

- Grate Inlet Skimmer Box
  - Catch basin insert can be custom sized to fit almost and inlet.
  - Includes oil boom for hydrocarbon removal.
  - Can include media filter, if needed.
  - Fairly easy to install and maintain.

Ideal Implementation:
•Any grated catch basin inlet where pollutant removal is needed.

Permanent BMP Options

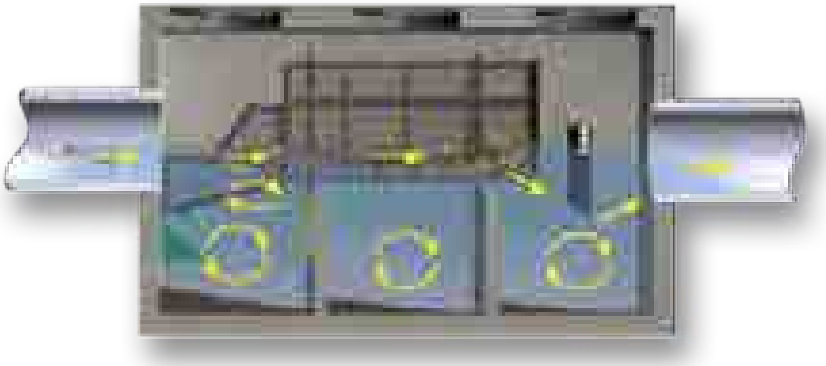
- Grate Inlet Filter
  - Catch basin insert can be custom sized to fit almost and inlet.
  - Includes oil boom for hydrocarbon removal.
  - Can include media filter, if needed.
  - Fairly easy to install and maintain.

Ideal Implementation:
•Any grated catch basin inlet where pollutant removal is needed.

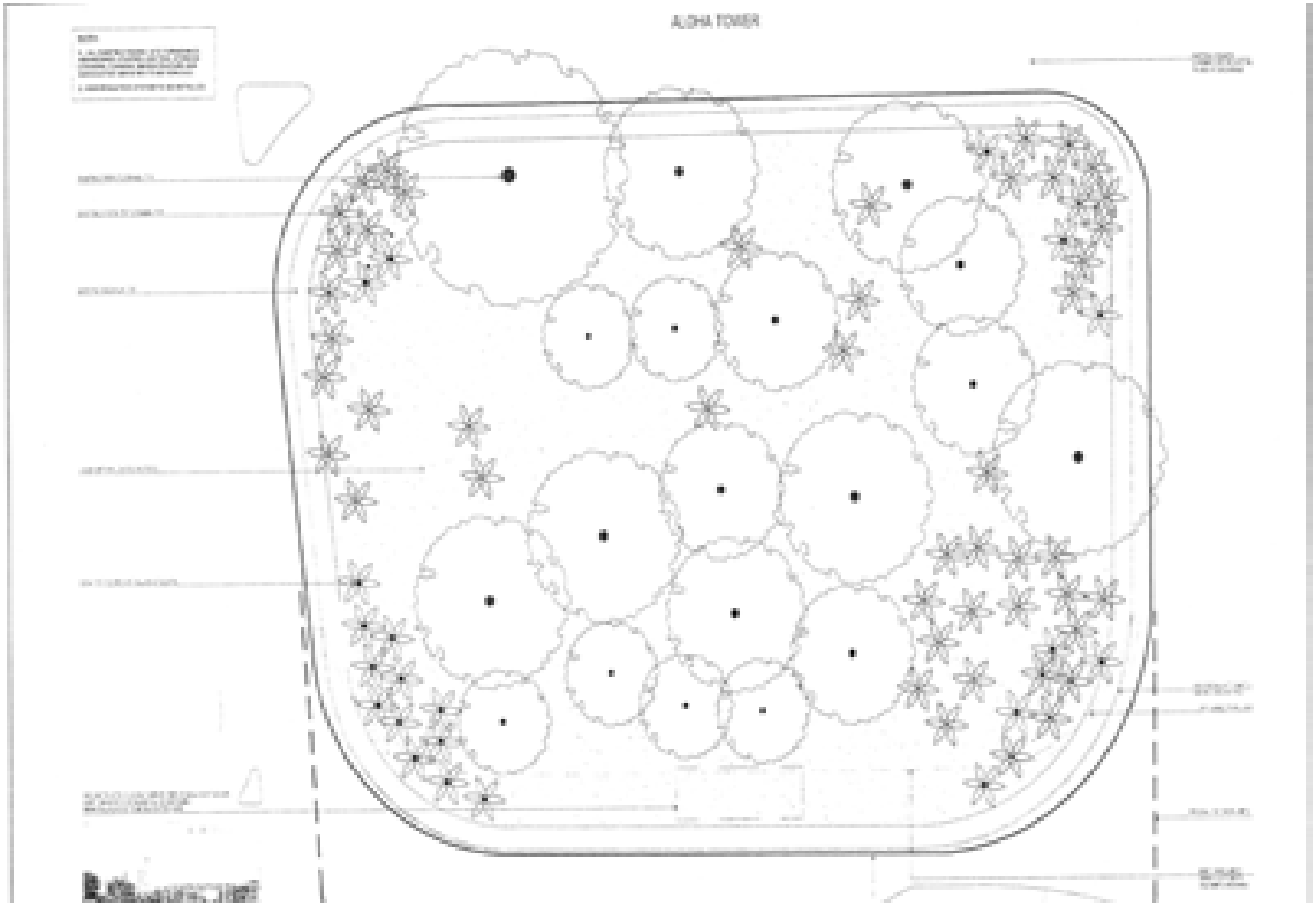
Permanent BMP Options

- Baffle Box
  - Flow through structure with settling chamber to remove sediment.
  - Includes basket system to trap floatables, and an oil boom to remove hydrocarbons.

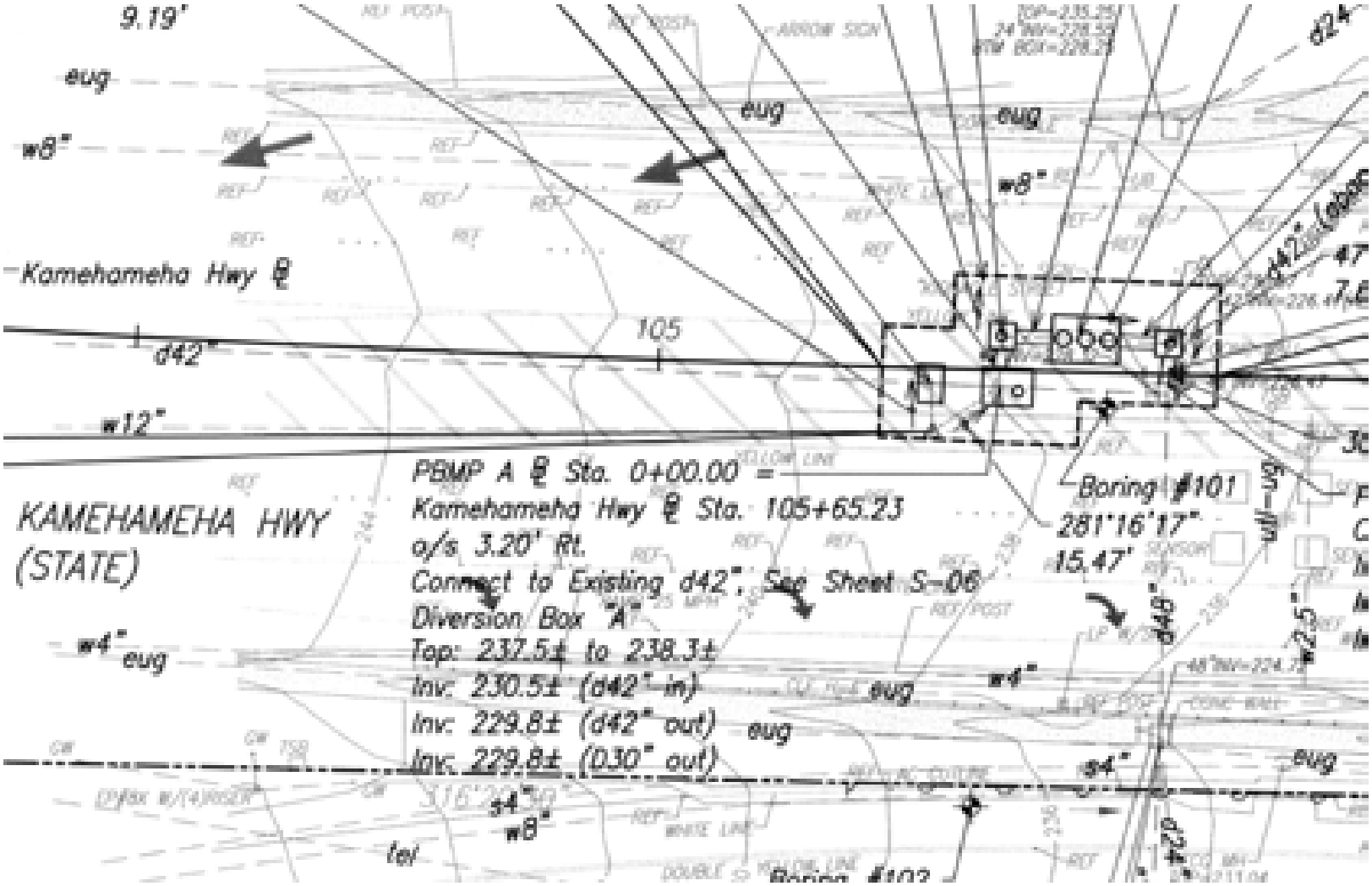
Ideal Implementation:
•Areas where materials to be removed from runoff are heavy particulates – which can be settled – or floatables –which can be captured, includes oil boom.



Irwin Memorial Park



Lessons Learned
(Maintenance Considerations)



Lessons Learned
(Maintenance Considerations)

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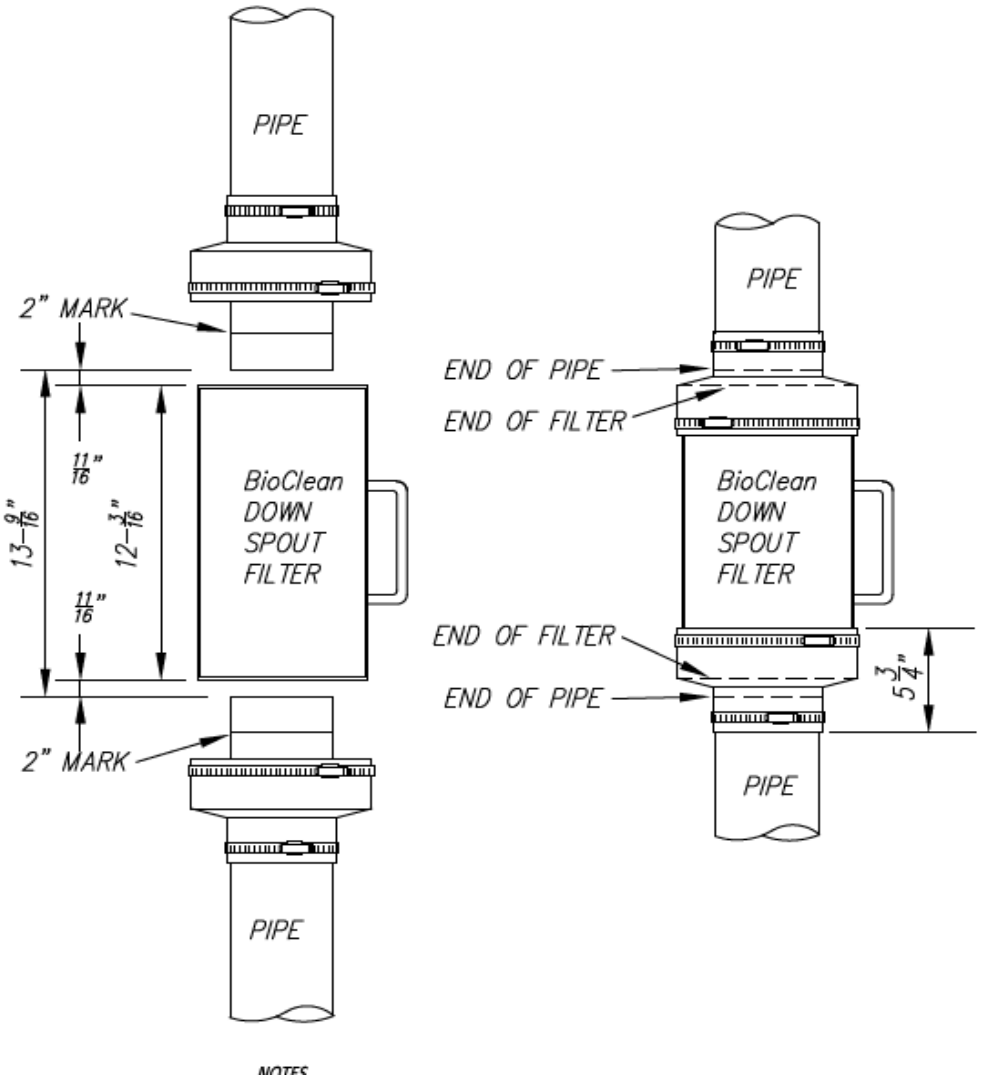
(Maintenance Considerations)

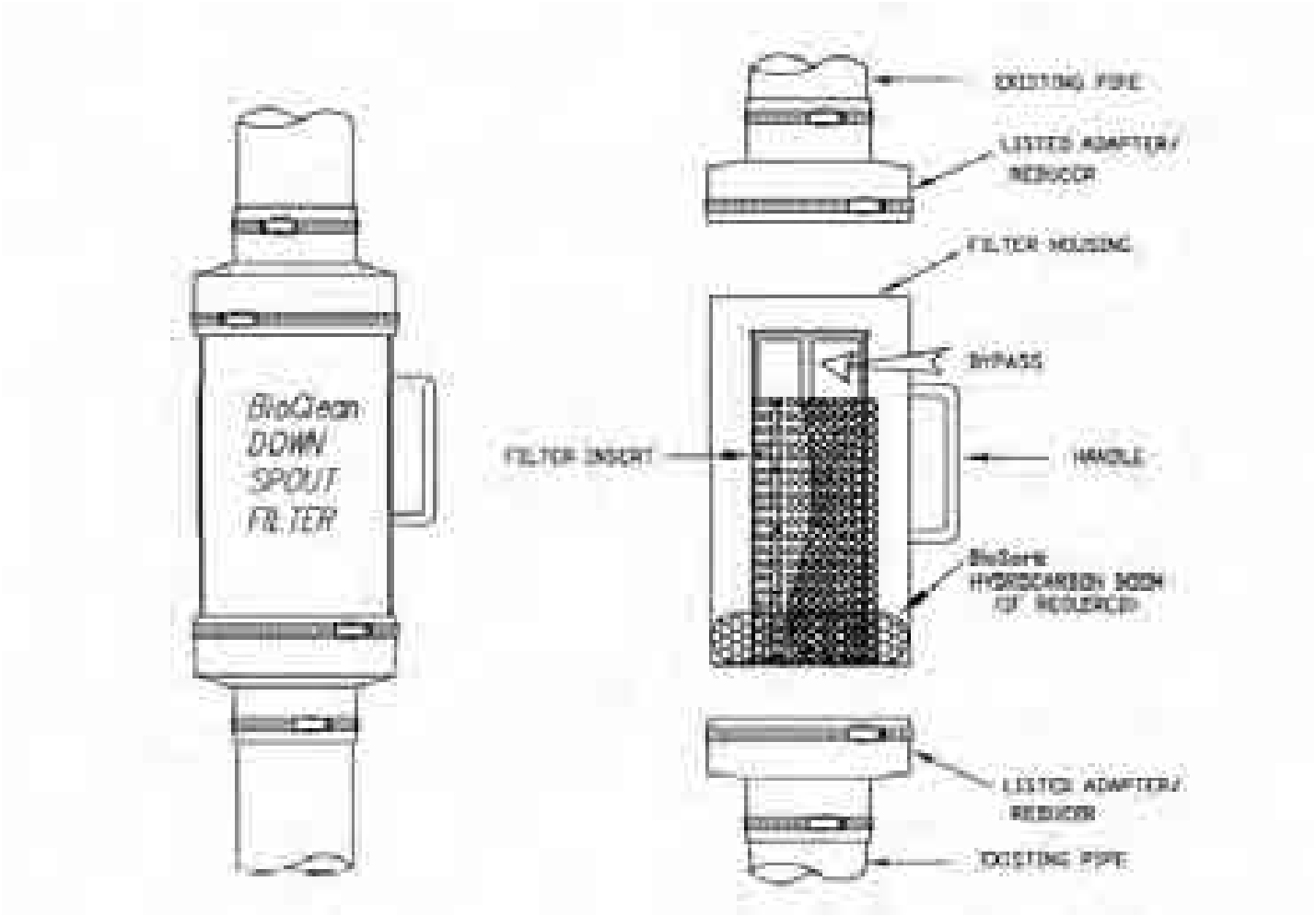
Lessons Learned

Proper Construction/Installation



Proper Construction/Installation is Critical!

Proper Construction/Installation is Critical!



Know Your Pollutant Load!

Evaluate Maintenance Requirements

Take Away

- All projects must be reviewed to ensure that they comply with Post-Construction BMP requirements.
- Projects that result in a land disturbance of 1 acre or more must consider the inclusion of post-construction BMPs.
- **Be familiar with City and County of Honolulu BMP manual, Harbor's SWMP programs, Consent Decree, and construction documents.**

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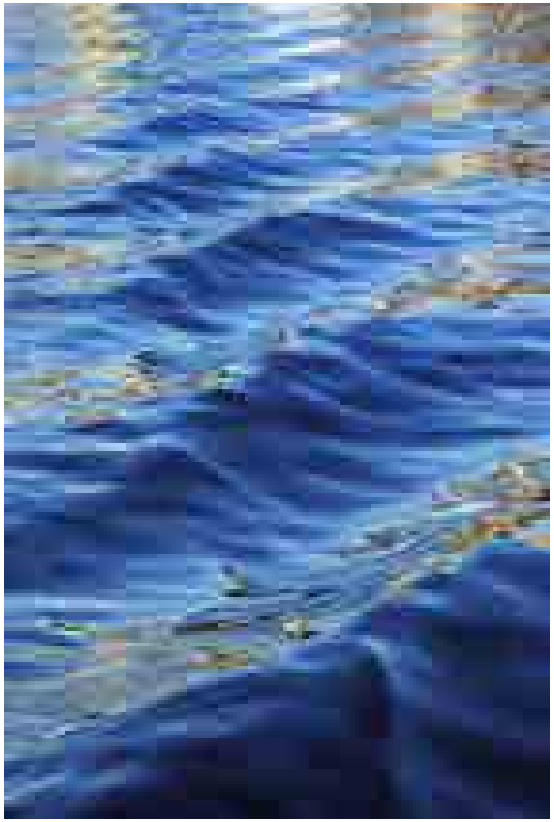
DOT Harbors Construction Site Runoff Control Program



Construction Site Runoff Control Program Training

- NPDES Small MS4 Permit
- Consent Decree
- NPDES Construction General Permit
- Stormwater pollution prevention practices
- City and County of Honolulu Best Management Practice Manual for Construction

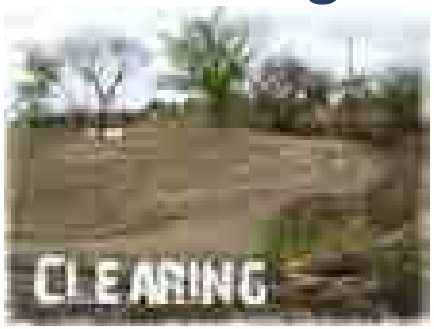
MS4 Permit
Stormwater Management Plan

- SWMP for Honolulu and KBPH is available online:
  - http://hidot.hawaii.gov/harbors/malamaikeawakai/
- SWMP for Kahului Harbor covered under the Kahului, Highways Division, Maui Division SWMP
  - http://stormwatermaui.com/
- Details procedures for complying with requirements of HAR 11-55, App K and the Consent Decree.
- Minimum Control Measure: *Construction Site Runoff Control Program*

All three harbors are subject to the requirements of the Harbor's Construction Site Runoff Control Program

MS4 Permit
SWMP Definitions

- Construction:
  - Activities that result in land disturbance, including:



  - Construction related activities, including:
    - Stockpiles.
    - Borrow areas.
    - Staging areas.

MS4 Permit
SWMP Definitions

- Land Disturbance:
  - Penetration, turning, or moving of soil.
  - Resurfacing of pavement where the ground is exposed.
  - Grubbing where equipment is used to uproot vegetation.
  - Does <u>NOT</u> include:
    - Grass or weed cutting.
    - Bush or tree trimming that leaves the soil intact.

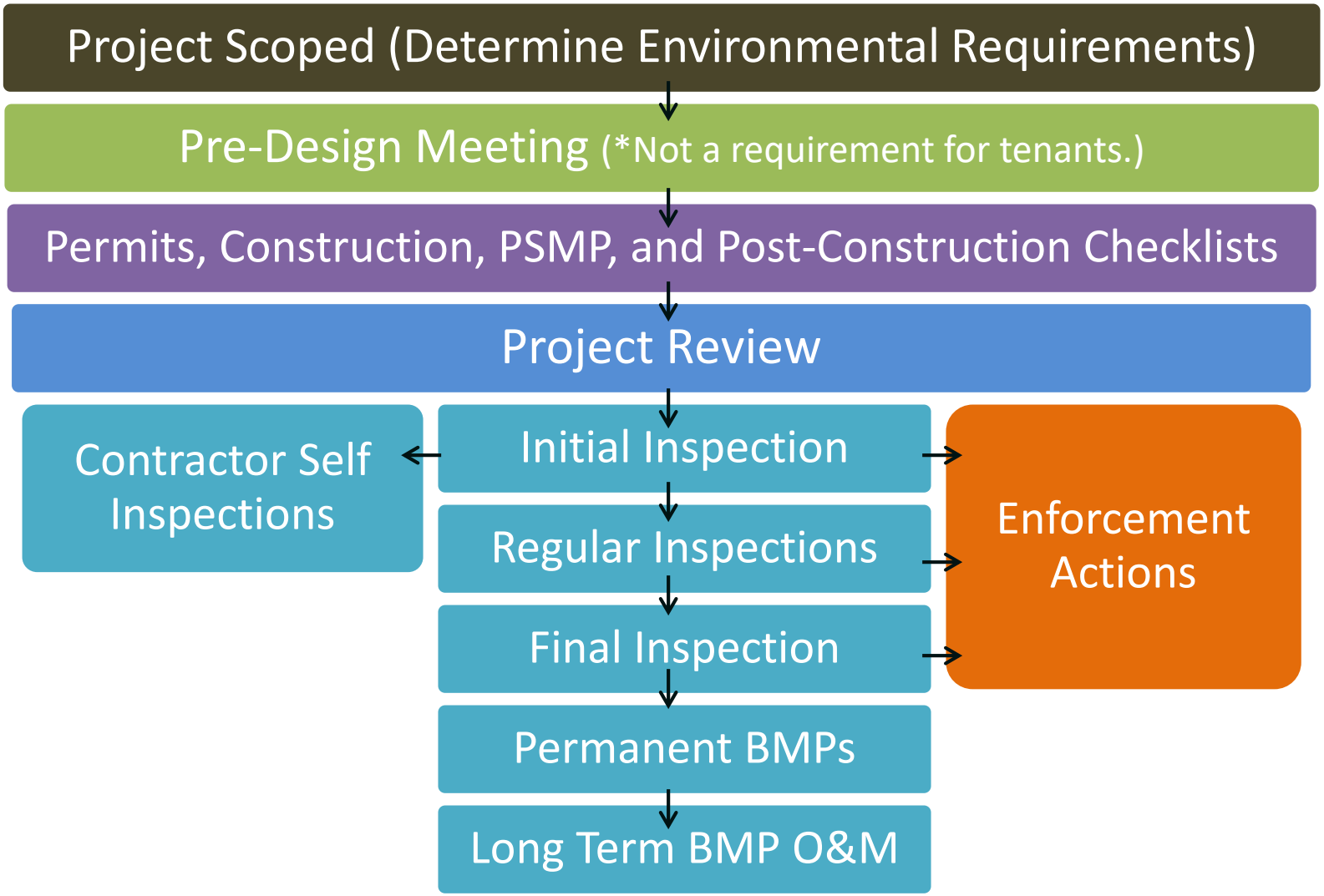
MS4 Permit
SWMP Definitions

- Exempted projects:
  - Minor land disturbance on a single lot (e.g., minor landscaping activities).
  - Post, pole, sign, and fencing installation.
  - Utility repair work.
  - Parking lot, driveway, and other paved surface repair.
  - Repair and maintenance activities.

MS4 Permit
SWMP Definitions

- Best Management Practice (BMP):
  - Practice or device used to mitigate the discharge of potential pollutants.

Harbor's Construction Process



Consent Decree Requirements

- Construction Site Runoff Control Program elements:
  - Plan Review Procedures.
    - Design Review Checklist.
  - BMP Standards and Technical Specifications.
    - Refer to SWMP Construction Program, Att 6.
  - Construction and Post-Construction BMP inspections.
  - Training program for plan reviewer and inspectors.

Construction Design Review

- Pre-Design Meeting.
- Documentation:
  - Notification Form for Project Less Than One Acre with BMP plan.

    OR
  - Construction Design Review Checklist.
  - Completed NPDES applications.
  - Construction BMP plan sheets and details.
  - Stormwater Pollution Prevention Plan.

Design Review Checklist

Hawaii Department of Transportation – Harbors Division

Construction Site Design Review Checklist

Project Description	
Project Title:	
Project Job No:	Acreage of Site:
Name of Design Firm:	
Projected Construction Timeframe:	
Description of Project:	

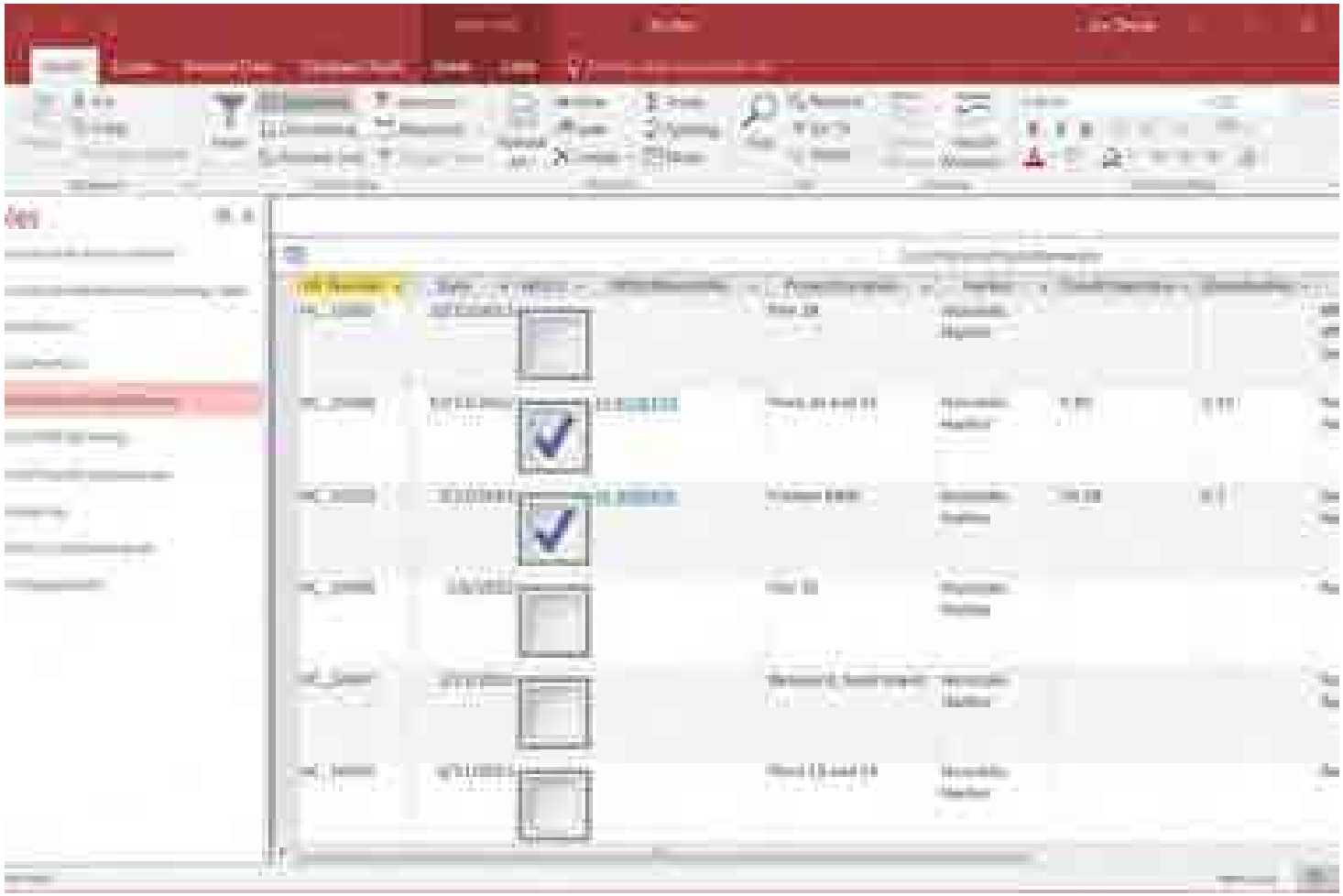
Site Information
Construction Site Location:

Signature and Certifications	
Designer: I certify that the design is complete, accurate, and addresses the items on this checklist to the best of my knowledge.	
Print Name:	Job Title:
Signature:	Date:
Review: HDOT Harbors Project Manager and Environmental Section.	
Harbors Project Manager Signature:	Print Name:
	Date:
Harbors Environmental Section Signature:	Print Name:
	Date:

Construction Review

- Project review after contract award:
  - Contractor completes Stormwater Pollution Prevention Plan and provides to the Construction Manager (CM).
  - CM will submit to Environmental Section (EE).
  - EE will send their comments to the CM through memorandum.
  - Harbors Division will issue Notice to Proceed to the contractor, specifying:
    - First work order is the installation of BMPs.
    - BMPs must be inspected prior to the start of any other work.
  - EE maintains an inventory of construction sites.

Inventory of Construction Sites



Reviewing Plans

- When conducting a plan review:
  - Identify location and size.
  - Identify where storm water will flow.
    - Identify waterways (e.g. coastline, canals) and storm drains.
    - Identify topography.
    - Identify ground cover and soil type.
  - Identify locations of potential pollutant source.
    - Land disturbance activities.
    - Staging areas.
    - Non-storm water.

Reviewing Plans

- Determine the scheduling / phasing.
  - Is the land disturbance activity planned for the dry season? (Apr – Sep)
  - Have there been efforts to minimize the disturbed area?
- Responsible parties.
  - Does the Stormwater Pollution Prevention Plan include the names or titles of parties responsible for:
    - Inspections?
    - Maintenance?
    - Recordkeeping?
    - Rain gauge monitoring?
    - Incident reporting?

Reviewing Plans

- Have potential pollutants been addressed via Best Available Technology/Best Conventional Pollutant Control Technology (BAT/BCT)?
- Ensure there is a plan for final stabilization.
- Does the design include permanent BMP?
  - Non-exempt projects one acre and larger.
  - Does the project include LID?
  - How is ongoing maintenance addressed in the plan?
- Have the necessary permits been applied for?

Reviewing Plans

- If greater than or equal to 1 acre, determine whether BMPs adequately address potential pollutants and the requirements of HAR 11-55, App. C.
  - BMPs should be based on expected amount, frequency, intensity, and duration of rain events in the area. (Typically: 2 yr, 24 hr storm).
  - Refer to City and County of Honolulu BMP manual for design details.

Consent Decree Requirements

- Use the City and County of Honolulu Stormwater BMP Manual – Construction. When applicable, all projects should include:

Erosion Controls	Scheduling
	Preservation of Existing Vegetation
	Slope Protection
	Run-on Diversion
Sediment Controls	Silt Fence
	Storm Drain Inlet Protection
	Sand Bag Barrier
	Stabilized Construction Site Entrance/Exit
Non-Stormwater Management	Water Conservation Practices
	Dewatering Operations
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management
	Concrete Waste Management
	Sanitary/Septic Waste Management

Consent Decree Requirements

- Sites Disturbing 1 Acre or More:

Erosion Controls	Hydraulic Mulch
	Hydroseeding
	Soil Binders
	Geotextiles and Mats
	Wood Mulching
	Slope Drains
Sediment Controls	Silt Fence
	Fiber Rolls
	Sediment Basin
	Gravel Bag Berm
	Street Sweeping and/ or Vacuum
	Sand Bag Barrier
	Storm Drain Inlet Protection
	Scheduling
	Check Dam

Consent Decree Requirements

- Sites Disturbing 1 Acre or More:

Additional Controls	Wind Erosion Controls
	Stabilized Construction Entrance/ Exit
	Stabilized Construction Roadway
	Entrance/ Exit Tire Wash
	Advanced Treatment Systems
Non-Stormwater Management	Water Conservation Practices
	Dewatering Operations (Groundwater dewatering only under National Pollutant Discharge Elimination System Permit No. (TBD)
	Vehicle and Equipment Washing
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management

Consent Decree Requirements

- Roadway Paving or Repair:

1.	Restrict paving and repaving activity to **exclude periods of rainfall** or predicted rainfall unless required by emergency conditions.
2.	**Install gravel bags and filter fabric** or other equivalent inlet protection at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat.
3.	Prevent the discharge of release agents including soybean oil, other oils, or diesel to the stormwater drainage system or receiving waters.
4.	Minimize non-stormwater runoff from water use for the roller and for evaporative cooling of the asphalt.
5.	Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
6.	**Collect liquid waste in a container**, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.

Consent Decree Requirements

- Roadway Paving or Repair:

7.	Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
8.	**Cover the "cold-mix" asphalt** (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
9.	**Cover loads** with tarp before haul-off to a storage site, and do not overload trucks.
10.	Minimize airborne dust by using water spray or other approved dust suppressant during grinding.
11.	Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grinding materials or rubble in or near stormwater drainage system or receiving waters.
12.	Protect stockpiles with a **cover or sediment barriers during a rain**.

Plan Reviews: NPDES Permit Minimum Measures

- Provide natural buffer if within 50’ of state water.
  - Alternatives or exemptions may be applied based on site conditions.
- Install perimeter controls where water will flow.
- Minimize track-out.
  - Has a designated exit if equipment will be coming onto the site.
- Control stockpiles.
  - Use a temporary perimeter BMP or stabilize.
- Minimize dust.
- Minimize land disturbance on slopes.
  - Attempt to limit grading to less than 15% slopes.
- Minimize soil compaction.
  - Restrict vehicle and equipment use.
  - Condition the soil prior to seeding.

Plan Reviews: NPDES Permit Minimum Measures

- Protect drain inlets.
  - Only required when storm water is not properly managed with another method.
- Contaminated stockpiles.
  - Prevent storm water from impacting stockpile. OR
  - Prevent discharge of storm water from the area.
- Ensure non-storm water is contained (e.g. dewatering, concrete washout, vehicle washing).
- Written narrative for potential pollutant generating activities such as:
  - Vehicle and equipment fueling.
  - Washing vehicles and paint applicators.
  - Storage, handling, and disposal of construction materials, products, and wastes.

Harbor's Inspections

- Initial Inspection:
  - Verify all BMPs are installed appropriately.
  - Deficiencies must be corrected prior to the start of other construction work.
- Regular Inspection:
  - Deficiencies must be corrected or enforcement will commence.
  - Inspector will provide the contractor with report in five (5) calendar days.

Harbor's Inspections

- Final Inspection:
  - When all the following conditions are met:
    - Construction is completed.
    - Exposed soil has been stabilized.
    - Remaining activities have minimal impact on stormwater runoff.
  - Document the conditions are met in the *Additional Notes* portion of the report.
  - Ensure that permanent BMPs are properly installed, if applicable.
  - Deficiencies must be corrected prior to issuance of final payment.

Harbor's Inspections

- Review completed Contractor Self Inspections:
  - For sites with NPDES permit:
    - Contractor's self inspections weekly AND within 24 hours of a 0.25 inch rainfall.
    - Signed by duly authorized representative.
  - Ensure contractor has completed or has a plan for completion of maintenance and repair of BMPs.
  - Any changes to BMPs must be documented.

Harbor’s Enforcement

- Escalating Policy for Enforcement
  - Harbor’s Construction Enforcement
    - Oral or Verbal Warning
    - Written Warning
    - Issue Stop Work Order

Harbor’s Enforcement

- Enforcement Response Plan
  - Currently Developing
  - Escalating Policy for Enforcement that may include ability to assess liquidated damages, fines, and/or criminal penalties for non-compliance on construction projects

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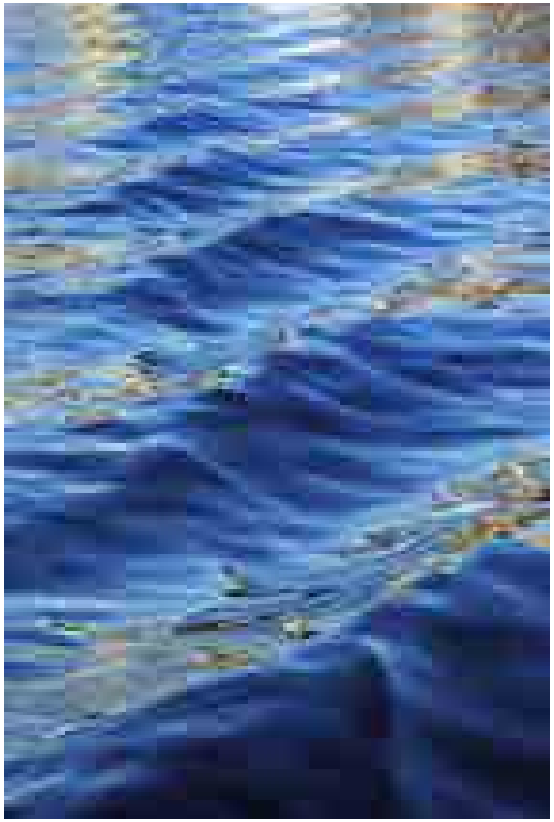
NPDES Construction General Permit



HAR 11-55, App C

- Submit a Notice of Intent and develop a Stormwater Pollution Prevention Plan (SWPPP) 30 days prior to the start of activities.
- Notify the DOH 7 days prior to start.
- Train personnel on BMPs.
- Install, inspect, and repair BMPs as necessary.
- Update SWPPP and maintain on-site.
- Submit a Notice of Cessation when area has been stabilized.

HAR 11-55, App C

- General Permit Requirements.
  - NOI submitted via e-permitting website.
  - Permittee must complete and keep on-site:
    - SWPPP.
    - Record of changes to the SWPPP (complete in 7 days).
    - Monthly compliance reports.
    - Inspection reports (within 48 hours).
    - Corrective action reports (start within 24 hours and finish with 7 days).
  - All documents must be signed by certifying person or duly authorized representative.

HAR 11-55, App C

- SWPPP must include:
  - **Personnel on the stormwater team**.
  - Contractor and sub-contractor information.
  - Nature and sequence of construction activities.
  - Description of sources of non-stormwater.
  - Potential sources of stormwater pollution and measures to reduce or eliminate.
  - Description of buffer option implemented.
  - **Description stabilization practices and post-construction BMPs.**
  - Inspection, maintenance, and corrective action procedures.
  - Training documentation.
  - NGPC and other permits.
  - Documentation of UIC well requirements, if applicable.

HAR 11-55, App C

- SWPPP must include a site map:
  - Locations of earth-disturbing activities.
  - Topography including slopes before and after grading.
  - Stockpiles locations.
  - Contaminated soils.
  - Direction of discharge to state waters and other drainage systems (Harbors MS4).
  - Entry/exit points.
  - Structures and impervious surfaces.
  - Staging area.
  - **Boundary lines of buffer areas.**
  - Potential pollutant activities and storage areas.
  - All BMPs.

HAR 11-55, App C

- Natural Buffers:
  - Required when a state water is within 50 feet of ground disturbance.
  - Options:
    - Maintain a 50-foot undisturbed vegetated buffer.
    - If the buffer is less than 50 feet, also provide a double sediment control spaced 5 feet apart.
    - If there is no buffer, maintain a double sediment control spaced 5 feet apart and complete stabilization within 7 calendar days.
  - Delineate with flags, tape, or other marking.

HAR 11-55, App C

- Contractor Self-Inspection frequency:
  - For sites that are NOT discharging to impaired waters:
    - At least once every 7 days; **OR**
    - Once every 14 days and within 24 hours of a 0.25 inch rain event.
  - For sites that do discharge to impaired waters:
    - At least once every 7 days; **AND**
    - Within 24 hours of a 0.25 inch rain event and prolonged rain events.
      - Keep a rain gauge on-site!
  - Conducted by a qualified person.

HAR 11-55, App C

- Corrective Actions:
  - Only for actions to **stop or prevent** a violation of water quality (HAR 11-54).
  - Fix the problem immediately (start the same day).
  - Significant repairs – complete within 7 days.
- Corrective Action Report:
  - Within **24 hours**: condition identified, date, time, and how it was identified.
  - Within **7 days:** follow-up actions taken, summary of BMP modifications.

HAR 11-55, App C

- Stabilization is required:
  - Immediately (by next day) whenever earth disturbing activities have ceased.
    - Temporarily ceased means no activities within **14 calendar days** or more.
  - Deadline for completion: ASAP but no later than **14 calendar days** after initiation.
  - Deadline for sites discharging to impaired waters: **7 calendar days** from the temporary or permanent cessation of earth disturbance.

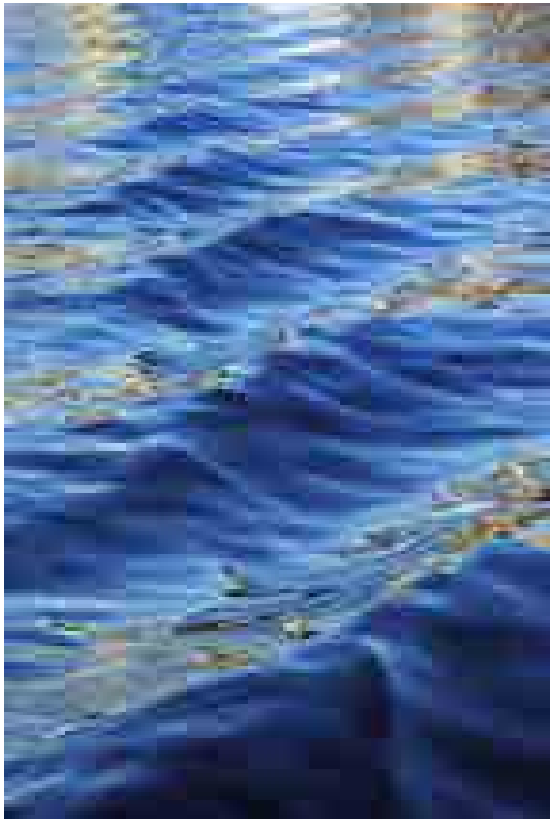
HAR 11-55, App C

- Types of initiation of stabilization:
  - Prepping the soil for vegetation or non-vegetation stabilization.
  - Applying mulch.
  - Seeding and planting.
  - Making the arrangements for stabilization.
- Criteria for stabilization:

  - Vegetation evenly distributed that provides **70%** or more of density that was previously there.
  - Non-vegetative controls (e.g. pavement).

MĀLAMA I KE AWA KAI - PROTECT OUR HARBOR WATERS

Stormwater Pollution Prevention Practices



Potential Pollutant: Sediment

- Erosion:
  - Process by which the land surface is worn away by the action of water or wind.

- Sedimentation:
  - Movement and settling out of suspended soil particles.

Common Pollutants

Vehicle Fluids.

Chemicals.

Portable Toilet.

Aggregate.

Washouts.

Trash.

Sediment.

Construction Impacts

Sedimentation

Unstabilized Construction Site

Between **35-45 tons** of sediment per acre each year.

VS

Forested Land / Grassy Areas

Approximately **1 ton** of sediment per acre each year.

Definition of Illicit Discharge

- Non-stormwater discharge that poses a risk to the environment.

Only Rain in the Storm Drain!

Erosion Control

- **Any source control practice that protects the soil surface and prevents soil particles from being detached by rainfall, flowing water, or wind.** *(Referred to as soil stabilization)*

CCH BMP Manual : Table 3-1
Employee/Subcontractor Training
Scheduling
Preservation of Existing Vegetation
Hydraulic Mulch
Hydroseeding
Soil Binders
Geotextiles and Mats
Wood Mulching
Earth Dikes and Drainage Swales
Velocity Dissipation Devices
Slope Drains
Streambank Stabilization
Seeding, Planting, and Sodding
Slope Roughening/Terracing
Topsoil Management

Sediment Control

- **Any practice that traps soil particles after they have been detached and moved by rain, flowing water, or wind.** *(Passive systems that rely on filtering or settling the particles out of the water or wind that is transporting them.)*

CCH BMP Manual: Table 3-2
Silt Fence
Sediment Basin
Sediment Trap
Check Dams
Fiber Rolls
Gravel Bag Berm
Street Sweeping and Vacuuming
Sandbag Barrier
Storm Drain Inlet Protection
Chemical Treatment
Locations of Potential Sources of Sediment
Level Spreader
Rip-Rap & Gabion Inflow Protection
Vegetated Buffer Strips and Channels

Wind Erosion Control

- **Applying water or other dust palliatives to prevent or alleviate dust nuisance.**

CCH BMP Manual: Table 3-3
Wind Erosion Control

Tracking Control

- **Preventing or reducing the tracking of sediment off-site by vehicles leaving the construction area.**

CCH BMP Manual: Table 3-4
Stabilized Construction Entrance/Exit
Stabilized Construction Roadway
Entrance/Outlet Tire Wash

Non-Storm Water Management BMPs

- **Source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source or eliminating off-site discharges** *(Referred to as good housekeeping practices)*

CCH BMP Manual : Table 4-1
Water Conservation Practices
Dewatering Operations
Paving and Grading Operations
Temporary Stream Crossing
Clear Water Diversion
Illicit Connection/Discharge
Potable Water/Irrigation
Vehicle and Equipment Cleaning
Vehicle and Equipment Fueling
Vehicle and Equipment Maintenance
Pile Driving Operations
Concrete Curing
Concrete Finishing
Material over Water
Demolition Adjacent to Water
Temporary Batch Plants

Waste Management & Materials Pollution Control BMPs

- **Source control BMPs that prevent pollution by limiting or reducing potential pollutants at their source before they come in contact with storm water.** *(Referred to good housekeeping practices)*

CCH BMP Manual : Table 4-2
Material Delivery and Storage
Material Use
Stockpile Management
Spill Prevention and Control
Hazardous Waste Management
Contaminated Soil Management
Concrete Waste Management
Sanitary/Septic Waste Management
Liquid Waste Management

BMP Installation, Inspection, and Maintenance

- **Implementation/Installation**
  - Refer to BMP Manual
  - Follow manufacturer specifications
- **Inspection**
  - Refer to BMP Manual
  - Routine inspections
  - Permit required inspections
- **Maintenance**
  - Performed required maintenance
  - Repair or replace when necessary

Proper BMP installation, conducting routine inspections, and performing on-going maintenance is needed for all temporary BMPs!

Erosion Control: Preservation of Existing Vegetation (EC-2)

- **Implementation**
  - Avoid disturbing existing vegetation
  - Clearly mark limits of disturbance and leave buffer
- **Inspection**
  - Verify existing vegetation preserved
  - Verify protective measures remain in place
- **Maintenance**
  - Restore protective measures if damaged
  - Maintain irrigation or use temporary irrigation

Erosion Control: Soil Binders (EC-5)

- **Installation**
  - Roughen embankment and fill areas
  - Apply to exposed soil surfaces
  - Soil type dictates appropriate binder
  - Follow manufacturer recommendations for application rates
  - Requires a minimum curing time

- **Inspection**
  - Look for undercutting
  - Identify areas where erosion has occurred
- **Maintenance**
  - Reapply as needed

Erosion Control: Geotextiles and Mats (EC-7)

- **Installation**
  - Proper site preparation required
  - Refer to manufacturer specifications
  - Proper laying, securing, and anchoring needed
- **Inspection**
  - Geotextile and mat in contact with soil
  - Lap joints are secure
  - Undercutting
- **Maintenance**
  - Repair erosion or damage
  - Reinstall

Sediment Control: Silt Fence (SE-2)

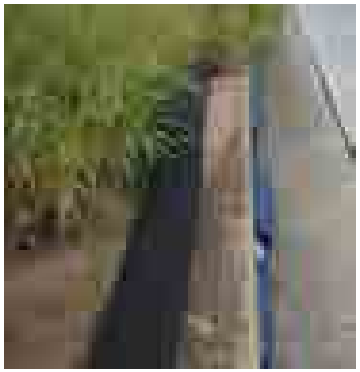
- **Installation**
  - Trench 6-inches wide and 6-inches deep
  - Bottom key-in a minimum of 12 inches
  - Posts spaced a maximum of 6 feet apart
  - Backfill and compact trench
  - Follow BMP manual and manufacturer specifications
- **Inspection**
  - Undercutting, split, torn, slumping, etc.
  - Sediment accumulation
- **Maintenance**
  - Repair or replace as needed
  - Remove sediment accumulation when it reaches one-third of the barrier height

Sediment Control: Fiber Rolls (SE-5)

- **Installation**
  - Consist of straw, flax, mulch, or other material bound in tight tubular roll
  - May require trenching and staking
  - Install along contour
  - Diameter and spacing requirements
- **Inspection**
  - Splits, tears, unraveling, slumping, etc.
  - Undercutting
  - Accumulated sediment
- **Maintenance**
  - Repair or replace as needed
  - Remove sediment accumulation when it reaches one-half designated storage

Sediment Control: Storm Drain Inlet Protection (SE-10)

- **Installation**
  - Drainage area should not exceed 1-acre
  - Requires area for ponding
  - Requirements vary depending on device
- **Inspection**
  - Clogs, torn, holes, snags, degradation, etc
  - Accumulation of sediment
- **Maintenance**
  - Frequent maintenance required
  - Repair and replace as needed
  - Remove sediment accumulation when it reaches one-third of barrier height

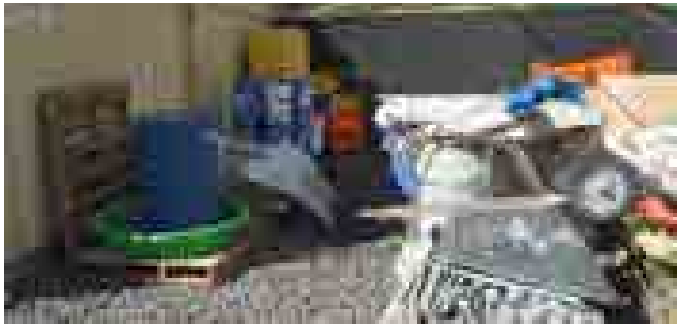


Temporary Tracking Control: Stabilized Construction Entrance/Exit (TR-1)

- **Installation**
  - Construct on level ground
  - Select 3-inch to 6-inch diameter stone
  - Minimum depth of stone 12-inches
  - Length of 50-feet minimum and 30-feet minimum width
  - Filter fabric
- **Inspection**
  - Check proper diameter stone used
  - Accumulated or clogged with sediment
- **Maintenance**
  - Remove sediment
  - Replace stone as needed

Waste Management & Materials Pollution Control: Material Delivery & Storage (WM-1)

- **Implementation**
  - Locate temporary storage away from vehicular traffic and waterways
  - Covered area if possible
- **Inspection**
  - Perimeter controls, containment structures, covers, liners
  - Proper storage, labels
- **Maintenance**
  - Repair or replace perimeter controls, containment structures, etc.
  - Spill cleanup
  - Maintain a clean and organized area



Waste Management & Materials Pollution Control: Stockpile Management (WM-3)

- **Implementation**
  - Maintain adequate setback from waterways
  - Requirements to be covered dependent on material and rainy/non-rainy season
  - Stabilization measures may be required
  - Perimeter control at base of stockpile
- **Inspection**
  - Adequately covered
  - Proper perimeter sediment barrier – undercutting, overtopping, torn
- **Maintenance**
  - Repair and/or replace covers
  - Repair and/or replace perimeter controls

Take Away

- All projects must be reviewed prior to start.
- Projects over 1 acre must include post-construction BMPs.
- Inspections are required by Consent Decree and NPDES permits.
  - Inspections are an important tool to catch problems before they result in regulatory enforcement.
- Main goal is to ensure that pollutants are not contaminating receiving waters or MS4.
  - Best if potential pollutants can be kept on-site!
- It is cheaper to implement BMPs than pay the regulatory fine.
- **Be familiar with City and County of Honolulu BMP manual, Harbor's SWMP programs, Consent Decree, and construction documents.**

Questions

- Harbor's Website: http://hidot.hawaii.gov/harbors/malamaikeawakai

- Harbor's Contacts:
  - Stormwater Reporting Hotline: 587-1962.
  - Spencer Yim, PE: 587-1963, spencer.k.yim@hawaii.gov.
  - Joy Zhang, PE: 587-1960, ying.j.zhang@hawaii.gov.

MĀLAMA I KE AWA KAI - PROTECT OUR HARBOR WATERS

Attachment 5

Construction and Post Construction Training –
b. Sign-In Sheets and Completed Surveys

HDOT Harbors small MS4 Training Sign-in Sheet

(This training covers HDOT small MS4 Construction and Post-Construction training requirements.)

Date: December 4, 2018 Trainer: Marlena Lyons Walls, John Lowry, ETC

No.	Name	Organization	E-mail Address	Phone #	Initials
1	DALE ANDRES	DOT - HARBORS	dale.andres@hawaii.gov	587-1876	DA
2	Gregg Hirokawa	" "	gregg.hirokawa@hawaii.gov	587-1985	gh
3	WADE TAKAMOTO	"	wade.takamoto@hawaii.gov	587-1959	[illegible]
4	Jonathan Ja	"	jonathan.sunjae.---	587-1956	[illegible]
5	Andy Chan	"	andy.chan@hawaii.gov	587-1167	[illegible]
6	Brandon Sumida	"	brandon.sumida@hawaii.gov	587-1873	[illegible]
7	Dug Vo	DOT - Harbors	Dug.P.Vo@hawaii.gov	586-2466	[illegible]
8	Lauren Young	HAR-EC	Lauren.M.T.Young@hawaii.gov	587-1870	[illegible]
9	Richard Yoneda	HAR-EC	Richard.Yoneda@hawaii.gov	587-1866	[illegible]
10					
11					
12					
13					
14					
15					

HDOT Harbors small MS4 Training Sign-in Sheet

(This training covers HDOT small MS4 Construction and Post Construction training requirements.)

Date: December 4, 2018 Trainer: Marlena Lyons-Wolle, John Lowry, CTC

No.	Name	Organization	E-mail Address	Phone #	Initials
1	Ying "Jay" Zhang	HDOT Harbors	ying.j.zhang@hawaii.edu	587-1161	YZ
2	Mel Travers	DOT-Harbors	melchor.a.travers@hawaii.gov	586-2461	MT
3	William Makanui	DOT Harbors ESP	william.h.makanui@hawaii.gov	586-2525	[illegible]
4	Sharlyn Ueda	DOT - Harbors	sharlyn.s.ueda@hawaii.gov	556 7451	[illegible]
5					
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HDOT Harbors small MS4 Training Sign-in Sheet

(This training covers HDOT small MS4 Construction and Post-Construction training requirements.)

Date: December 4, 2018 Trainer: Marlena Lyons-Wolfe, Jose Lowry, ETC

No.	Name	Organization	E-mail Address	Phone #	Initials
1	BRIAN [illegible]	[illegible]	[illegible]	X7244F	[illegible]
2	MARK YAMABE	[illegible]	[illegible]	X7-1955	[illegible]
3					
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2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section MAHALO SCHOOP **One correct answer per question.**

Name: Gregg Hirakawa

Date: 12/11/18

Company / Office Code: HDOT-HEM

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. Nonpoint Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades maritime habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis and shading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 1" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Love environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representatives, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbor's Engineering Branch Environmental Section. MAHALO NUI LOA **One correct answer per question.**

Name: Joy Phang Date: 12/4/2018

Company / Office Code: HDOT Harbors

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades maritime habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with "C-006" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause traffic hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without burning the environment through sediment pollution
   - D. Make environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can hurt fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section, MAHALO NO EDAY. **One correct answer per question.**

Name: LAUREN YOUNG Date: [illegible]

Company / Office Code: HAE-EC

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades maritime habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and outstanding photosynthesis and abrading count
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 3" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if tracked out on weekends or working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section: MĀLAMA I KE AWA KAI **One correct answer per question.**

Name: [illegible] **Date:** [illegible]

Company / Office Code:

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades marine habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis, and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 3" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give a environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instruction: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section. MAHALO NUI LOA **One correct answer per question**

Name Richard Yoneda **Date:** 12/4/18

Company / Office Code: HAE-E

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades maritime habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis, and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 1" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch & Environmental Section. **One correct answer per question.**

Name: Andy [illegible]

Date: 12/4/18

Company / Office Outlet: HPC [illegible]

1. NPDES is an acronym for
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades ecosystems primarily by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis, and ultraviolet rays
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 4" to 6" crushed stone
   - B. Carbon geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if tracked out vehicles during non-work hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False: Silt fences are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Calculate timline knowledge and expenses on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without polluting the environment through sediment pollution
   - D. Keep epa personnel off your back using fines

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the owner of the land
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor operating
   - D. None of the above

9. True or False: Under extremely high levels of sediment can harm fish in streams and streams
   - A. True
   - B. False

10. A silt fence needs to be replaced when
    - A. The sediment reaches one third the height of the fence
    - B. The sediment reaches one half the height of the fence
    - C. The sediment reaches three quarters the height of the fence
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section MAHALO NUI LOA **One correct answer per question**

Name: [illegible] MAKAHUI **Date:** 12-4-2018

Company / Office Code: Harbors Engineering, Special Projects Group

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades maritime habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis, and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 3" to 4" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instruction: Please complete this quiz and submit to Harbors Engineering Branch Environmental Section. MAHALO NUI LOA! **One correct answer per question.**

Name: [illegible] Date: 12/4/18

Company / Office Code: [illegible]

1. SPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades nonfinite habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering river gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis, and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 3" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Cover environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section MAHALO NUI LOA **One correct answer per question.**

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible]

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades marine habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 1" to 6" crushed stone
   - B. Can have geotextile fabric studs to fill the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 DOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and return it to Harbors Program using Drop to Administrator of System. **SELECT ONLY ONE ANSWER** **One correct answer per question**

Name: SHARI LYN IKEDA Date: [illegible]

Company / Office Code: DOT - HARBORS DIVISION

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Effluent and Sediment
   - B. National Pollutant Development and Elimination System
   - (C) National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment deposits normally tend to be
   - A. Lifting in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and interfering physiologically and disturbing food
   - (D) All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 3" [illegible] crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continued maintenance
   - (D) All of the above

4. Sediment tracked onto roadways during construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if tracked out overnight during non-working hours
   - C. Per permit
   - (D) A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Oil and grease
   - C. Impervious Surfaces
   - (D) All of the above

6. True or False: Clay soils are less permeable than sandy soils
   - (A) True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - (C) Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - (C) The owner of the property, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False: Only extremely high levels of sediment can harm fish eggs and larvae
   - (A) True
   - (B) False

10. A silt fence needs to be maintained when
   - (A) The sediment reaches one-third the height of the fence
   - B. The sediment reaches one-half the height of the fence
   - C. The sediment reaches three-quarters the height of the fence
   - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section. MAHALO SULLIVAN **One correct answer per question.**

Name: JMC L TRAVERS **Date:** 12-7-18

Company / Office Code: DOT - HARBORS DIVISION

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - (C) National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades marine habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis and abrading coral
   - (D) All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 3" to 6" crushed stone
   - B. Can have protective fabric under to add the crushed stone
   - C. Needs continual maintenance
   - (D) All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if tracks out occurs during non-working hours
   - C. Twice a day
   - (D) A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - (C) Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - (A) True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - (C) Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - (C) The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - (B) False

10. A silt fence needs to be maintained when
    - (A) The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA! **One correct answer per question.**

Name: D. Andres Date: 12/4/18

Company / Office Code: DOT-HARBORS / HAR-EM

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades maritime habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 3" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 Hawai'i Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Program staff. Thank you!

Note: [illegible] **One correct answer per question.**

Name: JEANPIER SAMERA

Date: 12/4/18

Company / Office Code: HAR AM

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Discharge Adequate and Depositions System
   - (C) National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades habitat by
   - A. Filling in deep pools which provide fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and interrupting photosynthesis, and clouding water
   - (D) All of the above

3. A stabilized construction entrance
   - A. Is best constructed with "crushed" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs occasional maintenance
   - (D) All of the above

4. Sediment tracked onto roads by construction vehicles must be swept up
   - (A) By the end of the same work day
   - B. By the end of the next work day or tracks can be dumped on new sidewalk issues
   - C. Once a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Contaminants
   - C. Impervious Surfaces
   - (D) All of the above

6. True or False? A fish ladder is a permeable dissipatory weir
   - (A) True
   - B. False

7. The purpose of preserving grassy and sediment control is to
   - A. Cause undue hardship and expense to the developer and contractor
   - B. Provide jobs for government employees
   - (C) Provide a means of construction without harming the environment through sediment pollution
   - D. Cause environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The development project manager
   - (C) The owner of the project, the authorized representative, and the permit contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in streams and streams
   - A. True
   - (B) False

10. A sediment trap needs to be maintained when
    - (A) The sediment reaches one-third the height of the fabric
    - B. The sediment reaches one-half the height of the fabric
    - C. The sediment reaches three-quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section - MATTHEW NELSON **One correct answer per question.**

Name: BRIAN SHOLD **Date:** [illegible]

Company / Office Code: [illegible]

1. NPDES is an abbreviation of
   - A National Policy for Discharge of Erosion and Sediment
   - B National Pollutant Development and Elimination System
   - C National Pollutant Discharge Elimination System
   - D None of the above

2. Sediment degrades maritime habitats by
   - A Filling in deep pools which give fish protective cover
   - B Covering over gravel bottoms used by fish to deposit eggs
   - C Blocking light and inhibiting photosynthesis, and abrading coral
   - D All of the above

3. A stabilized construction entrance
   - A Is best constructed with 1" to 6" crushed stone
   - B Can have geotextile fabric underneath the crushed stone
   - C Needs continual maintenance
   - D All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A By the end of the same work day
   - B By the end of the next work day if tracks out occurs during non-working hours
   - C Twice a day
   - D A or B

5. Nonpoint Source pollutants include
   - A Pathogens, Sediment, and Litter
   - B Temperature, Sediment, and Groundwater
   - C Impervious Surfaces
   - D All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A True
   - B False

7. The purpose of providing erosion and sediment control is to
   - A Cause undue hardship and expense on the developer and contractor
   - B Provide jobs for government employees
   - C Provide a means of construction without harming the environment through sediment pollution
   - D Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A Whoever is the easiest to blame
   - B The downstream property owner
   - C The owner of the project, the authorized representative, and the general contractor(s) operator
   - D None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A True
   - B False

10. A silt fence needs to be maintained when
    - A The sediment reaches one third the height of the fabric
    - B The sediment reaches one half the height of the fabric
    - C The sediment reaches three quarters the height of the fabric
    - D None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MAHALO NUI LOA!

Name: MARK YAMADE **Date:** [illegible]

Company / Office Code: HAR-[illegible] **Job Title:** [illegible]

1. How does your job relate to stormwater management?

   DESIGN DOCUMENTS MUST MANAGE STORMWATER.

2. Did you find the Construction and Post-Construction Training relevant and useful?

   (Use a scale of 1 to 5, circle one number)

   1 = not relevant / useful 5 = extremely relevant / useful

   1 2 3 (4) 5

3. What was the most interesting thing you learned in this training?

   LESSONS LEARNED AND EXAMPLES OF SUBPAR COMPLIANCE.

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible] **Job Title:** [illegible]

1. How does your job relate to stormwater management?

   OVER LARGE CAPITAL IMPROVEMENT PROJECTS DISTURBING [illegible] THAN 1 ACRE

2. Did you find the Construction and Post Construction Training relevant and useful?

   On a scale of 1 to 5 circle one number

   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

   [illegible] PENALTIES SAME AS HAZWASTE [illegible] THE [illegible] LARGE [illegible] FOR [illegible] TO CONFORM TO [illegible] P[illegible]

4. What other topics would you like to see covered in this training?

   [illegible] MET [illegible] IN USD 14000 [illegible] ALL [illegible] PERSONNEL ADMIN, FISCAL, [illegible]

5. Do you have any recommendations on how to improve Construction and Post Construction HSEP training?

   [illegible] PRINCIPLE OF [illegible] CONTINUAL [illegible]

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MAHALO SULTAN

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible] **Job Title:** [illegible]

1. How does your job relate to stormwater management?

   [illegible]

2. Did you find the Construction and Post-Construction Training relevant and useful?

   On a scale of 1 to 5, circle one number

   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

   [illegible]

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO SULLIVAN

Name: BRANDEN SUMIDA **Date:** 12/4/18

Company / Office Code: HAR - GM **Job Title:** ENGINEER

1. How does your job relate to stormwater management?

2. Did you find the Construction and Post-Construction Training relevant and useful?
   On a scale of 1 to 5, circle one number
   5 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 (4) 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve Construction and Post-Construction HMP training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA!

Name: D. ANDRES **Date:** 12/4/18

Company / Office Code: DOT-HARBORS **Job Title:**

1. How does your job relate to stormwater management?
   PROJECT DESIGNER. INCLUDE ENVIRONMENTAL STANDARDS IN SPECIFICATIONS

2. Did you find the Construction and Post-Construction Training relevant and useful?
   Circle scale of 1 to 5, circle one number
   1 = not relevant / useful 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   METHODS OF CONTROLLING EROSION & SEDIMENT

4. What other topics would you like to see covered in this training?
   NONE

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?
   NONE.

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MĀLAMA NUI LAU

Name: MEL TRAVENS **Date:** 12/4/2018

Company / Office Code: DOT HARBORS **Job Title:** PROJECT MGR.

1. How does your job relate to stormwater management?
   OVER SIGHT OF THE CONTRACTOR

2. Did you find the Construction and Post-Construction Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve Construction and Post-Construction HDOT training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO SULLOA

Name: WILLIAM MAKANUI **Date:** 1-4-2018

Company / Office Code: EST HARBOR ENGINEERING ESE **Job Title:** HMP ENG NEER

1. How does your job relate to stormwater management?

   Project Manager (construction & design)

2. Did you find the Construction and Post Construction Training relevant and useful?

   On a scale of 1 to 5, circle one number

   1 = not relevant / useful 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve Construction and Post Construction BMP training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit to Harbors Engineering Branch Environmental Section "MĀLAMA I KE AWA KAI"

Name: Andy Chan **Date:** 12/4/18

Company / Office Code: HDOT [illegible] **Job Title:** Engineer

1. How does your job relate to stormwater management?
   We manage construction projects

2. Did you find the Construction and Post-Construction Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful 5 = extremely relevant / useful

   1 2 3 (4) 5

3. What was the most interesting thing you learned in this training?
   Implementation of BMP measures

4. What other topics would you like to see covered in this training?
   Mistakes in the past. So we can learn from the past mistakes

5. Do you have any recommendations on how to improve Construction and Post-Construction HDOT training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA

Name: [illegible] Yanesa **Date:** [illegible]

Company / Office Code: HAR-[illegible] **Job Title:** [illegible]

1. How does your job relate to stormwater management?

   Construction project management

2. Did you find the Construction and Post-Construction Training relevant and useful?

   Circle a scale of 1 to 5, circle one number

   1 – not relevant / useful, 5 – extremely relevant / useful

   1 2 3 **4** 5

3. What was the most interesting thing you learned in this training?

   post-construction BMP

4. What other topics would you like to see covered in this training?

   new technology

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?

   Input [illegible] info

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section (MAHALO NUI LOA)

Name: J - Shen Yee CD **Date:** 12/3/18

Company / Office Code: **Job Title:** Proj Engr

1. How does your job relate to stormwater management?

   Proj Engr

2. Did you find the Construction and Post-Construction Training relevant and useful?

   On a scale of 1 to 5, circle one number

   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

   photos

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MAHALO KEPULUA!

Name: [illegible] YOUNG **Date:** [illegible]

Company / Office Code: [illegible] **Job Title:** [illegible]

1. How does your job relate to stormwater management?

   CONST[illegible]N ENGINEER

2. Did you find the Construction and Post-Construction Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 **3** 4 5

3. What was the most interesting thing you learned in this training?

   TRYING NEW THINGS DOESN'T ALWAYS WORK [illegible]!

4. What other topics would you like to see covered in this training?

   MORE [illegible] FOR PAVED
   AND [illegible]
   HARBORS [illegible]

5. Do you have any recommendations on how to improve Construction and Post-Construction HMP training?

   [illegible]

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO KUPUNA

Name: Gregg Hirakawa **Date:** 12/4/18

Company / Office Code: HTA-BM **Job Title:** Engineer

1. How does your job relate to stormwater management?

   Design projects.

2. Did you find the Construction and Post Construction Training relevant and useful?

   On a scale of 1 to 5, circle your number

   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 (3) 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

   Maintenance proj. requirements

5. Do you have any recommendations on how to improve Construction and Post Construction BMP training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instruction: Please complete this survey and submit to Harbors Engineering Branch Environmental Section MAHALO NCI LOA

Name: Jeff Pharp Date: 11/6/2018

Company / Office Code: HDOT Harbors Job Title: Engineer

1. How does your job relate to stormwater management?

   Our Section manages Harbor Stormwater Program

2. Did you find the Construction and Post-Construction Training relevant and useful?

   On a scale of 1 to 5, circle one number

   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

   Different types of Drugs

4. What other topics would you like to see covered in this training?

   No content re: good

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?

   Lowtime Training.

Please provide additional comments below.

Trainings are very well prepared!

HDOT Harbors small MS4 Training Sign-in Sheet

This training covers HDOT small MS4 Construction and Post-Construction training requirements

Date: December 6, 2018 Trainer: Marisha Lyons-Wolfe, [illegible]

No.	Name	Organization	E-mail Address	Phone #	Initials
1	Rodney [illegible]	D.O.T HARBORS EC	[illegible]	587-1869	Rdy
2	[illegible]	"	[illegible]	587-[illegible]	[illegible]
3	Neil A[illegible]	D.T-HAR-EC	[illegible]	587-1[illegible]	NMA
4	Mitchell [illegible]	HAR-EC	mitchell[illegible]	587-[illegible]	[illegible]
5	[illegible]	HAR-EC	[illegible]	587-[illegible]	[illegible]
6	[illegible]	HAR-EC	[illegible]	587-[illegible]	[illegible]
7	[illegible]	HAR-EM	[illegible]	587-1875	[illegible]
8	Spencer Ym	HAR-EC	spencer.k.ym@hawaii.gov	587-1960	[illegible]
9	[illegible]	HAR-EM	[illegible]	587-1878	[illegible]
10					
11					
I					
II					
II					
III					

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section MAILBOX FLOAT **One correct answer per question**

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible]

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades maritime habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis, and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 1" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if tracks out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instruction: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section, MAHALO NCHAM. **One correct answer per question.**

Name: [illegible] CHETI Date: 12/6/2018

Company / Office Code: HAR-ED

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades maritime habitats by
   - A. Falling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis, and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 3" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
   - A. The sediment reaches one third the height of the fabric
   - B. The sediment reaches one half the height of the fabric
   - C. The sediment reaches three quarters the height of the fabric
   - D. None of the above

Comments

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section. MAHALO NUI LOA! **One correct answer per question.**

Name: Rodney Yamane Date: 17/6/18

Company / Office Code: DOT/HAR-CC

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollution Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades marinine habitats by
   - A. Filling in deep ponds which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis, and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 4" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause sudden hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA. **One correct answer per question.**

Name: Spencer Yim **Date:** 12/3/18

Company / Office Code: HAR-EE

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollution Development and Elimination System
   - C. National Pollution Discharge Elimination System
   - D. None of the above

2. Sediment degrades coastline habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis, and shading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 1" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section - MĀLAMA NOI LOA. **One correct answer per question.**

Name: [illegible] Date: 2/6/18

Company / Office Code: [illegible]

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades maritime habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis, and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 1" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next workday if track out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without forming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The destruction projects owner
   - C. The owner of the project, the authorized representative, and the general contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and return it to the Harbors Program using Kazan's Environmental Section. [illegible] **One correct answer per question.**

Name: [redacted] **Date:** 12/6/18

Company / Office Code: [redacted]

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Discharge Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment deposits in marine habitats by
   - A. Filling in deep pools which provide fish protective cover
   - B. Covering over gravel bottoms used by fish for deposit eggs
   - C. Blocking light and inhibiting photosynthesis and stunting coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 1" to 2" crushed stone
   - B. Can have permeable fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if tracked out vehicles driving more than working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Trash/Litter, Sediment, and Dissolved Oxygen
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of preventing erosion and sediment control is to
   - A. Create undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Create environmental activists unemployed

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The construction property owner
   - C. The owner of the project, the authorized representative, and the personal contractor/operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in streams and oceans
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one-third the height of the fence
    - B. The sediment reaches one-half the height of the fence
    - C. The sediment reaches three-quarters the height of the fence
    - D. None of the above

Comments:

2018 DHEET Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section MĀLAMA NOI LOA **One correct answer per question.**

Name: Mitchell Mastella Date: 12/6/2018

Company / Office Code: HAR. 42

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades maritime habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 4" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if track out occurs during non working hours
   - C. Twice (x/day)
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without forming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized representative, and the general contractor operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section. MAHALO NUI LOA **One correct answer per question.**

Name: [illegible] **Date:** Dec. 6 2018

Company / Office Code: [illegible]

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades nonfinite habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and inhibiting photosynthesis and abrading coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 1" to 6" crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs continual maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day or tracks out occurs during non-working hours
   - C. Twice a day
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pollutants, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing erosion and sediment control is to
   - A. Cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of construction without harming the environment through sediment pollution
   - D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   - A. Whoever is the easiest to blame
   - B. The dominant air property owner
   - C. The owner of the project, the authorized representative, and the general contractor operator
   - D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fabric
    - B. The sediment reaches one half the height of the fabric
    - C. The sediment reaches three quarters the height of the fabric
    - D. None of the above

Comments:

2018 HPCT Harbors Construction and Post-Construction Training Quiz

Instructions: Please complete this quiz and return it to Harbors Engineering Branch Environmental Section. MAHALO NUI LOA! **One correct answer per question.**

Name: Niel A. [illegible] **Date:** 12/6/18

Company / Office Code: DT-[illegible]-E

1. NPDES is an abbreviation of
   - A. National Policy for Discharge of Erosion and Sediment
   - B. National Pollutant Development and Elimination System
   - C. National Pollutant Discharge Elimination System
   - D. None of the above

2. Sediment degrades nearshore habitats by
   - A. Filling in deep pools which give fish protective cover
   - B. Covering over gravel bottoms used by fish to deposit eggs
   - C. Blocking light and introducing pollutants, and disrupting coral
   - D. All of the above

3. A stabilized construction entrance
   - A. Is best constructed with 1-3 in. crushed stone
   - B. Can have geotextile fabric underneath the crushed stone
   - C. Needs occasional maintenance
   - D. All of the above

4. Sediment tracked onto roads by construction activity must be cleaned up
   - A. By the end of the same work day
   - B. By the end of the next work day if tracking occurs during non-workday hours
   - C. Every 3 days
   - D. A or B

5. Nonpoint Source pollutants include
   - A. Pathogens, Sediment, and Litter
   - B. Temperature, Sediment, and Groundwater
   - C. Impervious Surfaces
   - D. All of the above

6. True or False? Clay soils are less permeable than sandy soils
   - A. True
   - B. False

7. The purpose of providing a tether and setback on a silt fence is
   - A. To cause undue hardship and expense on the developer and contractor
   - B. Provide jobs for government employees
   - C. Provide a means of constructing a silt fence facilitating the conversion of through sediment pollution
   - D. Cross environmental purposes supporting to do

8. Who is responsible for controlling sediment pollution?
   - A. Who ever is the closest to blame
   - B. The downstream property owner
   - C. The owner of the project, the authorized agent's affiliates, and the general contractor/operator
   - D. None of the above

9. True or False? Clay soils are in high levels of sediment can impact fish in ocean and streams
   - A. True
   - B. False

10. A silt fence needs to be maintained when
    - A. The sediment reaches one third the height of the fence
    - B. The sediment reaches one half the height of the fence
    - C. The sediment reaches three quarters the height of the fence
    - D. None of the above

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MALAMA I KE AHA AHI

Name: Neil Asato **Date:** [illegible]

Company / Office Code: DOT-HAR-[illegible] **Job Title:** Construction Engineer

1. How does your job relate to stormwater management?
   Construction work

2. Did you find the Construction and Post-Construction Training relevant and useful?
   Give scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 **4** 5

3. What was the most interesting thing you learned in this training?
   Methods.

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA!

Name: Mikhell Martello Date: 12/6/2018

Company / Office Code: HAR-EA. Job Title: GIS

1. How does your job relate to stormwater management?
   GIS in HAR-EA - support [illegible] and [illegible] [illegible] regulations on all harbor [illegible] including [illegible] [illegible] HAR-EA also [illegible] [illegible] & harbor [illegible] for stormwater

2. Did you find the Construction and Post Construction Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   Various types of [illegible] - [illegible] effectiveness of how they work

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve Construction and Post Construction BMP training?

Please provide additional comments below

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO KULIMA

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible] **Job Title:** [illegible]

1. How does your job relate to stormwater management?
   training & inspections as well as plan review upcoming projects

2. Did you find the Construction and Post-Construction Training relevant and useful?
   On a scale of 2 to 5 circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?
   More slides showing larger views of BMS installed.

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?

Please provide additional comments below.

Good snacks

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA!

Name: Marcy Legaspi **Date:** -11-

Company / Office Code: -- -- **Job Title:** Engr.

1. How does your job relate to stormwater management?
   Development of specification & P---

2. Did you find the Construction and Post Construction Training relevant and useful?
   On a scale of 1 to 5 circle our number
   1 = not relevant / useful 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?
   Permits & BMPs

4. What other topics would you like to see covered in this training?
   All

5. Do you have any recommendations on how to improve Construction and Post Construction HMP training?
   -- Time

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit to Harbors Engineering Branch Environmental Section - MAHALO KULLOA!

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible] **Job Title:** [illegible]

1. How does your job relate to stormwater management?

   BMP INSPECTION

2. Did you find the Construction and Post-Construction Training relevant and useful?
   (Use scale of 1 to 5, circle one number)
   1 = not relevant / useful 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

   SEDIMENT VS BROKEN

4. What other topics would you like to see covered in this training?

   [illegible] - HYDROTESTING DAMAGE

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MAHALO SULTAN

Name: Arnold Fukumoto **Date:** [illegible]

Company / Office Code: HARBOR **Job Title:** Engineer

1. How does your job relate to stormwater management?

   Some of our design projects disturbs the ground and requires BMP management.

2. Did you find the Construction and Post-Construction Training relevant and useful?

   On a scale of 1 to 5, circle your number:

   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 (4) 5

3. What was the most interesting thing you learned in this training?

   Importance of keeping up to date records of inspection.

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve Construction and Post-Construction HMP training?

Please provide additional comments below.

[illegible]

[illegible] Spencer Yim [illegible] 12/3/1[illegible]

[illegible] HK-EE [illegible] Ex. Engineer

1. How does your job relate to stormwater management?

My job is to ensure environmental compliance through inspections, training, environmental [illegible] review, and environmental cleanup projects.

2. Did you find the Construction and Post-Construction Training relevant and useful?

On a scale of 1 to 5, circle one number:
1 = not relevant / useful, 5 = extremely relevant / useful

1 2 3 4 5

3. What was the most interesting thing you learned in this training?

Post-construction BMPs

4. What other topics would you like to see covered in this training?

More information specifically applicable to Harbors

[illegible]

Please provide additional comments below.

Great [illegible]

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instruction: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MAHALO NUI LOLO

Name: RODNEY YAMANE

Date: 12/6/18

Company / Office Code: DOI / HAR - EC

Job Title: GEN. CONSTRUCTIONS INSPECTOR

1. How does your job relate to stormwater management?

   INSPECTS CONSTRUCTION PROJECT

2. Did you find the Construction and Post-Construction Training relevant and useful?

   On a scale of 1 to 5, circle one number

   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

   BMP PRODUCTS

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO KULLOA!

Name: Lori A Chen **Date:** 12/6/18

Company / Office Code: HAR-ED **Job Title:** Engineer

1. How does your job relate to stormwater management?

   managing construction projects need to know how to control sediment.

2. Did you find the Construction and Post-Construction Training relevant and useful?

   On a scale of 1 to 5, circle one number

   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

   Stamples

4. What other topics would you like to see covered in this training?

   Examples of failure

5. Do you have any recommendations on how to improve Construction and Post-Construction BMP training?

   No

Please provide additional comments below.

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instruction: Please complete this quiz and submit it to Harbors Engineering Branch Environmental Section. MAHALO NUI LOA! **One correct answer per question.**

Name: Breanna Smith **Date:** 2/8/2018

Company / Office Code: _____

1. NPDES is an abbreviation of:
   A. National Policy for Discharge of Erosion and Sediment
   B. National Pollutant Development and Elimination System
   C. National Pollutant Discharge Elimination System.
   D. None of the above.

2. Sediment degrades maritime habitats by:
   A. Filling in deep pools which give fish protective cover
   B. Covering over gravel bottoms used by fish to deposit eggs
   C. Blocking light and inhibiting photosysthesis, and abrading coral
   D. All of the above.

3. A stabilized construction entrance:
   A. Is best constructed with 3" to 6" crushed stone
   B. Can have geotextile fabric underneath the crushed stone
   C. Needs continual maintenance
   D. All of the above.

4. Sediment tracked onto roads by construction activity must be cleaned up:
   A. By the end of the same work day
   B. By the end of the next work day if track-out occurs during non-working hours
   C. Twice a day.
   D. A or B.

5. Nonpoint Source pollutants include:
   A. Pathogens, Sediment, and Litter
   B. Temperature, Sediment, and Groundwater
   C. Impervious Surfaces
   D. All of the above.

6. True or False? Clay soils are less permeable than sandy soils.
   A. True
   B. False

7. The purpose of providing erosion and sediment control is to:
   A. Cause undue hardship and expense on the developer and contractor
   B. Provide jobs for government employees
   C. Provide a means of construction without harming the environment through sediment pollution
   D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   A. Whoever is the easiest to blame
   B. The downstream property owner
   C. The owner of the project, the authorized representative, and the general contractor/operator
   D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams.
   A. True
   B. False

10. A silt fence needs to be maintained when:
   A. The sediment reaches one third the height of the fabric
   B. The sediment reaches one half the height of the fabric
   C. The sediment reaches three quarters the height of the fabric
   D. None of the above.

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instruction: Please complete this quiz and submit it to Harbor's Engineering Branch Environmental Section. MAHALO NUI LOA! **One correct answer per question.**

Name: Chad Sakai **Date:** 10/12/2018

Company / Office Code: Yogi Kwong Engineers

1. NPDES is an abbreviation of:
   A. National Policy for Discharge of Erosion and Sediment
   B. National Pollutant Development and Elimination System
   C. National Pollutant Discharge Elimination System
   D. None of the above.

2. Sediment degrades maritime habitats by:
   A. Filling in deep pools which give fish protective cover
   B. Covering over gravel bottoms used by fish to deposit eggs
   C. Blocking light and inhibiting photosynthesis, and abrading coral
   D. All of the above.

3. A stabilized construction entrance:
   A. Is best constructed with 3" to 6" crushed stone
   B. Can have geotextile fabric underneath the crushed stone
   C. Needs continual maintenance
   D. All of the above.

4. Sediment tracked onto roads by construction activity must be cleaned up:
   A. By the end of the same work day
   B. By the end of the next work day if track-out occurs during non-working hours
   C. Twice a day
   D. A or B.

5. Nonpoint Source pollutants include:
   A. Pathogens, Sediment, and Litter
   B. Temperature, Sediment, and Groundwater
   C. Impervious Surfaces
   D. All of the above.

6. True or False? Clay soils are less permeable than sandy soils.
   A. True
   B. False

7. The purpose of providing erosion and sediment control is to:
   A. Cause undue hardship and expense on the developer and contractor
   B. Provide jobs for government employees
   C. Provide a means of construction without harming the environment through sediment pollution
   D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   A. Whoever is the easiest to blame
   B. The downstream property owner
   C. The owner of the project, the authorized representative, and the general contractor/operator
   D. None of the above.

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams.
   A. True
   B. False

10. A silt fence needs to be maintained when:
   A. The sediment reaches one third the height of the fabric
   B. The sediment reaches one half the height of the fabric
   C. The sediment reaches three quarters the height of the fabric
   D. None of the above.

Comments:

2018 HDOT Harbors Construction and Post-Construction Training Quiz

Instruction: Please complete this quiz and submit it to Harbors Engineering Branch (Environmental Section). MAHALO NUI LOA! **One correct answer per question.**

Name: Christopher Swartz **Date:** 07/22/18

Company / Office Code: Kiewit Infrastructure West, Co.

1. NPDES is an abbreviation of:
   A. National Policy for Discharge of Erosion and Sediment
   B. National Pollutant Development and Elimination System
   C. National Pollutant Discharge Elimination System.
   D. None of the above.

2. Sediment degrades marinne habitats by:
   A. Filling in deep pools which give fish protective cover.
   B. Covering over gravel bottoms used by fish to deposit eggs
   C. Blocking light and inhibiting photosynthesis, and abrading coral
   D. All of the above.

3. A stabilized construction entrance:
   A. Is best constructed with 3" to 6" crushed stone
   B. Can have geotextile fabric underneath the crushed stone
   C. Needs continual maintenance
   D. All of the above.

4. Sediment tracked onto roads by construction activity must be cleaned up:
   A. By the end of the same work day
   B. By the end of the next work day if track-out occurs during non-working hours
   C. Twice a day.
   D. A or B.

5. Nonpoint Source pollutants include:
   A. Pathogens, Sediment, and Litter
   B. Temperature, Sediment, and Groundwater
   C. Impervious Surfaces
   D. All of the above.

6. True or False? Clay soils are less permeable than sandy soils
   A. True
   B. False

7. The purpose of providing erosion and sediment control is to:
   A. Cause undue hardship and expense on the developer and contractor
   B. Provide jobs for government employees
   C. Provide a means of construction without harming the environment through sediment pollution
   D. Give environmental activists something to do

8. Who is responsible for controlling sediment pollution?
   A. Whoever is the easiest to blame
   B. The downstream property owner
   C. The owner of the project, the authorized representative, and the general contractor/operator
   D. None of the above

9. True or False? Only extremely high levels of sediment can harm fish in ocean and streams
   A. True
   B. False

10. A silt fence needs to be maintained when:
   A. The sediment reaches one third the height of the fabric
   B. The sediment reaches one half the height of the fabric
   C. The sediment reaches three quarters the height of the fabric
   D. None of the above.

Comments:

Attachment 6

Harbors Employee Survey and Results Summary

Zhang, Ying J

From: Young, Darrell T
Sent: Friday, September 28, 2018 12:19 PM
To: DOT HAR All Users
Cc: Hoshida, Sandra Y; Takeno, Chris; Butay, Jade; Catalani, Roy; Sniffen, Edwin H; Lee, Dawn RN
Subject: Your Help and Participation is Requested...2018 HDOT Harbors Division Storm Water Program - Employee Survey
Attachments: 2018 HDOT Harbors Employee Annual Survey.docx; Brochures on P2.pdf

Aloha Harbors Division Ohana:

It's the time of year again to complete our annual storm water awareness and pollution prevention surveys.

Taking care to ensure that pollutants don't reach the ocean through our harbors and roadway storm water inlets and drains are important to the quality of life for all us and our families. While these surveys are a requirement of our 2014 EPA/HDOH Consent Decree, we are evolving our program to be an everyday intention to ensure that the best practices we use for cleanliness and prevention at work become engrained in our daily activities.

We are working to make our message more intentional, meaningful and relevant to all of us so that it can be easily shared with our friends and family. Toward that end, we made more accurate our motto of "Protect Our Harbor Waters" to ***"Mālama i ke awa kai"*** and will soon be introducing new training materials, including social media, to promote our education, outreach and successes even more.

Here are some interesting and important facts we should all take to heart (HINT! HINT!!):

- Storm water runoff (aka rainwater) flows over everything it falls on, and impervious surfaces, such as paved streets, parking lots, and building rooftops do not allow this rainwater to soak into the ground. As it travels across these surfaces, the runoff picks up pollutants like trash, oils, chemicals, and dirt that can harm our rivers, streams, lakes, and coastal waters if it gets into the storm drain inlets. Anything that enters a storm drain system ends up in the ocean without any treatment.
- To protect these vital water resources, communities, construction companies, industries, and others use controls, better known as best management practices (BMPs), to filter out pollutants and/or prevent pollution by controlling it at its source.

- Unlike storm water runoff, **an illicit discharge is a non-stormwater discharge that poses a risk to the environment**, such as uncontained wash water, uncontained aggregate spillage at pier side, fuel spill, leaking vehicles or equipment where a sheen is visible on the ground, and uncontained sediment laden water from construction site, to name a few examples.
- As people who work around our Harbors every day, we all have a responsibility to report suspected illicit discharges to help protect our environment. If it looks like it could be something wrong to you, please call it in so the reported incident can be checked out and actions taken as quickly as possible. This ensures that our oceans are safe swim, dive and fish in.
- To report a suspected illicit discharge that occurred at Honolulu Harbor or Kalaeloa Barbers Point Harbor, please call Harbor Traffic Control Unit (aka Aloha Tower) at (808) 587-2076 (available 24/7), or Harbors Environmental Section at (808) 587-1962 (during working hours).

For harbors outside the island of Oahu, please report suspected illicit discharges to your district managers.

MAHALO goes out to all who completed these surveys last year. Let's all work together to surpass last year's 85.14% participation rate! (Hint: follow the hints)

This year's survey consists of ten (10) multiple choice questions. It shouldn't take long to complete. Most of survey answers can be found in the information shared above and in the attached brochures **(Another Hint!)**. Your participation helps us continually improve our program with positive changes.

There are two ways to complete the survey:

1. **ONLINE** at https://eSurv.org?u=2018HDOTHarborsEmployeeSurvey
   Click on **<Finish Survey>** when you are done, and the data will be automatically forwarded to HAR-EE.

   OR

2. **SEND A COPY**. You may print the survey attached to this email, making sure to fill in your name and date and provide any comments (if any). Please send your completed survey to Ms. Ying "Joy" Zhang of HAR-EE, through one of the following methods:
   - Email a copy of the completed survey to ying.j.zhang@hawaii.gov
   - Fax to HAR-EE at (808) 587-1864
   - Route the completed survey to HAR-EE via messenger mail

Please complete this survey by October 31, 2018 to help us meet our goal of 100% participation by that date.

FOR MANAGERS: Please print hard copies of all attachments, including the survey for your employees who do not have email or daily access to a computer for them to fill out, then please route the completed surveys to HAR-EE.

Thanks to our team efforts, the Harbors Division has accomplished much in stormwater runoff management and pollution prevention over recent years. Should you have any questions, please contact Spencer Yim at 587-1963 or Joy Zhang at 587-1960. For more information on Harbors Storm Water Management, please visit us online at http://hidot.hawaii.gov/harbors/malamaikeawakai/

Mahalo nui loa for your participation and support!

Aloha,
Darrell

Darrell T. Young
Deputy Director, Harbors Division
State of Hawaii Department of Transportation
Hale Awa Ku Moku
79 S. Nimitz Highway
Honolulu, HI 96813-4898

Ph. (808) 587-3651 | Fax (808) 587-3652
Email:darrell.t.young@hawaii.gov

About HDOT Harbors Storm Water Management Program

- The National Pollutant Discharge Elimination System (NPDES) permitting program regulates stormwater discharges from three potential sources: municipal separate storm sewer system (MS4), construction activities, and industrial activities. In compliance, permits have been issued for the Honolulu Harbor, Kalaeloa Barbers Point Harbor, and Kahului Harbor, requiring BMPs to prevent stormwater runoff from washing harmful pollutants into local surface waters (e.g., our harbors). At Harbors, a Stormwater Management Program was created and is updated in response to the permit requirements. The program plan contains a variety of BMPs developed and/or adopted by Harbors Division on general housekeeping, construction, and post-construction.
- Going forward, HAR-E and HAR-EE will continue to oversee the implementation of this Program and comply with the 2014 Consent Decree requirements, and to ensure the construction and post-construction programs are implemented. HAR-EE will continue to conduct required activities, and assist with investigation and enforcement where necessary. Oahu District will continue to inspect, clean, and stencil storm drains; to install P2 signs when needed; to patrol the piers and notify the HAR-EE of any suspected illicit discharges; to maintain post-construction BMPs; and to sweep our container yards and keep up the general housekeeping. HAR-PM will continue its oversight of all harbor tenants and ensure that tenants comply with their revocable permits and leases and implement proper BMPs. HAR-SI will continue to update our Harbors Division website.

NOTICE: This information and attachments are intended only for the use of the individual or entity to which it is addressed, and may contain information that is privileged. If the reader of this message is not the intended recipient, any dissemination, distribution or copying of this communication is strictly prohibited and may be punishable under state and federal laws. If you have received this communication and/or attachments in error, please notify the sender via email immediately and destroy all electronic and paper copies of the original message.

2018 HDOT Harbors Employee Stormwater Awareness Survey

Please complete this survey and email it to Ms. Ying "Joy" Zhang of Harbors Engineering Branch Environmental Section at Ying.J.Zhang@hawaii.gov by ***October 15, 2018****. MAHALO NUI LOA!*

Note: One best answer per question.

Name:_____ **Office Code:**_____ **Date:** _____

1. What is the definition of an illicit discharge?
   a. ☐A non-stormwater discharge that poses a risk to the environment
   b. ☐Unpolluted condensate from AC system
   c. ☐Rain falls from the sky
   d. ☐Using an unauthorized credit card

2. What can you do when you observe a suspected illicit discharge at your harbor?
   a. ☐On Oahu, call Harbor Traffic Control Unit (aka Aloha Tower) at (808) 587-2076
   b. ☐Inform your supervisor
   c. ☐Call Harbors Environmental Hotline at (808) 587-1962
   d. ☐All of the above

3. How can you help prevent storm water pollution?
   a. ☐Properly dispose of household chemicals
   b. ☐Pick up after your pet
   c. ☐Rake up grass clippings and collect them in the green waste bin after mowing your lawn
   d. ☐All of the above

4. True or False? Use pesticides, herbicides, and fertilizers only as needed and follow the manufacturer's instructions.
   a. ☐True
   b. ☐False

5. Which of the following can help reduce household hazard risks?
   a. ☐Use eco-friendly products
   b. ☐Recycle reusable materials
   c. ☐Store out reach of children and pet
   d. ☐All of the above

Comments:

6. Which of the following guidelines apply to the storage and use of fertilizer, pesticide, and herbicides?
   a. ☐Store chemicals in a covered area
   b. ☐Avoid applying during a rain event
   c. ☐Follow the manufacturer's instructions
   d. ☐All of the above

7. True or False? At harbors, anything that goes into a regular storm drain inlet will end up in the ocean after treatment, like a sanitary sewer system.
   a. ☐True
   b. ☐False

8. Which of the following are considered potential household hazards?
   a. ☐Ammonia based cleaners
   b. ☐Adhesives
   c. ☐Paint thinners
   d. ☐All of the above

9. Any product labeled POISONOUS, TOXIC, FLAMMABLE, CORROSIVE, REACTIVE, or EXPLOSIVE should be considered hazardous.
   a. ☐True
   b. ☐False

10. Which of the following can be considered good practices at your home?
    a. ☐Use native plants for your garden
    b. ☐Reroute your car wash water to your lawn
    c. ☐Dispose household hazards through programs managed by local county
    d. ☐All of the above

Results for: 2018 Mandatory HDOT Harbors Employee Stormwater Awareness Survey

2018 Mandatory HDOT Harbors Employee Stormwater Awareness Survey

Please complete this mandatory survey by October 31, 2018.

Note: One best answer per question.

*1) Please provide your full name here:

ID	Email	First Name	Last Name	Responses (184)	View
14362543				Jeffrey Prather	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJNH_c88
14362547				Brian Shono	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJNL_cfe4
14362551				Michael Howells	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJOJ_3f9c
14362575				Greer mckeen	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJMN_ac7
14362591				Erin Takeshima	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJCJ_9329
14362613				Joe Cheng	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIKH_b7b8
14362614				Cynthia Lindsey	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIKO_29d
14362616				Joy Zhang	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIKM_c7d
14362620				ROBERT A. McLEAN	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIHK_59c
14362628				Calvert Chun	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIHC_b47
14362640				Gregg Hirokawa	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLINK_53c
14362649				Sandra Christine Rossetter	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLINB_2a1
14362652				Amy Iritani	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOI_a4d3
14362653				Jame K. Schaedel	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOH_d3d
14362657				Huong C. Vuong	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOL_d4b
14362658				Mark "Dutch" Hanohano	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOC_440
14362663				Duane Kim	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLILH_f8f9
14362695				Andy Chan	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLICN_960
14362705				Darrell Young	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLHJN_460
14362713				Lena Wang	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLHKH_b67
14362749				Harley Tancayo	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLHNB_2bd

ID	Email	First Name	Last Name	Responses (184)	View
14366376				Christopher Murphy	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHLMM_18
14366487				Janice Otaguro	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHKBL_edf
14366553				Vanessa Baptiste	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHJOH_5ef
14366663				Carol-Ann Hodson	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHILH_779
14366775				Jeff Hood	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHMN_86
14366779				Michael Augest	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHMB_8f9
14366780				Gene Ishibashi	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHBK_71c
14366782				Denny Ferrari	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHBI_9fd
14366803				Michele Freitas	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHGJH_2b5
14366820				Jerome Aguada	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHGHK_806
14366848				Robert Cecconi	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHGNC_d8e
14366924				Ana Marie Aiu	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHFHO_86c
14366964				Steven Dale	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHFLO_e2a
14366998				Celia Shen	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHFCC_6c8
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14368718				Neil Asato	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFHKC_4e1
14368807				Branden Sumida	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGJL_cced
14368812				Brock A. Stanley	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGKI_a59
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14368821				Leslie Tolentino	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGHJ_17b
14369014				Catherine Clark	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKGOKO_fa5

ID	Email	First Name	Last Name	Responses (184)	View
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14371773				Lauren Young	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJOHMH_cff5
14372079				Anne Sakamoto	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJLOMB_38d
14376113				Don Minoda	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJHNKH_f57
14376628				Daverney-Gioia K. Mahaulu	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJHIHC_b94
14389479				Arnold Fukumoto	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOEGKMB_6a8
14392333				Brandie Shimabukuro	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLIH_115e
14392335				Louis Nobriga	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLIN_e876
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14392356				Marshall Sacapanio-Bouisa	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLOM_272
14392358				Dave Udarbe	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLOC_c09
14392363				Jorlikion Jibas	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLLH_7c6
14392365				Mitchell Martello	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLLN_950

ID	Email	First Name	Last Name	Responses (184)	View
14402995				Shari Lynn Ouchi	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHMLFCN_f1b
14409362				Arleen Ganigan	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHMGLLI_cc71
14414260				Cherinne L. Nihipali	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLJMLK_ecb7
14417296				Spencer Yim	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIMCM_90f
14417444				Howard P. Chee	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIKNO_cfd4
14417448				Duy Tran	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIKNC_c662
14417464				Dre Kalili	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIKLO_fde2
14417624				Arnold Liu	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIIHO_9a0a
14417634				Coleen Yoshina	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIIIO_8311
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14423844				wade takamoto	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGNO_e0
14423856				Mel Travens	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGOM_f9
14423860				Robert Crowell	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGLK_3b
14423882				Galvin A.	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGBI_4bc
14423888				WENDELL KAM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGBC_ab
14423891				ANNABELLE CLARK	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCJ_cbc
14423893				IRIS K. CRAIG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCH_25
14423894				Long Chen	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCO_bb

ID	Email	First Name	Last Name	Responses (184)	View
14423897				DWIGHT H. UAMA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCL_22a
14423899				PATRICK LOPEZ	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCB_c51
14423901				LARRY OKAMOTO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFJJ_1bc8
14423908				K. M.	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFJC_621
14423916				COREY K. ROMERO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFKM_9cb
14423922				GERALD RAPOZO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFHI_b0f
14423932				WILLIAM RODRIGUES	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFII_a9ec
14423946				JUDSON K. VENTAR SR.	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFNM_e1
14423951				ALFREDO YADAO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFOJ_66b
14423953				Mark Yamabe	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFOH_88
14423956				FRED BAUTISTA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFOM_f8c
14423991				WENDELL K. KAHALAEOUWI	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFCJ_ca0
14424041				MICHAEL MILLES	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJONJ_eda
14424051				EVERETT OLIVEIRA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOJ_f4b9
14424056				WALTER AGUINALD	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOM_6ac
14424057				NELSON BOYCE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOL_1dd
14424058				ANTONIO RIVERA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOC_8d6
14424061				ROSIE JO P. KAPANEI-SULE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOLJ_df94
14424064				ROBERT SOARES	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOLO_affe
14424091				KENNETH Z.	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOCJ_580
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14424101				JOHN LIFTEE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNJJ_880c

ID	Email	First Name	Last Name	Responses (184)	View
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14424129				VAMDY SIBOUN	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNHB_b4e
14424132				NESTOR GURON	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNII_3a28
14424136				KEVIN SHIROMA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNIM_3d4
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14424157				CIRIADO v.	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNOL_1c1
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14424164				JUAN JR SALVADOR	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNLO_ae3
14424167				MANOLITO HALATE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNLL_373
14424188				DRAVE ALUI	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNBC_390
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14424194				R. ISA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNCO_29a
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14424199				I. KELIIPULEOLE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNCB_571
14424202				KERSTIN KONO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMJI_1343
14424205				NISHIMURA CHAD	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMJN_8d2
14424208				JOHN TODT	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMJC_f396
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14424231				DALE ANDRES	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMIJ_a167
14424237				JONATHAN L KUA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMIL_480
14424239				LUKELA BAGOOD	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMIB_afbc
14424243				FRANTIA GOMEZ	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMNH_28
14424246				KEN INOUYE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMNM_70
14424250				GUY GALDEIRA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMOK_803
14424256				BARBARA YOUNG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMOM_69
14424260				JONI SAVUSA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMLK_ab1
14424261				PETER PILLONE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMLJ_dc1
14424263				ALICE R. VANGELDER	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMLH_321
14424268				RODNEY YAMANE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMLC_a5c
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14424575				Sherryle Heafner	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJJMN_c72
14426882				Aurora B. Bigelow	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOHGBI_7c0
14436282				Kendrick Y. H. Au	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHNHMBI_4cf
14445621				Gregory K. Gomes	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIHJ_8889
14445622				FRANKLIN CRUZ	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIHI_1180
14445624				LOGAN WILLIAMS IV	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIHO_f8e3
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ID	Email	First Name	Last Name	Responses (184)	View
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14445630				HENRY A KOA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIK_e695
14445633				SHAYNA ASUNCION	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIH_7f9ce
14445634				GERALS S YOKOUCHI	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIO_e1f87
14445635				ELMER HIRANO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIN_96ff4
14445636				JON MCKEE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIM_ff616
14445637				E. FA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIL_78f12
14445638				RAUDY CASTILLO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIC_e84e
14445642				JO DOMINGO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKINI_47da
14445645				RAYMOND SAITO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKINN_d9be
14447917				JASON NISHIGATA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFKL_eb92
14447919				KEITH CHIKAMORI	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFKB_c2ae
14447923				LAYNE SUNADA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFHH_c7d2
14447924				NELSON KALOA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFHO_59b6
14447926				JEFFREY MUN	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFHM_b7b8
14447928				CLIFFORD ONTAI	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFHC_5000
14447933				DEAN IBANA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFIH_dec9
14447936				AURELIO PREZA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFIM_aea3
14447937				ROBERT SAYER	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFIL_d9a4
14447941				ALBERT C.	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFNJ_7f86
14447948				PETER PRUSKI	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFNC_65a2

ID	Email	First Name	Last Name	Responses (184)	View
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14447953				CLYDE NISHIGATA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFOH_8893
14447955				JEROME R.	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFON_61f0
14447957				DAVID MARKLE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFOL_8ffe0
14447960				WILLIAM MAKANUI	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFLK_3ab7
14447962				JONATHAN YEE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFLI_d4b9a
14452985				Leeann Kaili	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHHLFBN_dee
14452990				Calvin Woo	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHHLFCK_b79
14452995				Emmanuel Lagaspi	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHHLFCN_c7fb
14516828				Reginld A.K. Tanaka Kawaakoa	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOILHGHC_eac2

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*2) Please provide your Office Code (e.g., HAR-EE) here:

ID	Email	First Name	Last Name	Responses (184)	View
14362543				HAR-O	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJNH_c88991
14362547				HAR-ESP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJNL_cfe455(
14362551				HAR-EP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJOJ_3f9cc17
14362575				HAR-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJMN_ac767e
14362591				HAR-SF	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJCJ_93298e
14362613				HAR-EC	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIKH_b7b8db
14362614				HAR-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIKO_29dc4e
14362616				HAR-EE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIKM_c7d22f
14362620				HAR/OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIHK_59cd97
14362628				HAR-PM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIHC_b47514
14362640				HAR-EM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLINK_53c67e
14362649				HAR-EP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLINB_2a1ac6
14362652				HAR-E	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOI_a4d32e
14362653				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOH_d3d41e
14362657				HAR-SF	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOL_d4b9da
14362658				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOC_4406c7
14362663				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLILH_f8f94dc
14362695				HAR-EC	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLICN_9602f4
14362705				DEP-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLHJN_460225
14362713				HAR-SI	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLHKH_b67ab
14362749				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLHNB_2bd8a
14366376				HAR-SPRO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHLMM_1821d

ID	Email	First Name	Last Name	Responses (184)	View
14366487				HAR-SO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHKBL_edf1e7
14366553				DEP-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHJOH_5ef037
14366663				HAR-SF	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHILH_779bda
14366775				HAR-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHMN_86212
14366779				HAR-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHMB_8f976
14366780				HAR-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHBK_71d3c
14366782				HAR-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHBI_9fddad
14366803				HAR-EE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHGJH_2b5f50
14366820				HAR-ED	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHGHK_80606
14366848				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHGNC_d8e14
14366924				HAR-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHFHO_86cfcd
14366964				HAR-EP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHFLO_e2a308
14366998				HAR-EP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHFCC_6c8d58
14367074				HAR-EP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKIOMO_4cd565
14368625				Oct	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFIHN_1a4bcd
14368718				HAR-EC	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFHKC_4e1588
14368807				HAR-EM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGJL_ccede3
14368812				HAR-ED	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGKI_a59c26
14368819				HAR-OCM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGKB_324eff
14368821				HAR-OO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGHJ_17b824
14369014				HAR-OO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKGOKO_fa50b5
14369015				Xiping Huang	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKGOKN_8d578

ID	Email	First Name	Last Name	Responses (184)	View
14369022				Clarence Kimura	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKGOHI_381e43
14369029				Lukela Bagood	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKGOHB_afcc9a
14371773				HAR-EC	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJOHMH_cff590
14372079				HAR-SMBA	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJLOMB_38dac0
14376113				Har-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJHNKH_f57367
14376628				HAR-SO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJHIHC_b945efa
14389479				HAR-EM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOEGKMB_6a827
14392333				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLIH_115ecb
14392335				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLIN_e87649
14392338				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLIC_96c735
14392340				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLNK_d75d2b
14392345				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLNN_a737df
14392347				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLNL_4939be
14392350				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLOK_ce461a
14392353				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLOH_574f4b
14392355				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLON_be2cee
14392356				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLOM_2725b
14392358				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLOC_c09d92
14392363				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLLH_7c6218
14392365				HAR-EE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLLN_9501bc
14402995				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHMLFCN_f1b761
14409362				HAR-SF	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHMGLLI_cc71fda

ID	Email	First Name	Last Name	Responses (184)	View
14414260				HAR-SF	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLJMLK_ecb707
14417296				HAR-EE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIMCM_90f911
14417444				DEP-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIKNO_cfd472
14417448				HAR-EM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIKNC_c6623e
14417464				DEP-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIKLO_fde2109
14417624				HAR-EP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIIHO_9a0a01
14417634				HAR-ESP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIIIO_831130
14417733				HAR-O	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIHIH_1cb7cf2
14417740				HAR OC	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIHNK_caff085
14417849				HAR-SI	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIGNB_b87ff7
14421062				HAR-EC	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOOOLI_714338
14421075				HAR-EC	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOOOMN_f63c9
14423844				har-ed	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGNO_e0c66
14423856				HAR-ESP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGOM_f9193
14423860				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGLK_3b57c
14423882				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGBI_4bda8
14423888				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGBC_ab0f6
14423891				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCJ_cbc8e
14423893				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCH_25c68
14423894				HAR-ED	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCO_bba21
14423897				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCL_22ab4
14423899				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCB_c5136

ID	Email	First Name	Last Name	Responses (184)	View
14423901				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFJJ_1bc83d
14423908				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFJC_62148
14423916				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFKM_9cb79
14423922				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFHI_b0f70e
14423932				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFII_a9ec3f
14423946				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFNM_e1c06
14423951				HAR-K	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFOJ_66bfc9
14423953				HAR-ED	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFOH_88b1a
14423956				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFOM_f8db5
14423991				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFCJ_ca0a86
14424041				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJONJ_eda2fb
14424051				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOJ_f4b9ca
14424056				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOM_6add5
14424057				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOL_1dda6f
14424058				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOC_8d657
14424061				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOLJ_df9499
14424064				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOLO_affe6d
14424091				HAR- OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOCJ_580c85
14424096				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOCM_c6681
14424101				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNJJ_880c54
14424105				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNJN_8f6190
14424129				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNHB_b4e1b

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14424132				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNII_3a2856
14424136				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNIM_3d4592
14424146				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNNM_72040
14424157				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNOL_1c1805
14424161				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNLJ_de56f3
14424164				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNLO_ae3c07
14424167				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNLL_373556
14424188				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNBC_39096
14424191				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNCJ_59ceef
14424193				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNCH_b7c08
14424194				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNCO_29a41
14424196				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNCM_c7aa7
14424197				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNCL_b0ad4
14424198				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNCC_20125
14424199				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNCB_57156
14424202				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMJI_1343bb
14424205				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMJN_8d272
14424208				HAR-OE	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMJC_f39652
14424210				HAR- OO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMKK_e456e
14424211				HAR SP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMKJ_9351d
14424217				HAR-EP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMKL_7a327
14424219				HAR-E	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMKB_9d8a5

ID	Email	First Name	Last Name	Responses (184)	View
14424231				HAR-EM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMIJ_a167b9
14424237				HAR-OCT	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMIL_48041c
14424239				HAR-OCT	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMIB_afbc31
14424243				HAR-OCT	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMNH_284e3
14424246				HAR-OCM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMNM_7042b
14424250				HAR-OCM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMOK_803a2
14424256				HAR-SO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMOM_69598
14424260				HAR-OO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMLK_ab177
14424261				HAR-O	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMLJ_dc104d
14424263				HAR-OCO	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMLH_321e2
14424268				HAR-EC	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJMLC_a5ccf5
14424476				HAR-ESP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJKMM_5fe29
14424575				HAR	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJJMN_c729ae
14426882				HAR-SF	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOHGBI_7c047
14436282				DEP-H	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHNHMBI_4cf3d0
14445621				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIHJ_8889b2
14445622				HAR-OCG	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIHI_1180e3
14445624				HAR-OCB	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIHO_f8e346
14445626				HAR-PM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIHM_16ed27
14445627				HAR-PM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIHL_61ea17
14445628				HAR-ESP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIHC_f1550a2
14445629				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIHB_86523a

ID	Email	First Name	Last Name	Responses (184)	View
14445630				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIK_e695b35
14445633				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIH_7f9ce2e
14445634				HAR-M	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIO_e1f8774
14445635				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIN_96ff47d
14445636				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIM_ff61669
14445637				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIL_78f126ff
14445638				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKIIC_e84e3b6
14445642				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKINI_47da44b
14445645				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIKINN_d9bed1
14447917				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFKL_eb92cbc
14447919				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFKB_c2ae6cc
14447923				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFHH_c7d25c1
14447924				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFHO_59b6c9
14447926				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFHM_b7b8a8
14447928				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFHC_500085
14447933				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFIH_dec96d5
14447936				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFIM_aea399c
14447937				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFIL_d9a4a94
14447941				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFNJ_7f869ab
14447948				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFNC_65a221
14447951				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFOJ_669dabf
14447953				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFOH_8893ca

ID	Email	First Name	Last Name	Responses (184)	View
14447955				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFON_61f06fe
14447957				HAR-OM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFOL_8ffe0ecf
14447960				HAR-ESP	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFLK_3ab7c8a
14447962				HAR-ED	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFLI_d4b9a98
14452985				MSC	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHHLFBN_dee0c8
14452990				MSC	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHHLFCK_b7910c
14452995				HAR-EM	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHHLFCN_c7fbf96
14516828				HAR-OCB	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOILHGHC_eac2d4

<< Hide

*3) Date (mm/dd/yyyy):

ID	Email	First Name	Last Name	Responses (184)	View
14362543				09-28-2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJNH_c8899
14362547				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJNL_cfe455
14362551				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJOJ_3f9cc1
14362575				09/28/18	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJMN_ac767
14362591				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJCJ_93298e
14362613				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIKH_b7b8dl
14362614				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIKO_29dc4e
14362616				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIKM_c7d22f
14362620				09/27-2918	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIHK_59cd97
14362628				09282018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIHC_b4751
14362640				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLINK_53c67e
14362649				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLINB_2a1ac6
14362652				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOI_a4d32e
14362653				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOH_d3d41
14362657				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOL_d4b9da
14362658				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIOC_4406c7
14362663				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLILH_f8f94d
14362695				9/28/18	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLICN_9602f4
14362705				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLHJN_46022
14362713				9/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLHKH_b67ab
14362749				09/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLHNB_2bd8a
14366376				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHLMM_1821

ID	Email	First Name	Last Name	Responses (184)	View
14366487				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHKBL_edf1e7
14366553				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHJOH_5ef03
14366663				10/1/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHILH_779bd
14366775				10/1/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHMN_8621
14366779				10/1/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHMB_8f976
14366780				10/1/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHBK_71d3c
14366782				10/1/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHHBI_9fddac
14366803				10-01-2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHGJH_2b5f5
14366820				9/28/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHGHK_80606
14366848				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHGNC_d8e14
14366924				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHFHO_86cfc
14366964				10/1/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHFLO_e2a30
14366998				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKHFCC_6c8d5
14367074				10/1/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKIOMO_4cd56
14368625				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFIHN_1a4bc
14368718				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFHKC_4e158
14368807				10/2/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGJL_ccede3
14368812				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGKI_a59c26
14368819				10/1/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGKB_324ef
14368821				10/2/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKFGHJ_17b82
14369014				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKGOKO_fa50b
14369015				10/2/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKGOKN_8d578

ID	Email	First Name	Last Name	Responses (184)	View
14369022				10/2/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKGOHI_381e4
14369029				10/2/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKGOHB_afcc9
14371773				10/03/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJOHMH_cff59
14372079				10/03/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJLOMB_38dac
14376113				10/05/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJHNKH_f5736
14376628				10/05/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJHIHC_b945e
14389479				10/11/18	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOEGKMB_6a82
14392333				10/12/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLIH_115ec
14392335				10/8/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLIN_e8764
14392338				10/8/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLIC_96c73
14392340				10/10/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLNK_d75d2
14392345				10/10/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLNN_a737d
14392347				10/10/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLNL_4939b
14392350				10/10/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLOK_ce461
14392353				10/10/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLOH_574f4
14392355				10/10/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLON_be2ce
14392356				10/10/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLOM_2725
14392358				10/10/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLOC_c09d9
14392363				10/10/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLLH_7c621
14392365				10/12/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOODLLLN_9501b
14402995				10/17/18	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHMLFCN_f1b76
14409362				10/19/18	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHMGLLI_cc71fd

ID	Email	First Name	Last Name	Responses (184)	View
14414260				10/22/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLJMLK_ecb707
14417296				10/23/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIMCM_90f91
14417444				10/23/18	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIKNO_cfd472
14417448				10/23/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIKNC_c6623e
14417464				10/23/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIKLO_fde210
14417624				10/23/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIIHO_9a0a01
14417634				10/23/18	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIIIO_831130
14417733				10/23/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIHIH_1cb7cf7
14417740				10/23/18	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIHNK_caff085
14417849				10/23/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIGNB_b87ff7
14421062				10/24/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOOOLI_71433
14421075				10/24/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOOOMN_f63c9
14423844				10/25/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGNO_e0c6
14423856				10/10/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGOM_f919
14423860				10/05/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGLK_3b57c
14423882				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGBI_4bda8
14423888				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGBC_ab0f6
14423891				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCJ_cbc8e
14423893				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCH_25c68
14423894				10/25/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCO_bba2
14423897				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCL_22ab4
14423899				10/03/18	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMGCB_c5136

ID	Email	First Name	Last Name	Responses (184)	View
14423901				10/05/18	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFJJ_1bc83
14423908				08/05/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFJC_62148
14423916				10/05/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFKM_9cb7
14423922				10/04/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFHI_b0f70
14423932				10/05/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFII_a9ec3f
14423946				10/04/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFNM_e1c0
14423951				10/04/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFOJ_66bfc
14423953				10/25/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFOH_88b1
14423956				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFOM_f8db
14423991				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOMFCJ_ca0a8
14424041				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJONJ_eda2f
14424051				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOJ_f4b9c
14424056				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOM_6add
14424057				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOL_1dda6
14424058				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOOC_8d657
14424061				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOLJ_df9499
14424064				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOLO_affe6c
14424091				10/08/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOCJ_580c8
14424096				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJOCM_c6681
14424101				10/07/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNJJ_880c54
14424105				10/08/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNJN_8f619
14424129				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNHB_b4e1b

ID	Email	First Name	Last Name	Responses (184)	View
14424132				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNII_3a2856
14424136				10/02/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNIM_3d459
14424146				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNNM_7204
14424157				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNOL_1c180
14424161				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNLJ_de56f3
14424164				10/01/02018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNLO_ae3c0
14424167				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNLL_37355
14424188				10/01/2018	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHOJNBC_39096
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ID	Email	First Name	Last Name	Responses (184)	View
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ID	Email	First Name	Last Name	Responses (184)	View
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ID	Email	First Name	Last Name	Responses (184)	View
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14516828				N/A	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOILHGHC_eac2d

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*4) 1. What is the definition of an illicit discharge?

	Response (%)	Responses
a. A non-stormwater discharge that poses a risk to the environment	99.46	184
b. Unpolluted condensate from AC system	0.54	1
c. Rain falls from the sky	0.00	0
d. Using an unauthorized credit card	0.00	0
	Answered Question	184
	Skipped Question	0

*5) 2. What can you do when you observe a suspected illicit discharge at your harbor?

	Response (%)	Responses
a. On Oahu, call Harbor Traffic Control Unit (aka Aloha Tower) at (808) 587-2076	2.69	5
b. Inform your supervisor	3.23	6
c. Call Harbors Environmental Hotline at (808) 587-1962	1.61	3
d. All of the above	92.47	172
	Answered Question	184
	Skipped Question	0

*6) 3. How can you help prevent storm water pollution?

	Response (%)	Responses
a. Properly dispose of household chemicals	2.66	5
b. Pick up after your pet	1.60	3
c. Rake up the grass clippings and collect them in the green waste bin, after mowing the lawn	0.53	1

d. All of the above	95.21	179
	Answered Question	184
	Skipped Question	0

*7) 4. True or False? Use pesticides, herbicides, and fertilizers only as needed and follow the manufacturer's instructions.

	Response (%)	Responses
a. True	100.00	184
b. False	0.00	0
	Answered Question	184
	Skipped Question	0

*8) 5. Which of the following can help reduce household hazard risks?

	Response (%)	Responses
a. Use eco-friendly products	0.54	1
b. Recycle reusable materials	0.54	1
c. Store out reach of children and pet	0.00	0
d. All of the above	98.92	183
	Answered Question	184
	Skipped Question	0

*9) 6. Which of the following guidelines apply to the storage and use of fertilizer, pesticides, and herbicides?

	Response (%)	Responses
a. Store chemicals in a covered area	1.09	2
b. Avoid applying during a rain event	0.54	1
c. Follow the manufacturer's instructions	3.26	6
d. All of the above	95.11	175
	Answered Question	184
	Skipped Question	0

*10) 7. True or False? At harbors, anything that goes into a regular storm drain inlet will end up in the ocean after treatment, like a sanitary sewer system.

	Response (%)	Responses
a. True	16.85	31
b. False	83.15	153
	Answered Question	184
	Skipped Question	0

*11) 8. Which of the following are considered potential household hazards?

	Response (%)	Responses
a. Ammonia based cleaners	0.53	1
b. Adhesives	0.53	1
c. Paint thinners	0.53	1
d. All of the above	98.40	184
	Answered Question	184
	Skipped Question	0

*12) 9. Any product labeled POISONOUS, TOXIC, FLAMMABLE, CORROSIVE, REACTIVE, or EXPLOSIVE should be considered hazardous.

	Response (%)	Responses
a. True	98.37	181
b. False	1.63	3
	Answered Question	184
	Skipped Question	0

*13) 10. Which of the following can be considered good practices at your home?

	Response (%)	Responses
a. Use native plants for your garden	1.59	3
b. Reroute your car wash water to your lawn	1.06	2
c. Dispose household hazards through programs managed by local county	4.23	8
d. All of the above	93.12	176
	Answered Question	184
	Skipped Question	0

14) Please provide your comments here, if any:

ID	Email	First Name	Last Name	Responses (7)	View
14447948				QUESTION #3 C. SHOULD'NT BE IN THIS SURVEY, HOUSEHOLD GRASS CLIPPINGS WOULD GO IN THE MULCH PILE THE BREAK DOW INTO NATURAL NUTRIENTS	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHIIFNC_
14436282				None	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHNHMBI
14417444				Thanks for the good work!	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOHLIKNO_
14376628				N/A	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOJHIHC_
14362649				* only if your not using harsh chemicals. If those are used it best to go to the car wash where runoff is properly treated. Good job guys! Harbors should be advocates of stewardship. We should discourage the use of single-use plastics in our office and at events and educate all on the importance of taking care of the ocean we depend on. :)	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLINB_
14362620				We as Harbors, should develop this learning for all employees to take on line.	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLIHK_

ID	Email	First Name	Last Name	Responses (7)	View
14362547				Question 2 about observing and reporting a suspected illicit discharge. I couldn't find anything in Darrell's email that said one should notify their supervisor, but it does make sense to inform the supervisor. Question 7 True and False is a tricky question. I had to read it twice to realize that unlike a wastewater treatment system where the effluent is "treated" before being discharge into the receiving waters...stormwater is an untreated discharge.	View (results-overview.php?mode=5&survey_ID=MOKDNG_65633b11&session_ID=KOOKLJNL_

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Attachment 7

IDDE Training –
a. Presentation Slides

2018 Illicit Discharge Detection & Elimination Training

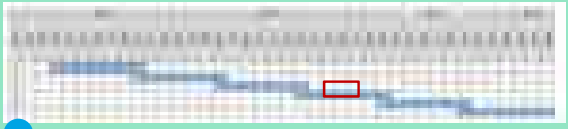
MALAMA I KE AWA KAI –
Protect Our Harbor Waters

Agenda

- Introduction
  - Compliance Audit Status Report
- Pollutants of Concern
- Allowable Non-Storm Water Discharges
- Break (10 min)
- Review of Common Illicit Discharges
- Reporting Suspected Illicit Discharges
- Questions/Quiz/Revie

Compliance Audit Schedule

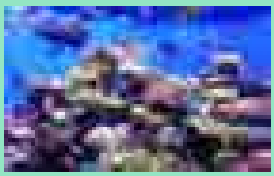
1. ~~Post-Construction / Permanent Best Management Practices~~
2. ~~Construction Site Runoff Control~~
3. ~~Public Outreach / Public Involvement~~
4. Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
5. Pollution Prevention / Good Housekeeping Program
6. Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability



3

Environmental Goals

- *Clean Water*
- *Healthy Reefs*
- *Sustainable Environment*



Effects of Pollution

Can we prevent this?

5

Storm Drain System

Stormwater picks up debris, chemicals, sediment and other pollutants.

Stormwater flows into a storm sewer system.

Collected stormwater eventually drains to the ocean through outfalls, with no treatment.

6

Pollutant

Any type of material or waste that degrades water quality, public health, the environment or the beneficial uses of receiving waters.

7

Pollutants of Concern

- Sediment
- Nutrients (leaves, trash, etc.)
- Bacteria and other pathogens
- Debris and garbage
- Chemicals and Hydrocarbons (insecticides, pesticides, paints, solvents, oil, automobile fluids)
- Metals (zinc, iron, aluminum)

Pollutant Categories

3 Categories: Physical, Chemical and Biological

- **Physical Pollutants**
  - **Sediment**
    - Sources: Construction Sites, Erosion, Urban Areas, **Container Yards** & Agricultural Practices
    - Negative Impacts:
      - **Reduce light transmission**
      - **Smother habitat**
      - Impair recreational use of water bodies
      - Also, **transport other pollutants**

Physical Pollutants (Continued)

- **Temperature** (not currently a major concern at our Harbors)
  - Sources: Power plants, industries, removal of trees along streams, hot impervious (paved) areas
  - Impacts: Threat to stream insects & fish species
- **Gross Solids (Garbage, Trash, Plastics, etc.)**
  - Source: Human activities
  - Impacts: **Major threat to aquatic life**; impairs recreational uses; expensive to clean up

Chemical Pollutants

- **Nutrients (Nitrogen & Phosphorus)**
  - **Sources:** Atmosphere, fertilizers, sewage leaks
  - **Impacts:** Toxic algae blooms – ***currently devastating Florida!***
  - **Nitrogen forms:** Ammonia, Nitrate/Nitrite
  - **Phosphorus forms:** Orthophosphates, Total P

Chemical Pollutants

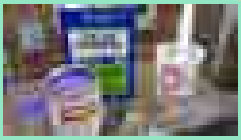
- **Metals**
  - **Sources:** streets & highways, **buildings, materials, industrial activities**, **container yards**, atmospheric deposition
  - **Impacts:** toxic to aquatic life, bioaccumulation, threat to human health
  - **Forms of Metal Pollutants** (Can be dissolved or solid)
    - Copper
    - **Zinc**
    - Lead
    - Chromium
    - Cadmium
    - **Iron**
    - **Aluminum**
    - Others

Chemical Pollutants (Continued)

- **Hydrocarbons**
- **Forms of Hydrocarbons**
  - **Oil and Grease**
  - **Fuels**
  - **Hydraulic Fluids**
- **Sources**
  - Streets, highways, **container yards**
  - **Fueling sites**, emissions
  - **Illegal dumping**
  - **Leakages** (vehicles & equipment)
- **Impacts**
  - **Threat to aquatic life**
  - Threat to human health

Chemical Pollutants (Continued

- **Organic Compounds**
  - **Paints & paint thinners**
  - **Solvents**
  - Degreasing agents
  - **Curing agents**
  - **Sealing compounds**
  - PCBs (polychlorinated biphenyls)
- **Sources: Construction sites, industrial & maintenance facilities, illegal dumping**, poor storage & handling of materials
- **Impacts:**
  - Threat to aquatic life, Bioaccumulation, Human health risks

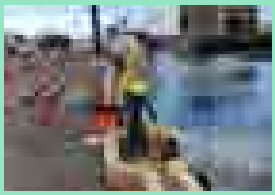


Chemical Pollutants (Continued

- **Pesticides**
  - Herbicides
  - Rodenticides
  - Insecticides
- **Sources:**
  - Agriculture
  - Urban landscaping
- **Impacts:**
  - Threat to aquatic life
  - Bioaccumulation
  - Human health risk

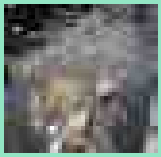
Biological Pollutants

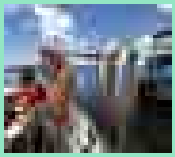
- **Bacteria and Viruses**: E. coli, Fecal coli, enterococci, etc.
- **Sources:**
  - **Dumping human wastes in harbors**
  - **Leaking septic/sewer systems**
  - **Illicit connections**
  - **Animal wastes**
- **Impacts:**
  - Human health risk of diseases
  - Threat to aquatic life



Secondary Pollutant Forms

- **Oxygen Demand**, pH, Algae, Chlorophyll
  - Oxygen Demand **Sources**: Sediment, nutrients, organics and other pollutants as particles and soluble phases (e.g., **molasses & fire fighting foam/FFF**)
  - Oxygen Demand **Impacts**:
    - **Reduced Dissolved Oxygen levels harm aquatic life**
    - **Fish kills**





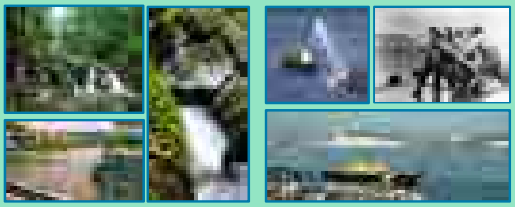
Allowable Non-Storm Water Discharges

1. **Daily Operations**
   - Water line flushing
   - **Air conditioning condensate**
   - Landscape irrigation
   - Discharges from potable water sources and foundation drains
2. **Groundwater**
   - Rising groundwater (tidal intrusion)
   - Uncontaminated groundwater infiltration
   - Uncontaminated pumped groundwater

Allowable Non-Storm Water Discharges

3. **Natural Origin**
   - Springs
   - Riparian habitat and wetland flows
   - Diverted stream flows

4. **Emergencies**
   - Discharge from fire fighting activities

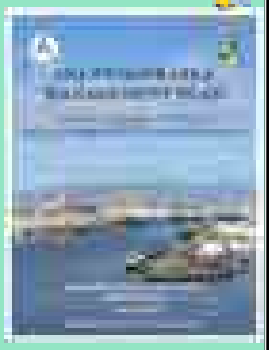


Let's take a 10-minute Break!

NPDES Permit Requirements

- Implementation of SWMP for MS4s at Honolulu and Kalaeloa Barbers Point Harbors (May 2003)
- SWMP currently being revised

http://hidot.hawaii.gov/harbors/files/2013/01/Final-SWMP-150325.pdf



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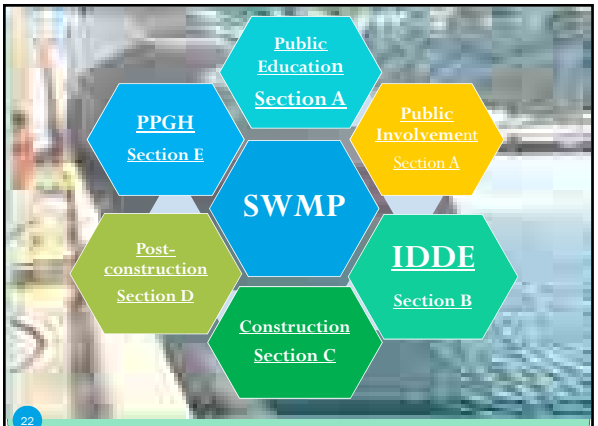


22

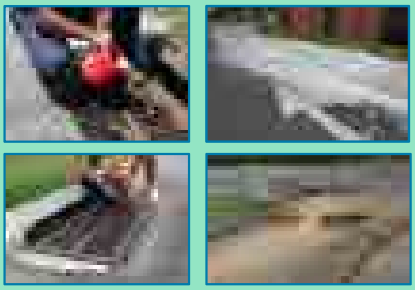
Consent Decree

- In November 2014, Harbors Division entered into a Consent Decree with DOJ/EPA/DOH
- Consent Decree available on Harbors website
  http://hidot.hawaii.gov/harbors/files/2013/01/Consent-Decree.pdf
- Stormwater compliance with:
  - Clean Water Act
  - National Pollutant Discharge Elimination System (NPDES) Permits for Small Municipal Separate Sewer Systems (MS4) which require a Stormwater Management Plan (SWMP)

23

Illicit Discharge Definition

- **Illicit Discharge** *(Note: "illicit" means "illegal")*
  A non-stormwater discharge (NSWD) that poses a risk to the environment *(and is not in the allowable class)*



2014 Consent Decree Requirements

No.16.b.i – HDOT-Harbors shall:

- Conduct site assessments (or Harbor patrols) of high risk areas.
- **Site Assessments are intended to:**
  - 1) Identify active or recent illicit discharges
  - 2) Increase the field presence of HDOT-Harbors personnel
    → deter illicit discharges

2014 Consent Decree Requirements

No.16.b.ii – HDOT-Harbors shall:

- Provide outreach activities during site assessments
  - Provide BMP fliers and other materials
  - Schedule of training
  - Schedule of outreach activities
- Identify areas that would benefit from signs

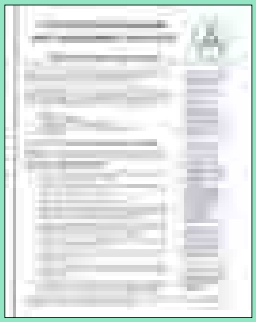
Best Management Practices (BMPs)

- **What is a BMP?**
  - Structural device or system
  - Operational or procedural practice
    - BMPs are specific to a facility's operation
  - **Good examples of BMPS are picking up litter on the ground or promptly responding to a spill or using a drip pan for a leaking vehicle until maintenance can be completed.**
- **Where are BMPs found?**
  - The Facility SWPCP or the Contractor's BMP Plan
  - DOT-Harbors Tenant Inspection Manual
  - Harbors Stormwater Management Website
  - Environmental Protection Agency BMP Menu

27

Best Management Practices Fliers

- Vehicle and Equipment Washing
- Vehicle and Equipment Fueling
- Material Storage
- Common Businesses
- Solid and Hazardous Waste Management
- Material Delivery and Handling
- Building and Remodeling
- Small Vessel Operation Maintenance Activities
- Building Power Washing
- Sidewalk and Walkway Power Washing
- Storm Drain Inlet Protection

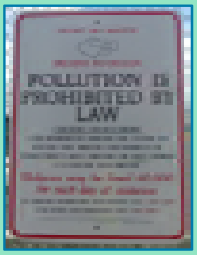


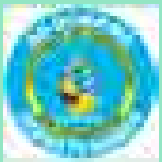
Available online: http://hidot.hawaii.gov/harbors/library/storm-water-management/

Illicit Discharge Prevention Signage

As stated in CD No. 16.b.ii:

- Recommendations for signs shall be made based on patterns of illicit discharges observed.





2014 Consent Decree Requirements

No.14.c.i – HDOT-Harbors shall:

- Install signs no later than 90 days after entry of CD
- Evaluate the need for additional signs annually
  - Take into account tenant use
  - Report information in ACR

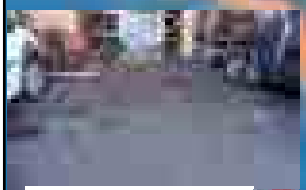
Would signs be effective in other areas?

Common Violations: Illicit Discharges

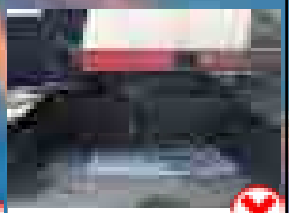
- Washing Machines, Outdoor Hand Wash Stations, and Sinks Draining to Ground
- Building/Equipment Power Washing – Unpermitted and Improperly Contained
- Vehicle Washing – Unpermitted and Improperly Contained
- Large Spills – Vehicle Maintenance, Material Storage, Fueling Operations
- Petroleum Sheen During Rain Events and Debris from Painting Operations
- Sediment Discharge Due to Construction Activities

Can you identify the potential pollution problem?

Poor Housekeeping – Needs BMPs!



- Staining observed
- Facility should implement proper BMPs to prevent staining and should remove stains



- Utilizing a containment device, however the leak expands larger than the device

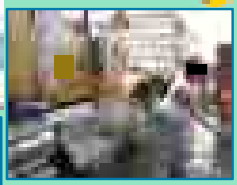
Common Illicit Discharges

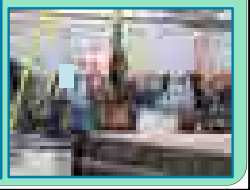
- Outdoor hand wash stations, sinks, and washing machines with soap & detergents draining onto open surfaces

Can you identify the potential pollution problem?

Common Illicit Discharges

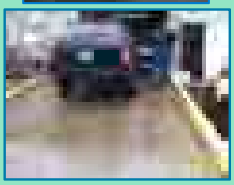
- Building/Equipment Power Washing – Unpermitted and Improperly Contained



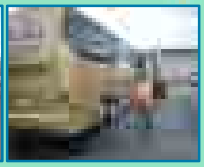


Common Illicit Discharges

- **Vehicle Washing** :
  Unpermitted
  Improperly Contained



Vehicle and Equipment Washing



WHO IS APPROVED?

1. McCabe, Hamilton & Renny (Pier 23)
2. Young Brothers (Pier 40)
3. Matson (Pier 52)
4. Hawaii Stevedores (Pier 1 and Pier 51A)

Common Illicit Discharges

Spills from:

- Vehicle Maintenance
- Material Storage
- Fueling Operations
- Sand and Aggregate Bulk Off-loading Operations

Can you identify the potential pollution problem?

Common Illicit Discharges

- Petroleum sheen
- Debris from painting operations.

Common Illicit Discharges

- **Sediment Discharge from Construction Activities**

When observed, you can report to:

Harbors Projects

Environmental Section	(808) 587-1962
Construction Section	(808) 587-1866
Special Projects Section	(808) 586-2455

Tenant Projects

Environmental Section	(808) 587-1962
Property Management Section	(808) 587-1944

Suspected Illicit Discharge and Spill Reporting

Notify Harbors Contacts of spills:

Harbor Traffic Control Unit (24/7): 808-587-2076

Harbors Environmental Hotline: 808-587-1962

- What to report:
  - Location of incident, date and time
  - Description of incident & the media into or on to discharged
  - Responsible party & cause of discharge
  - Clean-up actions (if any) & notifications made

Suspected Illicit Discharge Investigation & Reporting Steps

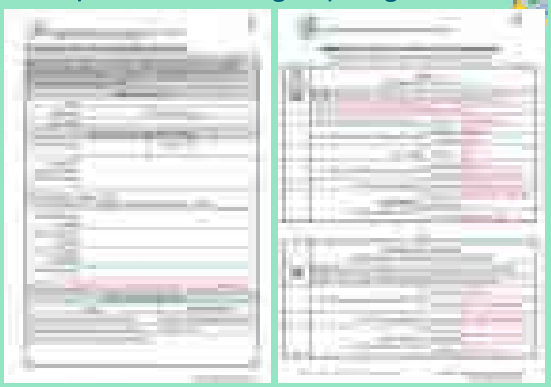
Observe
- If a suspected illicit discharge is observed, **STOP** and **investigate**.
- Take **notes** and **photos** of what you observe!

Trace
- **Follow** the discharge to locate the **source**.
- **Speak** with local representatives (employees and tenant representatives) about the suspected illicit discharge.

Report
- **Call** Harbors Traffic Control if it reaches harbor waters.
- **Call** Harbors Environmental Section if on land.

Document
- **Fill out** and **submit** Suspected Illicit Discharge Reporting form to HAR-EE for follow-on investigation (if warranted) and for recording in our Cityworks AMS.

Suspected Illicit Discharge Reporting Forms



Illicit Discharge Reporting

Discharge from **vessel** or pollutants found **in harbor waters**???

REPORT IT!!!

Harbor Traffic Control Unit (24/7)

(808) 587-2076

Discharge from **land based** sources???

REPORT IT!!!

Harbors Environmental Section (work hours)

(808) 587-1962

Escalating Enforcement

An environmental violation may lead to penalties

1. Oral or Verbal Warning
2. Written Warning (Inspection Report + Letter)
3. Notice of Apparent Violation
4. Notice of Finding of Violation and Order
5. Termination of Lease / Revocable Permit

Resources and Contacts

Harbors Stormwater Website:

http://www.hidot.hawaii.gov/harbors/malamaikeawakai

- Harbors Division Environmental Contacts:
  - Report Suspected Illicit Discharge: 587-2076 (Harbor Traffic Control) or 587-1962 (Environmental Hotline)
  - Spencer Yim, P.E., 587-1963; spencer.k. yim@hawaii.gov
  - Joy Zhang, P.E.: 587-1960; ying.j.zhang@hawaii.gov
  - Michele Freitas: 587-1976; michele.gn.freitas@hawaii.gov
  - Mitchell Martello: 587-1969; mitchell.a.martello@hawaii.gov

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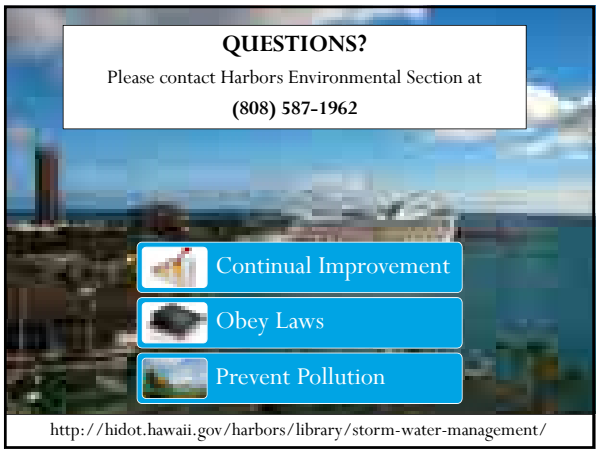

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge (NSWD) that poses a risk to the environment (*and is not in the allowable class*).
   d. None of the above.

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above.

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater.
   d. a and c only

6. Which of the following are **not** permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (guts) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is just soap in it.
   a. True.
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control at (808) 587-2076.
   b. Call Harbors Environmental Hotline at (808) 587-1962.
   c. Do nothing. None of your business.
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: _____ Date: _____

Office Code _____

Attachment 7

IDDE Training –
b. Sign-In Sheets & Completed Questionnaires

HDOT Harbors Annual Illicit Discharge Detection & Elimination (IDDE) Training Sign-In Sheet

December 10, 2012 (2100 - 2230)

No.	Name	Company	E-mail Address	Phone #	Initials
1	RICHARD ISA	HAR-OE			[illegible]
2	Gary Tsuzuki	HAR-OE			
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment and is not in the allowable class
   d. None of the above

2. True or False! Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Grow solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. Lubricants

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails, guts, & etc.
   c. Petroleum & paint products
   d. All of the above

7. True or False! Hand washing water can be discharged to the ground as long as there is just soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected in your harbor?
   a. If on Oahu, call Harbor Traffic Control at (808) 587-2078
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. Do nothing. None of your business.
   d. Both bills

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: Gary Tsuzuki

Date: 12-10-18

HA2-46

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment (and is not in the [illegible])
   d. None of the above.

2. True or false? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above.

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above.

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (guts) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or false? Hand washing water can be discharged to the ground as long as there is just soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. If on Dana, call Harbor Traffic Control at (909) 587-2076.
   b. Call Harbor Environmental Hotline at (909) 587-1962.
   c. Do nothing. None of your business.
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Gas, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: Richard Isa

HAR-DE

Date: [illegible]

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALA KEKAI

Name: RICHARD ISA

Date: 12-10-18

Company / Office Code: HAR-DE

Job Title: HARBOR ENVIRONMENT

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   ESSENCE, DETECT AND REPORT MATTERS. SOME PREVENTION.

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 - not relevant / useful, 5 - extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   TYPES OF [illegible]

4. What other topics would you like to see covered in this training?
   N/A - GOOD CLASS

5. Do you have any recommendations on how to improve our annual IDDE training?
   NONE. IT'S GOOD.

Please provide additional comments below.
VERY GOOD CLASS.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MĀLAMA NUI IAU

Name: Gary Tsugawa Date: 12-10-18

Company / Office Code: HARBOR Job Title: Harbor Pilot and Staff

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   We can detect illicit discharges and report it during daily patrols

2. Did you find the IDDE Training relevant and useful?
   Often scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?
   Actually everything was interesting

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?
   Please invest presentation and organized lecture.

Please provide additional comments below.

HDOT Harbors Annual Illicit Discharge Detection Elimination (IDDE) Training Sign-in Sheet

December 11, 2018 (2100 - 2230)

No.	Name	Company	E-mail Address	Phone #	Initials
1	Lukela Bahoe	[illegible]	[illegible]	[illegible]	
2	Jon Kuo	[illegible]	[illegible]	[illegible]	[illegible]
3	Gabriel Delgado	[illegible]	[illegible]	[illegible]	[illegible]
4	[illegible]	DOT HAR-CE	[illegible]	[illegible]	[illegible]
5	John Hill	[illegible]	[illegible]	[illegible]	[illegible]
6					
7					
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15					

"Malama i ke awa kai" Protect our harbor waters

2018 IDDE Training Quiz

1. What is the definition of an IDDE discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment, [illegible]
   d. None of the above.

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (guts) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is just a tip in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. Ifion Dana, call Harbor Traffic Control at (808) 567-2078
   b. Call Harbor Environmental Hotline at (808) 517-1962
   c. Do nothing. None of your business.
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Pine, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: [illegible]

Date: 12/1/18

2018 IDDE Training Quiz

1. What is the definition of an Illicit Discharge?
   a. Condensate from an A/C system
   b. Rainwater runoff
   c. Any non-storm water discharge that poses a risk to the environment [illegible]
   d. None of the above

2. True or False? Biological pollutants include bacteria and viruses from human and animal waste.
   a. True
   b. False

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. [illegible]

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish retrieval, gutted oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is no soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected to your harbor?
   a. [illegible]
   b. [illegible]
   c. Do nothing. None of your business
   d. [illegible]

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: [illegible]

Date: [illegible]

2018 IDDE Training Quiz

1. What is the definition of an Illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment [illegible]
   d. None of the above.

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above.

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (guts) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is just soap in it.
   a. True
   b. False

8. What should you do when an Illicit discharge is suspected at your harbor?
   a. Iron Oahu Call Harbor Traffic Control at (808) 597-2076
   b. Call Harbors Environmental Hotline at (808) 387-1962
   c. Do nothing. None of your business
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: [illegible]

Date: 12-1-18

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment [illegible]
   d. None of the above

2. True or False? Biological pollutants include bacteria and viruses from human and animal waste
   a. True
   b. False

3. The IDDE pollutant categories are
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rain water
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (gutts) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is [illegible]
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. Dial Oahu Call Harbor Traffic Control at (808) 587-2076
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. Do nothing. None of your business
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: Gabriel Delapena

Date: 12/11/18

2018 IDDE Training Quiz

1. What is the definition of an IDDE discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment [illegible]
   d. None of the above

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash
   d. Air pollution
   e. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fire/entrails, gas & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is [illegible]
   a. True
   b. False

8. What should you do when an alleged discharge is suspected at your harbor?
   a. Dial Lightfoot Harbor Traffic Control [illegible]
   b. Call Harbor Environmental Hotline [illegible]
   c. Do nothing. None of your business
   d. a or c only

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and synthetic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Prompt responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name [illegible]

Date [illegible]

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section. MAHALO NUI LOA!

Name: Gabriel Delapenia

Date: 12/11/18

Company / Office Code: HAR - OE

Job Title: HEO IV

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

We are responsible to respond and report all illicit discharges.

2. Did you find the IDDE Training relevant and useful?

(Please rate on 1 to 5, circle one number)

1 = not relevant / useful, 5 = extremely relevant / useful

1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

How important it is to prevent pollutants from entering the Harbor.

4. What other topics would you like to see covered in this training?

N/A

5. Do you have any recommendations on how to improve our annual IDDE training?

NO

Please provide additional comments below.

Excellent training.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MĀLAMA I KE AWA KAI

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible] **Job Title:** HEO

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   [illegible]

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   [illegible]

4. What other topics would you like to see covered in this training?
   [illegible]

5. Do you have any recommendations on how to improve our annual IDDE training?
   [illegible]

Please provide additional comments below.

[illegible]

2018 IDDE Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA

Name: John Todt Date: 12-11-18

Company / Office Code: HAR OL Job Title: H.E.O. III

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   observations while on patrol. Sent [illegible] of report to get information [illegible] violator.

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   what the different pollutants affects the environment.

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section (MĀLAMA NUI KAI)

Name: Lukela Richard Date: 12/11/18

Company / Office Code: DOT Harbors OCT Job Title: Harbors Traffic Controller

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   We report and Pete all reports to Hav-Ever.

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   What the State needs to do to comply with Ever Regulations.

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?
   Video training

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit to Harbors Engineering Branch Environmental Section: MAHALO NUI LOAI

Name: [illegible] Date: [illegible]

Company / Office Code: [illegible] Job Title: [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   [illegible]

2. Did you find the IDDE Training or exact and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   [illegible]

4. What other topics would you like to see covered in this training?
   [illegible]

5. Do you have any recommendations on how to improve our annual IDDE training?
   [illegible]

Please provide additional comments below.

HDOT Harbors Annual Illicit Discharge Detection & Elimination (IDDE) Training Sign-in Sheet

December 13, 2018 [illegible]

No.	Name	Company	E-mail Address	Phone #	Initials
1	[illegible]	State DOT		[illegible]	[illegible]
2	[illegible]	[illegible]		[illegible]	[illegible]
3	Kerstin [illegible]	State DOT	Kerstin.T.Kono@hawaii.gov		[illegible]
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment [illegible]
   d. None of the above.

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and b only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (guts) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is just soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control at (808) 381-2016
   b. Call Harbor's Environmental Hotline at (808) 837-1962
   c. Do nothing. None of your business.
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Fuel, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: [illegible]

Date: 2/5/18

2018 IDDE Training Quiz

1. What is the definition of an IDDE discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment and is not in the allowed's class
   d. None of the above

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes
   a. True
   b. False

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Grow solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (guts) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is just soap in it
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. Hot Oahu Call Harbor Traffic Control at (808) 587-2078
   b. Call Harbors Environmental Hotline at (808) 587-1962
   c. Do nothing. None of your business.
   d. a or b only

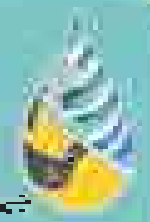
9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: [illegible]

Date: 12/13/2018

2018 IDDE Training Quiz



1. What is the definition of an illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment [illegible]
   d. None of the above

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Pressure trails, gum & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is no soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. Blue Cabin, call Harbor Traffic Control at [illegible]
   b. Call Harbor Environmental Hotline at [illegible]
   c. Do nothing. None of your business.
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuel and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Prompt responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name [illegible]

Date 12/12/2018

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit to Harbors Engineering Branch Environmental Section - MĀLAMA NUI LOA

Name: [illegible] Date: 12/13/2018

Company / Office Code: [illegible] Job Title: LABORER II

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   DOING MY [illegible] BUMP EVERY DAY

2. Did you find the IDDE Training relevant and useful?
   Then scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   EVERYTHING

4. What other topics would you like to see covered in this training?
   NONE

5. Do you have any recommendations on how to improve our annual IDDE training?
   NO

Please provide additional comments below.
ALL VERY GOOD

2018 IDDE Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible] **Job Title:** [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

2. Did you find the IDDE training relevant and useful?
   - On a scale of 1 to 5, circle one number
   - 1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

[illegible] Illicit Discharge Detection & Elimination (IDDE) Training Sign-in Sheet

[illegible]

No.	Name	Organization	E-mail Address	Phone #	Initials
1	[illegible]	[illegible]	[illegible]	587-2070	[illegible]
2	[illegible]		[illegible]	587-2076	[illegible]
3	[illegible]		[illegible]	587-2080	[illegible]
4	[illegible]		[illegible]	587-2057	[illegible]
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

2018 IDDE Training Quiz

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A nonstorm water discharge that poses a risk to the environment and is not in the allowable class
   d. None of the above

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. Lands only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (guts) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing waters can be discharged to the ground as long as there is just soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. Ill on Oshu call Harbor Traffic Control at (805) 537-3075
   b. Call Harbors Environmental Hotline at (805) 537-1967
   c. Do nothing. None of your business
   d. Not in only

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: Peter Pilcher

Date: 7/11

2018 IDDE Training Quiz

1. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

2. [illegible]
   a. [illegible]
   b. [illegible]

3. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

4. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

5. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

6. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

7. [illegible]
   a. True
   b. False

8. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

9. [illegible]
   a. True
   b. False

10. [illegible]
    a. [illegible]
    b. [illegible]
    c. [illegible]
    d. [illegible]

11. [illegible]
    a. [illegible]
    b. [illegible]
    c. [illegible]
    d. [illegible]

12. [illegible]
    a. [illegible]
    b. [illegible]
    c. [illegible]
    d. [illegible]

13. [illegible]
    a. [illegible]
    b. [illegible]
    c. [illegible]
    d. [illegible]

Name: [illegible]

Date: [illegible]

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment (and is not in the allowable category)
   d. None of the above

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (guts) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is just soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. If on Oshkosh Harbor Traffic Control at (608) 587-2076
   b. Call Harbors Environmental Hotline at (608) 587-1942
   c. Do nothing. None of your business
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaving vehicle until maintenance can be completed
   d. All of the above

Name: E.C. Nikki Hayden

Date: 12/14/18

2018 IDDE Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MALAMA ENGLISH

Name: DAVID L VEE Date: 12/14/18

Company / Office Code: DOT HARBORS HAR-OC Job Title: HARBOR OPERATIONS SUPERVISOR

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   OVERSEE BLUE COLLAR STAFF WHO SERVICES DRAINS ETC.

2. Did you find the IDDE training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   NOT SURE. PERHAPS THAT FLORIDA HAS A MAJOR ENVIRONMENTAL PROBLEM.

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?
   CONDUCT IN MAY/JUNE/JULY

Please provide additional comments below.
CAN WE PLEASE MOVE TO AN ONLINE TRAINING.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instruction: Please complete this survey and submit to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA!

Name: Peter Pillar **Date:** 12/14/18

Company / Office Code: [illegible] **Job Title:** Commercial Harbors Manager

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   Other [illegible] departments such as [illegible] Harbor [illegible] & MCS

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?
   Schedule the Series in the Water [illegible] the Year

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO SULLIVAN

Name: [illegible] Date: 10/14/18

Company / Office Code: HPR - OC Job Title: Operations Supervisor

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   To oversee the main environment office

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?
   How animals are not pollutants

4. What other topics would you like to see covered in this training?
   None at this time

5. Do you have any recommendations on how to improve our annual IDDE training?
   None

Please provide additional comments below.

2018 HDDE Harbors Illicit Discharge Detection & Elimination (HDDE) Training Survey

Instruction: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MOHALLENS LEDA

Name: Elaine C Niki Hayashi Date: 12/14/18

Company / Office Code: Job Title: Marine Traffic Controller

1. How does your job relate to illicit discharge detection & elimination (HDDE)?
   People call me to report

2. Did you find the HDDE training relevant and useful?
   Otherwise about 1 to 5, can be one number
   1 = not relevant / useful 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   All

4. What other topics would you like to see covered in this training?
   —

5. Do you have any recommendations on how to improve our annual HDDE training?
   Speak Cow Ka

Please provide additional comments below.

HDOT Harbors Annual Illicit Discharge Detection & Elimination (IDDE) Training Sign-in Sheet

December 18, 2018 (0700 - 0830)

No.	Name	Company	E-mail Address	Phone #	Initials
1	Sergio Dupin	H.E.O			[illegible]
2	Frank Conez	OE			[illegible]
3	Joe Ganton	OE			[illegible]
4	Fernandez Ryan K	OE			[illegible]
5	[illegible]	OE			[illegible]
6	Aaron Chun	OE			AC
7	Kullen Miyahira	OE			KM
8	Neel Miyagato	OE			[illegible]
9	John DeJesus	OE			[illegible]
10					
11					
12					
13					
14					
15					

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment (and is not in the allowable [illegible])
   d. None of the above.

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above.

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross-solids mainly garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails, guts & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is just soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. If on Oahu, call Harbor Traffic Control at (808) 537-2075
   b. Call Harbor Environmental Hotline at (808) 537-1962
   c. Do nothing. None of your business
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Fine, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: Aaron Chu

Date: 12-14-18

Office Code: [illegible]

2018 IDDE Training Quiz

2018 IDDE Training Quiz

2018 IDDE Training Quiz

1. What is the definition of an Illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-stormwater discharge that poses a risk to the environment (and is not in the allowable state)
   d. None of the above.

2. True or false? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The 11 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above.

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. Land ready

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Halventruth (gas) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or false? Hand washing water can be discharged to the ground as long as there is just soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. If on Duty, call Harbor Traffic Control at (909) 567-2076
   b. Call Harbor Environmental Hotline at (909) 537-1962
   c. Do nothing. None of your business.
   d. Also a only

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

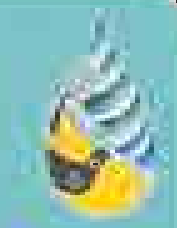
Name: John DeJesus

Date: 12/14/18

Office Code: HARBOR

2018 IDDE Training Quiz

2018 IDDE Training Quiz



2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment [illegible]
   d. None of the above.

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above.

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (guts) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is just soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. Hire Oxbow and Harbor Traffic Control at (305) 517-2076
   b. Call Harbors Environmental Hotline at (305) 557-1962
   c. Do nothing. None of your business.
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Zinc, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMPs)?
   a. Picking up litter on the ground
   b. Promptly responding to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: [illegible]

Date: [illegible]

Office Code: [illegible]

2018 IDDE Training Quiz

Kay Gomez

12/18/18

2018 IDDE Training Quiz

1. What is the definition of an Illicit discharge?
   a. Condensate from an A/C system
   b. Rain water runoff
   c. A non-storm water discharge that poses a risk to the environment; [illegible]
   d. None of the above

2. True or False? Biological pollutants include bacteria and viruses from human and animal wastes.
   a. True
   b. False

3. The IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gross solids such as garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Unpolluted A/C condensate water
   b. Gasoline, diesel, used oil & paints
   c. Rainwater
   d. a and c only

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Fish entrails (gutt) & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing water can be discharged to the ground as long as there is rust soap in it.
   a. True
   b. False

8. What should you do when an illicit discharge is suspected at your harbor?
   a. If on Itaha, call Harbor Traffic Control at (808) 937-2076
   b. Call Harbors Environmental Hotline at (808) 837-1962
   c. Do nothing. None of your business
   d. a or b only

9. Common forms of hydrocarbon pollutants are:
   a. Paint, iron and aluminum
   b. Oil & grease, fuels and hydraulic fluids
   c. Garbage, trash and plastics
   d. Sediment, nutrients and organics

10. Which of the following are good examples of Best Management Practices (BMP)?
   a. Picking up litter on the ground
   b. Prevent [illegible] to a spill
   c. Using a drip pan for a leaking vehicle until maintenance can be completed
   d. All of the above

Name: [illegible] (DE)

Date: 11/18/2018

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MALAMA SUPPORT

Name: NAL MIYASATO Date: 12-16-18

Company / Office Code: HAR-OC Job Title: HEOIV

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   Enforcement / Detection.

2. Did you find the IDDE training relevant and useful?
   On a scale of 1 to 5 circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   How pollutants can affect our environment / oceans.

4. What other topics would you like to see covered in this training?
   Useful

5. Do you have any recommendations on how to improve our annual IDDE training?
   Useful

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALA NI LIAHI

Name: [illegible] Date: [illegible] 8 18

Company / Office Code: [illegible] Job Title: [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

   [illegible] FREEDOM [illegible] DETECT [illegible] [illegible] APPROPRIATELY.

2. Did you find the IDDE Training relevant and useful?

   On a scale of 1 to 5, circle one number.

   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

   REFRESH.

4. What other topics would you like to see covered in this training?

   NONE I CAN IDENTIFY.

5. Do you have any recommendations on how to improve our annual IDDE training?

   NONE.

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MĀLAMA I KE AWA KAI

Name: John Dosusus

Date: 12/10/18

Company / Office Code: HAR-00

Job Title: Harbor HEO III

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   NO Enforcement Patrol

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   None

4. What other topics would you like to see covered in this training?
   None

5. Do you have any recommendations on how to improve our annual IDDE training?
   None

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section (MAHALO SULLOA)

Name: [illegible] Date: 12/18/18

Company / Office Code: HAR OE Job Title: [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   DRAFT AND SHARED FOR SHARED

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle your number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   DIFFERENT TYPES OF POLLUTANTS

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA!

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible] **Job Title:** [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   [illegible]

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MAHALO SULTAN

Name: Aaron K Chu Date: 12-18-18

Company / Office Code: OE Job Title: HDOE

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   Identify and report

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   The damage pollution can do

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instruction: Please complete this survey and submit to Harbors Engineering Branch Environmental Section, MAHALO NUI LOA!

Name: JOE CANTON Date: 12 / 18 / 18

Company / Office Code: HAR OLE Job Title: HARBOR POLICE

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

   [illegible] BEING OBSERVANT

2. Did you find the IDDE Training relevant and useful?

   On a scale of 1 to 5, circle one number

   1 = not relevant / useful 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

   ALL

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

   - - -

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MĀLAMA NUI Ala'

Name: Fernandez

Date: 12/18/18

Company / Office Code: OE

Job Title: HEOE

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

Front lines on the battle, to eliminate illicit discharge

2. Did you find the IDDE Training relevant and useful?

On a scale of 1 to 5, circle one number

1 = not relevant / useful, 5 = extremely relevant / useful

1 2 3 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

Thank you

2018 HDOT Harbors Illicit Discharge Detection & Elimination (HDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA!

Name: Kap Gouse

Date: 12/18/18

Company / Office Code: OCT

Job Title: Trappic Controller

1. How does your job relate to illicit discharge detection & elimination (HDDE)?
   All + any discharge is reported to the tower

2. Did you find the HDDE training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   Difference between illicit + non illicit

4. What other topics would you like to see covered in this training?
   N/A

5. Do you have any recommendations on how to improve our annual HDDE training?
   N/A

Please provide additional comments below.

HDOT Harbors Annual Illicit Discharge Detection [illegible]mination (IDDE) Training Sign-in Sheet

December 19, 2018 (0900 - 1030)

No.	Name	Company	E-mail Address	Phone #	Initials
1	[illegible]	HAR OM		832-3845	[illegible]
2	[illegible]	HAR OM			[illegible]
3	[illegible]	HAR OM		832-3845	[illegible]
4	[illegible]	OM		832 3845	[illegible]
5	[illegible]	HAR OM		832 [illegible]	[illegible]
6	Albert [illegible]	HAR OM		[illegible]	[illegible]
7	[illegible]	OM		[illegible]	[illegible]
8	[illegible]	OM		[illegible]	[illegible]
9	[illegible]	HAR OM		[illegible]	[illegible]
10	[illegible]	HAR OM	[illegible]	[illegible]	[illegible]
11	[illegible]	HAR OM		832-3845	[illegible]
12	[illegible]	HAR OM		832-3844	[illegible]
13	[illegible]	HAR OM		832-3845	[illegible]
14	[illegible] Takekawa	HARO		587-2100	[illegible]
15	[illegible]	HE-552		587-2056	[illegible]
16	[illegible]	HAR OM		[illegible]	[illegible]

"Malama i ke awa kai" Protect our harbor waters

HDOT Harbors Annual Illicit Discharge Detection & Elimination (IDDE) Training Sign-in Sheet

December [illegible], 2018 ([illegible])
19 0900~1030

No	Name	Agency	E-mail Address	Phone #	Initials
1	Gary [illegible]	DOT HARBORS	[illegible]	587-2055	[illegible]
2	[illegible]	[illegible]	Paul [illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4					
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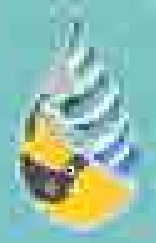
15					

"Malama i ke awa kai" Protect our harbor waters

2018 IDDE Training Quiz



2018 IDDE Training Quiz

2018 IDDE Training Qulz

1. What is the definition of an illicit discharge?
   a. Constituents from an [illegible] system
   b. Rain water runoff
   c. A non-storm water discharge (NSWD) that [illegible]
   d. None of the above

2. Pyrolysis [illegible] pollutants [illegible]
   a. Pyro
   b. Fabri

3. The IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & mechanical
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Trash [illegible]
   c. [illegible] plastics
   d. All of the above

5. Which of the following [illegible] discharge [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

6. Which of the following [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

7. True or False: [illegible]
   a. True
   b. False

8. Which [illegible] discharge is [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]

9. [illegible] pollutants are:
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

10. Which [illegible] Practices (BMPs)?
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

Name: Brother, Shane

Office Code: HAR-0

Date: [illegible]

2018 DDE Training Quiz

[illegible]

Name: Robert Cooper

Date: 12/19/18

2018 IDDE Training Quiz

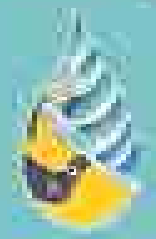
2018 IDDE Training Quiz

12/19/2018

2018 IDDE Training Quiz

2018 IDDE Training Quiz

2018 IDDE Training Quiz



1. [illegible]
   1. [illegible]
   2. [illegible]
   3. [illegible]
   4. [illegible]
   5. [illegible]

2. [illegible]
   1. True
   2. False

3. [illegible]
   1. [illegible]
   2. [illegible]
   3. [illegible]
   4. [illegible]

4. [illegible]
   1. [illegible]
   2. [illegible]
   3. [illegible]
   4. [illegible]

5. [illegible]
   1. [illegible]
   2. [illegible]
   3. [illegible]
   4. [illegible]

6. [illegible]
   1. [illegible]
   2. [illegible]
   3. [illegible]
   4. [illegible]

7. [illegible]
   1. True
   2. False

8. [illegible]
   1. [illegible]
   2. [illegible]
   3. [illegible]
   4. [illegible]

9. [illegible]
   1. [illegible]
   2. [illegible]
   3. [illegible]
   4. [illegible]

10. [illegible]
    1. [illegible]
    2. [illegible]
    3. [illegible]
    4. [illegible]

Name: [illegible]

Date: [illegible]

2018 IDDE Training Quiz

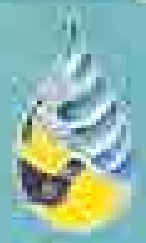
[illegible]

Name: [illegible]

Signature: [illegible]

Date: 12/19/2018

2018 IDDE Training Quiz



1. What is the definition of an IDDE discharge?
   a. Continuous from a [illegible]
   b. Rain water runoff
   c. A non-storm water discharge (NSWD) that poses a risk to the environment and is not in the allowable class
   d. None of the above

2. True or False? Biological pollutants include bacteria and viruses from human and animal waste.
   a. True
   b. False

3. The IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Water, oil, trash or garbage, trash & plastics
   d. All of the above

5. Which of the following are permitted to be discharged to the storm drain?
   a. Liquid, solid & [illegible]
   b. Garbage, trash, trash & plastics
   c. Rainwater
   d. Land runoff

6. Which of the following are not permitted to be discharged into the storm drain?
   a. Equipment washing water
   b. Pressure washing pipes & oil
   c. Petroleum & paint products
   d. All of the above

7. True or False? Hand washing vehicles are discharged to the permeable lining in the [illegible] area.
   a. True
   b. False

8. What are [illegible] when an illicit [illegible] is suspected to [illegible]?
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

9. [illegible] of high-carbon pollutants are:
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

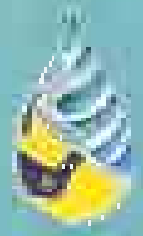
10. Where is the following are [illegible] of Best Management Practices (BMPs)?
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

Name: [illegible]

Office: [illegible]

Date: [illegible]

2018 IDDE Training Quiz



1. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. None of the above

2. [illegible]
   a. True
   b. False

3. The IDDE pollutants are [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. None of the above

4. Physical pollutants include
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

5. Which of the following [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

6. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

7. [illegible]
   a. True
   b. False

8. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

9. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

10. [illegible]
    a. [illegible]
    b. [illegible]
    c. [illegible]
    d. [illegible]

11. [illegible]
    a. [illegible]
    b. [illegible]
    c. [illegible]
    d. All of the above

Name: [illegible]

Office Code: [illegible]

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   - a. Continuous flow in A.C. Cyanide
   - b. Rain water runoff
   - c. Rain storm water discharge (NPDES) that poses a risk to the environment and a [illegible]
   - d. None of the above

2. True or False? Discharge of pollutants to fish, [illegible] and [illegible] from [illegible] and normal [illegible]
   - a. True
   - b. False

3. The 3 IDDE pollutants can generate
   - a. Physical, chemical & biological
   - b. Structural, organic & inorganic
   - c. Liquid, solid & gas
   - d. None of the above

4. Physical pollutants [illegible]
   - a. Sediment
   - b. Temperature
   - c. [illegible] and/or pathogen, such as pH, etc.
   - d. All of the above

5. Which of the following are prevented by the discharge of the [illegible]
   - a. Unpolluted A.C. [illegible]
   - b. [illegible]
   - c. Aquatic
   - d. [illegible]

6. Which of the following are not [illegible] discharged [illegible]
   - a. Equipment washing [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. All of the above

7. True or False? [illegible] discharge [illegible]
   - a. True
   - b. False

8. What [illegible] do what is [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

9. [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

10. [illegible]
    - a. [illegible]
    - b. [illegible]
    - c. [illegible]
    - d. [illegible]

11. [illegible]
    - a. [illegible]
    - b. [illegible]
    - c. [illegible]
    - d. [illegible]

12. [illegible]
    - a. [illegible]
    - b. [illegible]
    - c. [illegible]
    - d. [illegible]

Name: [illegible]

Date: [illegible]

Office Code: _____

2018 IDDE Training Quiz

1. What is the definition of an IDE Ordinance?
   a. Contractor Bonus (A) Creation
   b. Rate waiver small
   c. A non-storm water discharge (NSWD) that prevents a [illegible] and [illegible]
   d. None of the above

2. Pass or Fail? Biological pollutants include [illegible] and [illegible] from [illegible] and animal waste?
   a. Fire
   b. Dirt

3. The 3 IDDE pollutant categories are:
   a. Physical, chemical & biological
   b. Structural, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. Gas (solids such as garbage, stuck to plants)
   d. All of the above

5. Which of the IDE [illegible] are permitted to the discharge of the [illegible] flow?
   a. Unpolluted A/C condensate water
   b. Gasoline, [illegible]
   c. Bathroom
   d. [illegible]

6. Which of the following are not permitted to [illegible] pollutants [illegible]
   a. Equipment washing water
   b. Pollutant-organic [illegible]
   c. Pollutants to [illegible]
   d. All of the above

7. Pass or Fail? Hand washing [illegible] to discharge [illegible]
   a. Yes
   b. False

8. What [illegible] are [illegible] to [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

9. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

10. Which of the IDE [illegible] Management Practices (BMP)?
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

Name: [illegible]

Date: 12/18/18

Office Code: 1

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   - a. Contaminants from [illegible]
   - b. Rain water runoff
   - c. A non-storm water discharge (NSWD) that poses a risk to the [illegible]
   - d. [illegible]
   - e. None of the above

2. True or False? Biological pollutants are safe, [illegible] and [illegible] from human and animal waste.
   - a. True
   - b. False

3. The [illegible] pollutant categories are:
   - a. Physical, chemical & biological
   - b. Structural, organic & inorganic
   - c. Liquid, solid & gas
   - d. None of the above

4. Plant pollutants include:
   - a. Sediment
   - b. Temperature
   - c. Grass, [illegible] & plants
   - d. All of the above

5. Which of the following are prohibited to be discharged to the storm drain?
   - a. Unpolluted [illegible]
   - b. Gasoline, diesel, [illegible]
   - c. Rainwater
   - d. [illegible]

6. Which of the following are [illegible] discharged into the [illegible]?
   - a. Equipment [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. All of the above

7. True or False? Hand washing [illegible] is a [illegible] discharge to the [illegible] and [illegible]
   - a. True
   - b. False

8. What [illegible] is the [illegible] discharge [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

9. [illegible] pollutants are:
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

10. Which of the following [illegible] Management Practices (BMPs)?
   - a. Picking up [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. All of the above

Name: [illegible]

Date: 12-9-19

Office Code: [illegible]

2018 IDDE Training Quiz

Name: [illegible]

Office Code: [illegible]

Date: 8/9/18

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   - a. Consistent flows in [illegible]
   - b. Rain water runoff
   - c. A non-stormwater discharge (NSWD) that poses a risk to the environment and [illegible]
   - d. None of the above

2. True or False: Both [illegible] pollutants [illegible]
   - a. True
   - b. False

3. The IDDE pollutants are [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. None of the above

4. Physical pollutants include:
   - a. Sediment
   - b. Temperature
   - c. [illegible]
   - d. All of the above

5. Which of the following are [illegible] discharged to the [illegible]?
   - a. [illegible]
   - b. [illegible]
   - c. Bacteria
   - d. [illegible]

6. Which of the following are [illegible] discharged into the [illegible]?
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. All of the above

7. True or False: [illegible] discharged to the [illegible]
   - a. True
   - b. False

8. What [illegible] discharge [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

9. [illegible] pollutants are:
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

10. Which [illegible] Management Practices (BMPs)?
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. All of the above

Name: Jeffrey Mun

Date: 12/1/18

Signature: [illegible]

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   - a. Complaints from an O.C. [illegible]
   - b. Rain water runoff
   - c. A non-stormwater discharge (NSWD) that [illegible]
   - d. None of the above

2. True or False? Biological pollutants include [illegible]
   - a. True
   - b. False

3. The IDDE pollutants can [illegible]
   - a. Physical, chemical & biological
   - b. Structural, organic & inorganic
   - c. Liquid, solid & gas
   - d. None of the above

4. Physical pollutants include
   - a. Asbestos
   - b. Temperature
   - c. Sewer [illegible] in garbage [illegible]
   - d. All of the above

5. Which of the following are prevented to be discharged to the storm drain?
   - a. Unpolluted A/C [illegible]
   - b. Gasoline, diesel, and oil & paints
   - c. Bacteria
   - d. Land [illegible]

6. Which of the following are [illegible] to be discharged to the storm drain?
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. All of the above

7. True or False? [illegible]
   - a. True
   - b. False

8. What are [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

9. [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

10. Which of the following are good examples of Best Management Practices (BMPs)?
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. All of the above

Name: Shari Lyon Esso

Date: [illegible]

Office Code: HRK-CM

2018 IDDE Training Qulz

1. What is the definition of an illicit discharge?
   a. Continuous flow in A/C system
   b. Rain water runoff
   c. A non-storm water discharge (NSWD) that poses a risk to the environment and is not in the allowable class
   d. None of the above

2. Time or Rain: Be logical pollutants [illegible] and [illegible]
   a. Time
   b. Rain

3. The IDDE pollutant [illegible]
   a. Physical, chemical & biological
   b. Physical, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. [illegible] gallons, type of plastic
   d. All of the above

5. Which of the following are permitted to be discharged to the [illegible]
   a. Chlorinated A/C condensate water
   b. Gasoline, diesel, [illegible]
   c. Antifreeze
   d. [illegible]

6. Which of the following are [illegible] permitted to be discharged to [illegible]
   a. Exposed [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

7. [illegible] discharged to the [illegible]
   a. Time
   b. Rain

8. What do I do [illegible] discharge is suspected to [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

9. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

10. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

Name: Paul Shimmy

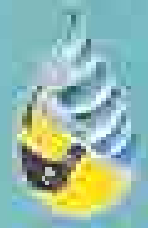
Date: [illegible]

Office Code: [illegible]

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   - a. Commonly [illegible]
   - b. Rise [illegible]
   - c. A non-stormwater discharge (NSWD) that [illegible]
   - d. None of the above

2. True or False? Biological pollutants include bacteria and viruses from human and animal sources.
   - a. True
   - b. False



3. The 3 IDDE pollutant categories are:
   - a. Physical, chemical, biological
   - b. Structural, organic, [illegible]
   - c. [illegible]
   - d. None of the above

4. Physical pollutants include:
   - a. Sediment
   - b. Temperature
   - c. Some solids such as garbage, [illegible] glass
   - d. All of the above

5. Which of the [illegible] pollutants [illegible] discharge [illegible]?
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

6. Which of the following are [illegible] permitted to be discharged [illegible]?
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. All of the above

7. True or False? [illegible] discharged to the [illegible]
   - a. True
   - b. False

8. What should you [illegible] discharge [illegible]?
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

9. Common [illegible] pollutants are:
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

10. Which [illegible] Management Practices (BMPs)?
    - a. [illegible]
    - b. [illegible]
    - c. [illegible]
    - d. All of the above

Name: [illegible]

Office Cell: [illegible]

Date: [illegible]

2018 IDDE Training Quiz

1. What is the definition of an Illicit discharge?
   - a. Contribute from [illegible]
   - b. Run [illegible]
   - c. [illegible] discharge [illegible] that [illegible] to the [illegible] and [illegible]
   - d. None of the above

2. Which of the following [illegible] discharged to the [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

3. What [illegible] discharged [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

4. [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

5. [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

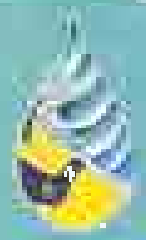
6. [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

7. [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

8. [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

9. [illegible]
   - a. [illegible]
   - b. [illegible]
   - c. [illegible]
   - d. [illegible]

10. [illegible]
    - a. [illegible]
    - b. [illegible]
    - c. [illegible]
    - d. [illegible]



11. [illegible]
    - a. [illegible]
    - b. [illegible]
    - c. [illegible]
    - d. [illegible]

12. [illegible]
    - a. [illegible]
    - b. [illegible]
    - c. [illegible]
    - d. [illegible]

Name: [illegible]

Date: [illegible]

Office ID: OM

2018 IDDE Training Quiz

1. What is the definition of an illicit discharge?
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. None of the above

2. True or False: Biological pollutants are [illegible]
   a. True
   b. False

3. The IDDE pollution categories are:
   a. Physical, chemical & biological
   b. Chemical, organic & inorganic
   c. Liquid, solid & gas
   d. None of the above

4. Physical pollutants include:
   a. Sediment
   b. Temperature
   c. [illegible]
   d. All of the above

5. Which of the following are permitted to be discharged to the [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

6. Which of the following are [illegible] to be discharged [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

7. True or False: [illegible]
   a. True
   b. False

8. What [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

9. [illegible]
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. [illegible]

10. Which of the following are good examples of Best Management Practices (BMPs)
   a. [illegible]
   b. [illegible]
   c. [illegible]
   d. All of the above

Name: _____

Date: _____

Office ID: _____

[illegible] IDDE Training Survey

[illegible] Branch Environmental

Date: 12.19.18

Job Title: [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

Marine cargo specialist always out on the piers

2. Did you find the IDDE Training tasks [illegible]

[illegible]

1 2 (3) 4 5

3. What was the most [illegible] stuff you learned in the [illegible]?

4. What other topics would you like to [illegible]?

penalties fines

5. Do you [illegible] IDDE [illegible]?

speaker needs to speak louder

Please provide additional comments below.

[illegible] IDDE Training Survey

[illegible]

[illegible] Date: 12/19/16

[illegible] M [illegible] Title: CUSTODIAN

[illegible] relate to illicit discharge dete[illegible]

[illegible]

(5)

1. What was the most interesting thing you learned in this training?
   PRESENT TYPES OF DISCHARGE

2. What other topics would you like to [illegible] in this training?
   NONE

3. [illegible] training?
   NONE

Please provide additional comments below.

[illegible] IDDE Training Survey

[illegible]

Date: 12/18/18

Title: Arch. Meat.

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

2. Did you find the IDDE Training relevant and useful?
   Use a scale of 1 to 5 (only one number)
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 (3) 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?
   None.

5. Do you have any recommendations on how to improve our annual IDDE training?
   p.10

Please provide additional comments below.

2018 IDDE Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey
Instruction: Please complete this survey and submit to Harbors Engineering Branch Environmental Section, MAHALO SULLIVAN

Name: Elmer Hirano Date: 12.19.18

Company / Office Code: Harbors Job Title: Gen. Const. & Maint Supv

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

   Auto Maint. Shop

2. Did you find the IDDE Training relevant and useful?
   Only a scale of 1 to 5 (as below) (number)
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

   Refresher

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our support IDDE mapping?

   Not None

Please provide additional comments below

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instruction: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section. MAHALO NUI LOA!

Name: Jackie Ferguson-Nugent **Date:** 12-19-18

Company / Office Code: HAR-OM **Job Title:** OFF. Ass't V

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

It doesn't

2. [illegible]

3. What was the most [illegible] in this training?

That there is a designated enforcement for violations

4. What other topics would you like to see covered in this training?

5. [illegible] IDDE training?

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NCI LOA

Name: Chan Lynn Onchi Date: 12/19/18

Company / Office Code: HAE-OM Job Title: OA III

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

   It doesn't

2. Did you find the IDDE Training relevant and useful?

   On a scale of 1 to 5, circle one number

   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 (3) 4 5

3. What was the most interesting thing you learned in this training?

   Learning about different types

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

Cleaner & designation

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA!

Name: [illegible] Date: 12-19-18

Company / Office Code: Job Title:

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   required

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 HDOI Harbors Illicit Discharge Detection & Elimination (HDDE) Training Survey

Instructions: Please complete this survey and submit to Harbors Enforcement Branch Environmental Section, MĀLAMA I KE AWA KAI

Name: [illegible] Date: [illegible]

Company / Office Code: [illegible] Job Title: [illegible]

1. How does your job relate to illicit discharge detection & elimination (HDDE)?
   [illegible]

2. Did you find the HDDE training relevant and useful?
   [illegible]
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 (4) 5

3. What was the most interesting thing you learned in this training?
   [illegible]

4. What other topics would you like to [illegible] in this training?
   [illegible]

5. Do you have any recommendations on how to improve our annual HDDE training?
   [illegible]

Please provide additional comments below.

[illegible]

[illegible] IDDE Training Survey

[illegible]

[illegible] Neil [illegible] Date: 12-18-18

[illegible] Job Title: [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

[illegible]

[illegible]

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to [illegible] in this training?

Future direction.
Improvements from past.

5. Do you have any [illegible] on how to improve [illegible] training?

Do not read the slides - add to the slides to keep the attention of the group. Keep to the time schedule of 1 hour.

Please provide additional comments below.

Since this is an annual class it needs to change to be current with the updates to the CD. Progress of [illegible] has happened and where do we need to go.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] does your job relate to illicit discharge dete[illegible]

WE ARE THE [illegible] & EARS ON THE [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

4. What other topics would you like to see covered in this training?

open

[illegible]

[illegible]

Please provide additional comments below.

[illegible] IDDE Training Survey

[illegible]

[illegible]

Date: [illegible]

Title: [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   [illegible]

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5 circle your answer
   1 = not relevant or useful, 5 = extremely relevant or useful

   1 2 3 4 (5)

3. What were the most interesting, about you learned in this training?
   [illegible]

4. What other topics would you like to see covered in this training?
   [illegible]

5. Do you have any recommendations for how to improve our annual IDDE training?

[illegible] de additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instruction: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section. MAHALO NUI LOA!

Name: Jon Mercado **Date:** 12/19/2018

Company / Office Code: HARBORS **Job Title:** Maint. Mech II

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

   Only To Report If Seen

2. [illegible] IDDE training relevant and useful?

   [illegible]

   1 2 3 4 5

3. What was the most interesting thing you learned in the training?

4. What other topics would you like to see covered in the training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instruction: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section. MAHALO NUI LOA!

Name: K. Inouye **Date:** 10/12/18

Company / Office Code: OCM **Job Title:** MCS

1. How does your job [illegible]

2. [illegible] IDDE Training is [illegible]

   [illegible]

   [illegible]

   1 2 (3) 4 5

3. [illegible]

4. [illegible]

5. [illegible]

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (HDDE) Training Survey

Instructions: Please complete this survey and submit to the Harbors Environmental Branch Programmatic Section (MAILBOX NUMBER)

Name: Keith Hamakk Date: 12/19/18

Company / Office Code: Job Title: Harbor Planner II

1. How does your job relate to illicit discharge detection & elimination (HDDE)?

   Patrons / Reports to tower

2. Did you find the HDDE Training relevant and useful?

   On a scale of 1 to 5 you'd now consider:

   1 – is a relevant [illegible], 5 – extremely relevant [illegible]

   1 2 3 4 5

3. What are the [illegible] that you learned in the training?

   Don't [illegible] will [illegible] dump anything into Storm Drains

4. What other topics would you like to see covered in this training?

   Fishing Vessels Cleaning

5. Do you have any recommended [illegible] to support [illegible] HDDE [illegible]?

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instruction: Please complete this survey and submit it to Harbors Engineering Branch / Environmental Section - MAHALO NCLEAR

Name: [illegible] Kauli (cah [illegible]

Date: 12 | 14 | 18

Company / Office Code: [illegible]

Job Title: MCS

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

helping to keep [illegible] harbor clean

2. Did you find the IDDE training relevant and useful?

On a scale of 1 to 5, circle one number:

1 = not relevant / useful, 5 = extremely relevant / useful

1 2 3 (4) 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

Fishing vessels

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Biological Environmental Section, MAHALO NUI LOA

Name: [illegible] **Date:** 11/14/2018

Company / Office Code: [illegible] **Job Title:** [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   [illegible] PRODUCT SPILLS.
   [illegible]

2. Did you find the IDDE Training relevant and useful?
   (Circle a scale of 1 to 5, circle one number)
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?
   HOW PERSISTENT POLLUTANTS CAN BE [illegible]

4. What other topics would you like to see covered in this training?
   [illegible]

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

[illegible]

1. How does your job [illegible]

No way paid to report Any Spill

2. [illegible]

1 2 3 4 5

3. What was the most [illegible]

4. What [illegible]

[illegible]

5. [illegible]

Please provide additional comments below.

2018 IDDE Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section (MALAMA NEI LOA)

Name: **Date:**

Company / Office Code: **Job Title:**

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful; 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

   KEEPS REFRESHING THE IDEA AND KEEPS THE CHECK.

4. What other topics would you like to see covered in this training?

   ?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 IDDE Harbors Illicit Discharge Detection & Elimination (IDDE) Training Surveys

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA!

Name: [illegible] **Date:** [illegible]

Company / Office Code: **Job Title:**

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

   Don't know

2. Did you find the IDDE Training relevant and useful?

   On a scale of 1 to 5, circle one number.

   1 = not relevant / useful, 5 = extremely relevant / useful

   (1) 2 3 4 5

3. What was the most interesting thing you learned in this training?

   Not thing

4. What other topics would you like to see covered in this training?

   Not thing

5. Do you have any recommendations on how to improve our annual IDDE training?

   Not to [illegible]

Please provide additional comments below.

[illegible]

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MAHALO NUI LOA

Name: [illegible] Date: 12/17/18

Company / Office Code: [illegible] Job Title: [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

[illegible]

2. Did you find the IDDE Training relevant and useful?

On a scale of 1 to 5, circle one number

1 = not relevant / useful, 5 = extremely relevant / useful

1 2 3 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

HDOT Harbors Annual Illicit Discharge Detection Elimination (IDDE) Training Sign-in Sheet

December 20, 2018 (1300 - 1430)

No	Name	Company	E-mail Address	Phone #	Initials
1	Keith Chikamoto	DOT HARBOR EM	—	[illegible]	[illegible]
2	David Mackie	DOT HAR - OM	—	[illegible]	[illegible]
3	Frederick Bautista	DOT HAR. OCG	—	[illegible]	[illegible]
4	Derek Brandon	DOT HAR OM	—	[illegible]	[illegible]
5	Clyde Nishigata	DOT HAR OM	—	[illegible]	[illegible]
6	Aurelio Preza	DOT HAR OM	—	[illegible]	[illegible]
7	Dean Ibana	S.O.H. D.O.T. HARBORS DIV		[illegible]	D
8	Randy Castillo	DOT HAR		[illegible]	[illegible]
9	Jason Nishigata	DOT - HAR OM	—	[illegible]	[illegible]
10	Eric Choi	DOT - HAR	—		[illegible]
11	[illegible]	DOT - HAR	—	[illegible]	[illegible]
12	[illegible]	DOT - HAR [illegible]	—	[illegible]	[illegible]
13	[illegible]	DOT - HAR [illegible]	—	[illegible]	[illegible]
14					
15					

"Malama i ke awa kai" Protect our harbor waters

2018 IDDE Training Quiz

[illegible]

Name [illegible]

Date 12-26-18

[illegible]

2018 IDDE Training Quiz

1. [illegible]
   - [illegible]
   - [illegible]
   - [illegible]
   - [illegible]
   - [illegible]
   - [illegible]

2. [illegible]
   - True
   - False

3. [illegible]
   - [illegible]
   - [illegible]
   - [illegible]
   - [illegible]

4. [illegible]
   - [illegible]
   - [illegible]
   - [illegible]
   - [illegible]
   - [illegible]

5. [illegible]
   - [illegible]
   - [illegible]
   - [illegible]
   - [illegible]

6. [illegible]
   - True
   - False

7. [illegible]
   - [illegible]
   - [illegible]
   - [illegible]
   - [illegible]

8. [illegible]
   - True
   - False

9. [illegible]
   - [illegible]
   - [illegible]
   - [illegible]
   - [illegible]

10. [illegible]
    - [illegible]
    - [illegible]
    - [illegible]
    - [illegible]

11. [illegible]
    - [illegible]
    - [illegible]
    - [illegible]
    - [illegible]

12. [illegible]
    - [illegible]
    - [illegible]
    - [illegible]
    - [illegible]

Name: [illegible]

Date: [illegible]

2018 IDDE Training Quiz

12/20/2018

2018 IDDE Training Quiz

12/20/18

2018 IDDE Training Quiz

2018 IDDE Training Quiz

2018 IDDE Training Quiz

2018 IDDE Training Quiz

2018 IDDE Training Quiz

2018 IDDE Training Quiz

2018 IDDE Training Quiz

[illegible]

Name: _____

[illegible]

90%

2018 IDDE Training Quiz

Name: Dan Irons

Date: Dec 26, 2018

2018 IDDE Training Quiz

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO NUI LAU!

Name: ALICE R. VANCELDER Date: 12-20-18

Company / Office Code: Job Title: WATER SERVICE WORKER II

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

2. Did you find the IDDE training relevant and useful?
   Ot a scale of 1 to 5, circle one number
   1 = not relevant / useful 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

   No Comments

5. Do you have any recommendations on how to improve our annual IDDE training?

   No Comments

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MĀLAMA I KE AWA KAI

Name: [illegible] Date: [illegible]

Company / Office Code: Job Title: [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   I work on the harbor

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful; 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?
   the informations

4. What other topics would you like to see covered in this training?
   more on what to do?

5. Do you have any recommendations as how to improve our annual IDDE training?
   None

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MĀLAMA I KE AWA KAI

Name: KEITH CHIKAMORI Date: 12/20/2018

Company / Office Code: Job Title: AUTO HOOK II

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

2. Did you find the IDDE Training relevant and useful?
   Over scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 (3) 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 IDDE Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MAHALO NUI LOA!

Name: [illegible] **Date:** [illegible]

Company / Office Code: **Job Title:** [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?
   None

Please provide additional comments below.

No comment

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit to Harbors Engineering Branch Environmental Section - MAHALO NUI LOA

Name: David Markle **Date:** 12/20/18

Company / Office Code: HAR - OM **Job Title:** Equipment - [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   Provides [illegible] equipment and [illegible]

2. Did you find the IDDE training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?
   [illegible]

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instruction: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO ENGLISH

Name: Jose Nishigaki Date: 11/20/18

Company / Office Code: Job Title: Plumber

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   Because of illicit discharge

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MAHALO NUI LAU!

Name: [illegible] **Date:** 12 - 10 - 18

Company / Office Code: **Job Title:** Electrician / Helper

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

2018 IDDE Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit to Harbors Engineering Branch Environmental Section: MĀLAMA NUI LOA

Name: Randy **Date:** [illegible]

Company / Office Code: **Job Title:**

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

2. Did you find the IDDE training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 (3) 4 5

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?
   Not to have the class after lunch time, morning [illegible] better

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instruction: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MĀLAMA NUI LOA!

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible] **Job Title:** [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   [illegible]

2. Did you find the IDDE Training relevant and useful?
   Give scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   [illegible]

4. What other topics would you like to see covered in this training?
   [illegible]

5. Do you have any recommendations on how to improve our annual IDDE training?
   [illegible]

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section, MAHALO NUI LOA

Name: Dean Ibana Date: Dec. 20, 2018

Company / Office Code: South, DOT HARBORS Job Title:

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   It's an every day thing.

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?
   TRAINING MAPS & DIFFERENCE

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?
   ALL TRAINING CLASSES, SHOULD BE HELD BEFORE LUNCH.

Please provide additional comments below

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch (Engineering) Section: MAHALO NUI LOA!

Name: [illegible] **Date:** [illegible]

Company / Office Code: [illegible] **Job Title:** [illegible]

1. How does your job relate to illicit discharge detection & elimination (IDDE)?
   [illegible]

2. Did you find the IDDE Training relevant and useful?
   On a scale of 1 to 5, circle one number
   1 = not relevant / useful, 5 = extremely relevant / useful

   1 2 3 (4) 5

3. What was the most interesting thing you learned in this training?
   [illegible] WHO DOES THESE TYPES [illegible]

4. What other topics would you like to see covered in this training?
   [illegible]

5. Do you have any recommendations on how to improve our annual IDDE training?
   [illegible] CLASSES

Please provide additional comments below.

2018 HDOT Harbors Illicit Discharge Detection & Elimination (IDDE) Training Survey

Instructions: Please complete this survey and submit it to Harbors Engineering Branch Environmental Section - MAHALO SULTAN

Name: CLYDE NISHIGATA Date: 12-20-18

Company / Office Code: HAR OM Job Title: BLDG MAINT WORKER

1. How does your job relate to illicit discharge detection & elimination (IDDE)?

WORKING ALONG HARBOR EVERYDAY WE SEE ALOT OF POTENTIAL OCCURRENCES RESPONSIBLE FOR REPORTING AND OUR JOB TO PREVENT US FROM POLLUTING THE ENVIRONMENT

2. Did you find the IDDE (tapping refresh) and useful?

Circle scale of 1 to 5, circle one number

1 = not relevant / useful, 5 = extremely relevant / useful

1 2 3 4 (5)

3. What was the most interesting thing you learned in this training?

4. What other topics would you like to see covered in this training?

5. Do you have any recommendations on how to improve our annual IDDE training?

Please provide additional comments below.

HAVE MORE EMERGENCY SPILL KITS AROUND HARBOR AND LOCATIONS (NO LISTINGS AT THIS TIME)

Attachment 8

Inspector Training –
a. Tenant Inspection Manual (TIM) and Outrall Reconnaisance Inventory (ORI) Presentation Slides

Harbors Tenant Inspection Manual

By HAR-EE
HDOT Harbors Division

February 1, 2018

Outline

- HDOT Harbors SWMP
- Organizational Chart
- Tenant Responsibilities & Requirements and Types of Inspection
- Inspection Forms and Procedures
- Enforcement
- Others
- Q&A

2

HDOT Harbors SWMP

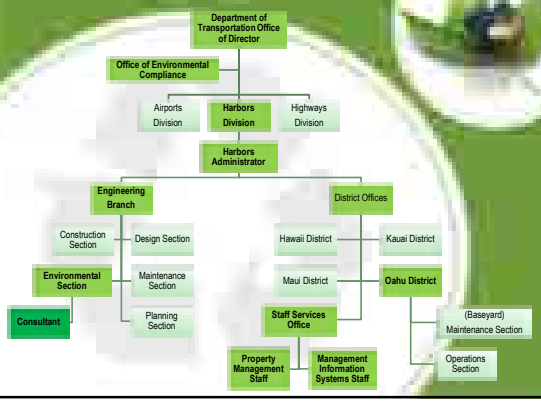
- Public Education and Outreach
- Public Involvement/Participation
- **Illicit Discharge Detection and Elimination**
- Construction Site Runoff Control
- Post-Construction Storm Water Management in New Development and Redevelopment
- **Pollution Prevention/Good Housekeeping**

3

IDDE Structure Chart (1.0)

4

Harbors Environmental Organization



5

Tenant Requirements (1.3)

- All Harbors tenant lease agreements and RP include language stating that the tenant is responsible for compliance with all environmental laws and regulations.
- Regulated hazardous substances and marine pollutants are not allowed to be used, treated, stored, or disposed, unless they are incidental to normal operations of their business.
- Tenants desiring to develop improvement projects on Harbors property must obtain approval from Harbors prior to initiation of the project.

6

Inspection Types (2.2)

- **Initial** Site Inspection or New Tenant Inspection (within three months of occupancy; 2.2.1)
- **Routine** Inspection (2.2.2)
  - High: Semiannual
  - Medium: Annual
  - Low: Every five years + annual reconnaissance (2.2.3)
- **Final** Inspection (2.2.4)
- **Investigation** Inspection (2.2.5)
- **Follow-Up** Inspection (2.2.6)

7

Tenant Inspection Basics (4.1)

- Schedule at least one week in advance.
- Allowable non-SW discharges (4.2)
- Risk Ranking Criteria (4.3)
  - Low (≤ 5)
  - Medium (6 to 16)
  - High (>16 or 5 in certain individual criteria)
- Re-Evaluation

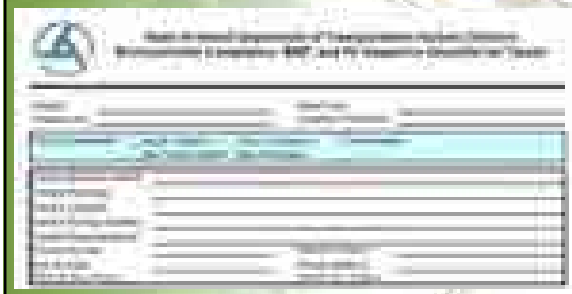
8

Inspection Forms

- Initial, Regular, and Final Inspections
  - Facility Information (One Page)
  - Inspection Checklist (Two Pages)
  - Tenant Risk Ranking Criteria (Three Pages)
- Low-risk Tenant Reconnaissance Inspection Form

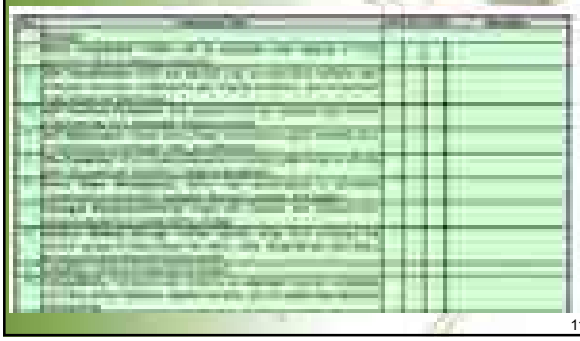
9

Inspection Forms (cont.)



10

Inspection Forms (cont.)

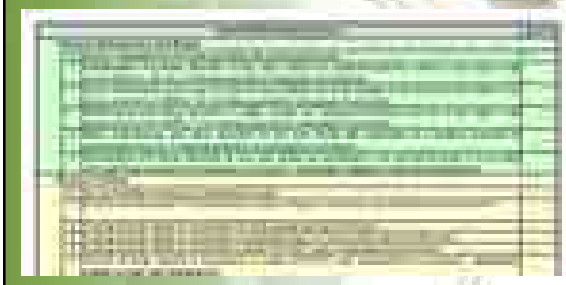


11

Inspection Forms (cont.)

12

Inspection Forms (cont.)



13

Inspection Forms (cont.)

14

Inspection Procedures (Attachment 10)

- Pre-inspection Preparation
- Entry
- Tenant Conference
- Inspection
- Documentation and Recordkeeping

15

Typical Operations (Attachment 10)

- Vessel/Vehicle/Equipment Maintenance and Repair
- Vessel/Vehicle/Equipment Fueling
- Vessel/Vehicle/Equipment Washing
- Container Storage
- Material Storage and Handling
- Waste Handling and Disposal
- Pier, Building, and Ground Maintenance
- …

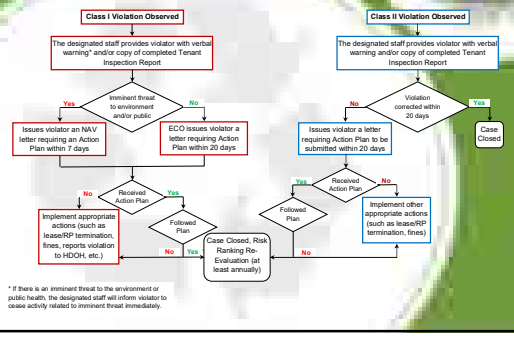
16

Enforcement (5.0)

- Authority
  - HRS Title 15 Chapter 266
  - HAR Title 19 Chapters 41 to 44
  - Lease Agreement and Revocable Permit
- Violations – Class I and II Violations
- Enforcement Actions
  - Oral/Verbal Warning (5.2.1)
  - Written Warning (5.2.2)
  - Notice of Apparent Violation (5.2.3)
  - Issuance of Summon and Citation (5.2.4)
  - Notice and Finding of Violation Order (5.2.5)
- Description of Enforcement Steps (5.3)

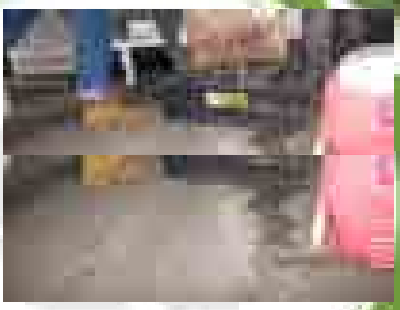
17

Enforcement Action Flow Chart



18

Examples of Illicit Discharge



19

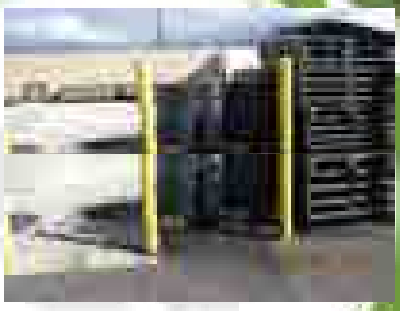
Examples of Illicit Discharge cont.

20

Examples of Illicit Discharge cont.

21

Examples of Illicit Discharge cont.



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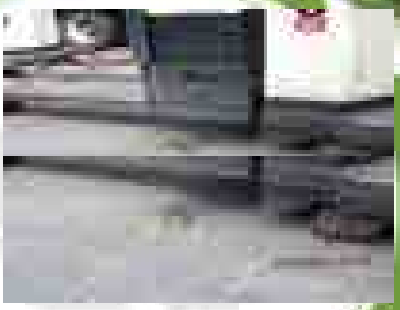
Examples of Illicit Discharge cont.



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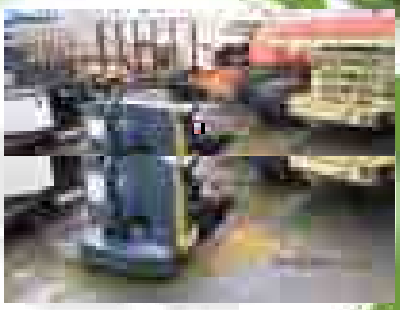
Examples of Illicit Discharge cont.



24

Examples of Illicit Discharge cont.

25

Examples of Illicit Discharge cont.

26

Take Away (in Attachments)

- BMPs developed by Harbors HAR-EE (**3**)
- Suspected Illicit Discharge Reporting Form (**7**)
- List of Major Environmental Laws and Regulations (**9**)
- New Tenant Information Package (**11**)
- VGP (**12**)

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Q&A

OUTFALL RECONNAISSANCE INVENTORY AND INSPECTION

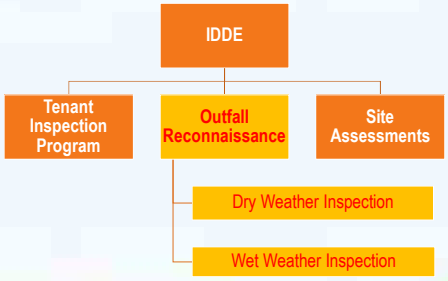
By HAR-EE
HDOT Harbors Division

April 12, 2018

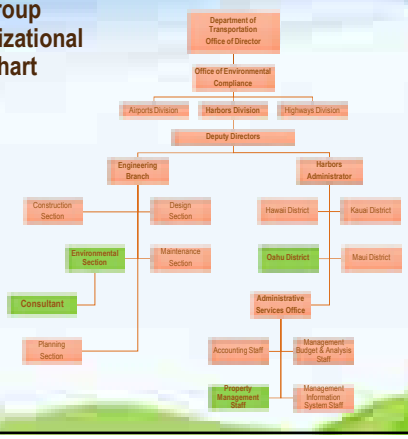
OUTLINE

- Introduction and Purpose
- Outfall Inventory
- Outfall Inspection and Documentation
- Enforcement
- Training and HASP

IDDE Program



Group Organizational Chart



PURPOSE OF ORII

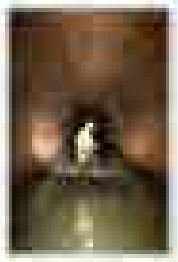
- Establishing a framework for annual dry/wet weather inspections.
  - Dry Weather Inspection includes
    - Annual Prioritized Outfall/Sheet Flow Inspection
    - Biennial Complete Outfall/Sheet Flow Inspection
- Documenting basic physical characteristics of each outfall.
- Source tracking and elimination of potential **illicit discharges**.
- Illicit Discharge: An NSWD that poses a risk to the environment

OUTFALL INVENTORY

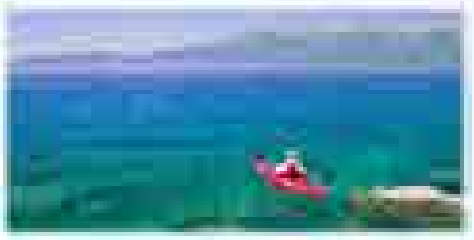
- Map (Use Cityworks powered AMS/GIS)
- Approximately 119 outfalls at Honolulu Harbor and 39 outfalls at Kalaeloa Barbers Point Harbor (AMS Demonstration)
  - Note: For inaccessible areas, will conduct up-stream drain inlet(s) or trench drain inspection (e.g., KBPH)
- Recorded in Geo-database and Access-database format.
  - Photo, Type of Material, Size, Condition, and Date of Installation (if known)
- Updated annually or as needed.

OUTFALL INSPECTION?

OUTFALL INSPECTION?



OUTFALL INSPECTION?



OUTFALL INSPECTION?

OUTFALL INSPECTION - PREPARATION

- Prepare SSHSP
  - **SAFETY FIRST, ALWAYS FIRST**
  - **Maintain communication at all times (Two-way Radio or Walkie Talkie)**
- **TWIC or CAC**
- Scheduling and Notifications by HAR-EE (District Office, and HTC if in water; avoid fueling operation areas) – Low Tide (≤ 1' above MLLW)
- Preparing Field Equipment (Appendix A) and PPE (HASP)
- Field Logistics - Appoint Site Manager, Pre-notification, Mobilization
- Site Manager's Primary Responsibilities

EXAMPLE OF COMMUNICATION WITH HTC

ORIIP Personnel: "Aloha Tower, this is Harbors Engineering."

HTC: "Harbors Engineering, this is Aloha Tower."

ORIIP Personnel: "Aloha Tower, Harbors Engineering would like to request to move from *Pier 10* to *Pier 24*."

HTC: "Okay, Harbors Engineering, proceed to *Pier 24*." (Note that their response varies depending on existing traffic situation at Honolulu Harbor.)

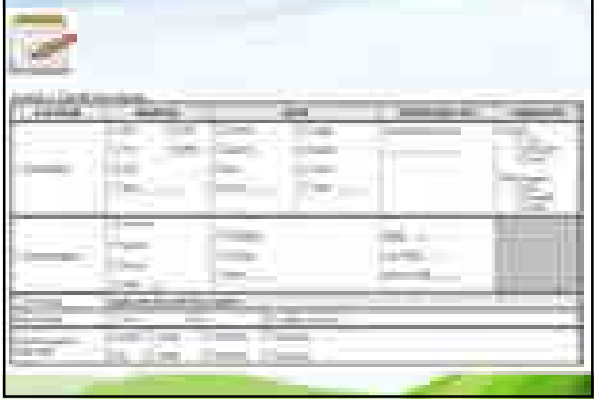
ORIIP FORM
(APPDX B)

OUTFALL RECONNAISSANCE INVENTORY FORM

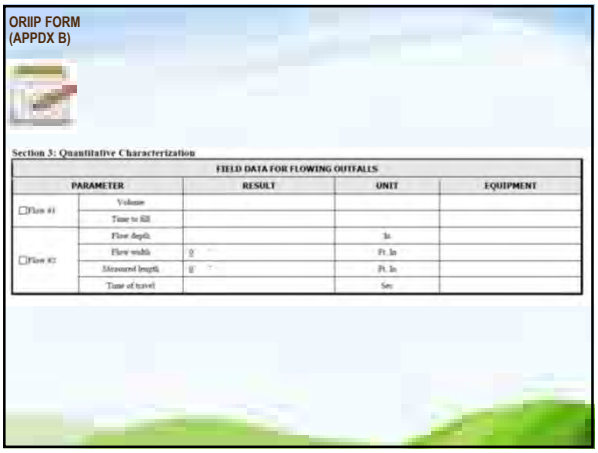
Section 1: Background Data

Outfall ID:		Today's date / Time (Military):	
Investigators:			
Temperature (°F):	Rainfall (in.): Last 24 hours: _____	Last 72 hours: _____	
Latitude:	Longitude:	GPS Unit:	GPS Landmark:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):		Known Industries: _____	
☐ Industrial			
☐ Commercial			
Other: _____			

ORIIP FORM
(APPDX B)



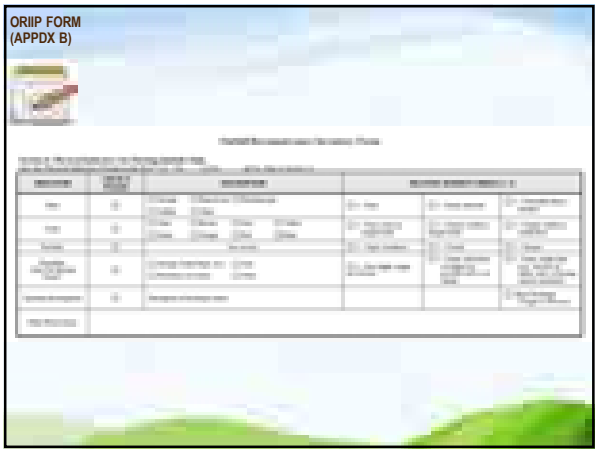
ORIIP FORM
(APPDX B)



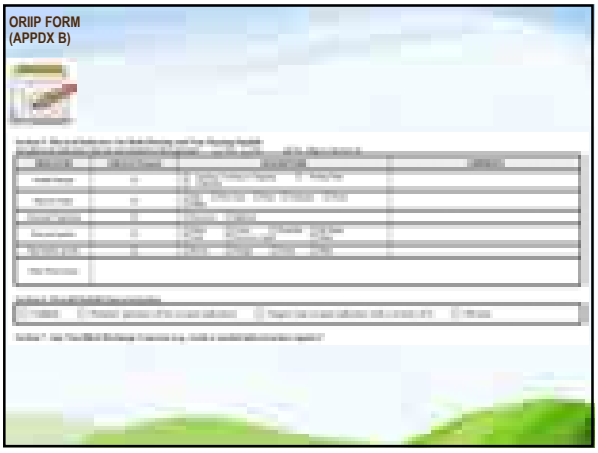
Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
☐Flow #1	Volume			
	Time to fill			
☐Flow #2	Flow depth		In	
	Flow width	' "	Ft. In	
	Measured length	' "	Ft. In	
	Time of travel		Sec	

ORIIP FORM
(APPDX B)



ORIIP FORM
(APPDX B)



OUTFALL INSPECTION - DRY WEATHER (3.3)

- Criterion: < 0.1 inches of precipitation during a 72-hour period preceding an inspection
- Conduct annually on outfalls characterized as "**potential**", "**suspect**", or "**obvious**" (determined by the findings from previous year's inspection). **Otherwise, biennially**.
- Consists of Kayak- and onshore- based inspections
- Observation of flows (3.3.1) and source identification (3.3.2)
  - Drainage Area Investigation
  - Storm Drain Network Investigation
- Documentation to be included in the ACR

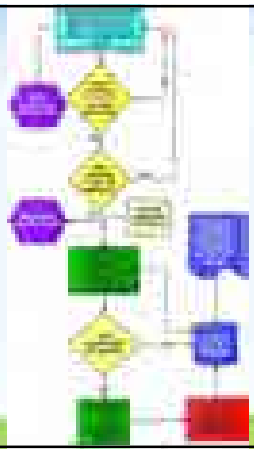
MORE ABOUT KAYAK-BASED INSPECTION

- To be conducted during daylight hours and **low-tide condition** (below 1-foot MLLW).
- Inspection equipment should be inspected prior to field activities.
- Must be supported by an on-shore crew.
- Possible launching locations in Honolulu Harbor include Pier 5, Pier 23 (behind Harbors Police Building), Pier 36, and Sand Island Boat Launch Facility. Must be conducted **SAFELY**.
- Limited access (Figures 1 and 2).
- Unforeseen climate conditions.

Launching Locations

-Switch to Google Map for live demonstration (P5, P23, P36, and Sand Island Boat Launch Facility)

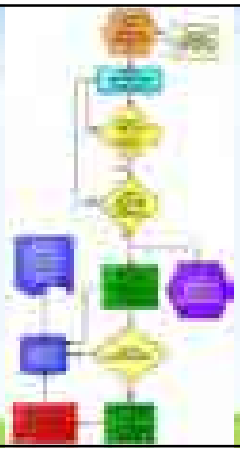
FLOW CHART – DRY WEATHER (3.3)



OUTFALL INSPECTION – WET WEATHER (3.4)

- Goal: Assess BMP performance.
- Criterion: > 0.1 inches rainfall per hour is recorded, or use weather stations below.
  - Honolulu International Airport (Station ID 91182, PHNL)
  - Kalaeloa Airport (PHJR)
- Conduct annual inspection at **identified high-risk outfalls** during regular businesses hours **FROM THE PIER SIDE**.
  - High-risk tenant areas
  - Construction areas
- Weather constraints
- Documentation to be included in the ACR

FLOW CHART – WET WEATHER (3.4)



INSPECTION DOCUMENTATION

- ORIIP FORM (Appendix B)
- Potential pollutants and sources

ENFORMENT (4.0)

- If identified source is from a tenant site, follow TIM.
- If identified source is from a construction site, follow Construction manual.
- If identified source is a result of in need of drain cleaning, follow Oahu District O&M Plan.
- If identified source is from a site outside of HDOT Harbors jurisdiction, inform the adjoining jurisdiction or property owner in writing and copy HDOH.

TRAINING (5.0) AND HASP (6.0)

- Pre-mobilization meeting (5.0) + On-the-job training (5.1)
- Training Documentation (5.2)
- HASP (Appendix D)

Attachment 8

Inspector Training –
b. Completed Questionnaires

2018 HDOT Harbors Tenant Inspector Training Quiz

Name: Mitchell Martello

Date: 2/1/2018

1. True or False – Tenant inspections are focused on tenant activities conducted on land.
   - (a) True
   - b False

2. Within which of the following time periods is an inspection required for a new tenant?
   - a Three years
   - (b) Three weeks
   - c Three days
   - (d) Three months

3. When should a final inspection be conducted?
   - a After the tenant leaves
   - (b) Prior to lease/permit termination
   - c When they first move in
   - d None of the above

4. When is a follow-up inspection required?
   - (a) When an illicit discharge or violation is observed at tenant facility
   - b When a tenant has been made
   - c Only if an illicit discharge is observed
   - d None of the above

5. How often should a high risk tenant be inspected?
   - a Annually
   - b Every 5 years
   - (c) Every 6 months
   - d Every 2 years

6. True or False – A discharge from potable water sources, such as melted ice, is considered an illicit discharge and is not permitted.
   - a True
   - (b) False

7. What is the first step when conducting tenant inspections?
   - (a) Review available records
   - (b) Hold a tenant conference
   - c Walk around and observe the site
   - d Complete the inspection form

8. True or False – SIDR (Suspected Illicit Discharge Reporting) form can be used to document a public complaint.
   - (a) True
   - b False

9. Which of the following conditions warrant a written warning?
   - a Improper storage of batteries
   - b Lack of proper labeling on drums
   - c Improper waste management
   - (d) All of the above

10. Which of the following is an example of a Class I Violation?
    - a Lack of recordkeeping on spills that occur on site
    - b Maintenance has not been conducted on a tenant's wash rack OWS within the past year
    - (c) Paint chips from sanding operations that are being washed into the harbor
    - d Tenant's trash bin appears to be overflowing

2018 HDOT Harbors ORII Inspector Training Quiz

Name: Mitchell Martello Date: 4/18/2018

1. What is the purpose of conducting an ORII?
   a. To locate and eliminate illicit discharges
   b. To look for endangered species under the pier
   c. To spend some time in the sun
   d. None of the above

2. True or False: An illicit discharge is something other than rainwater being discharged through the outfall, excluding allowable discharges listed in the permit
   a. True
   b. False

3. When may a dry weather ORII be conducted?
   a. When the tide is low
   b. When there is less than 0.1" of rain in the past 72 hours and the tide is low
   c. When there is less than 0.1" of rain in the past 72 hours regardless of tide
   d. At any time, usually

4. What are some conditions that would always use hazardous for personnel to conduct inspections in the water?
   a. Water levels higher than 1-foot above mean lower low water
   b. Vessels being heavily loaded in the area
   c. Nothing which prevents kayak from easily exiting the under pier area
   d. All of the above

5. True or False: A wet weather ORII requires that outfalls be inspected from the water
   a. True
   b. False

6. True or False: All outfalls must be inspected during dry weather every two years. This inspection may be completed in the water where safe or on land for upstream drains
   a. True
   b. False

7. Which of the following outfalls must be inspected annually?
   a. All outfalls
   b. Outfalls characterized as obvious
   c. Outfalls characterized as potential, suspect, or obvious
   d. Only those near high risk tenants

8. What steps are required when a potential illicit discharge is found?
   a. Inspect the drainage area on land for potential sources using a windshield survey
   b. Refer to the flow charts and follow the trouble up steps
   c. A & B
   d. None of the above

9. Which of the following areas must be inspected during a wet weather ORII?
   a. All outfalls
   b. High risk tenants and areas under construction
   c. Only those outfalls classified as potential, suspect, or obvious
   d. Medium and high ranked tenants

10. Which of the following conditions in a flow indicate a potential illicit discharge?
    a. Odor and clarity
    b. Odor
    c. Sheen
    d. All of the above

2018 HDOT Harbors ORII Inspector Training Quiz

Name: LADD YOSHIMURA Date: 8/8/18

1. What is the purpose of conducting an ORII?
   - (a) To locate and eliminate illicit discharges
   - b. To look for endangered species under the pier
   - c. To spend some time in the sun
   - d. None of the above

2. True or False: An illicit discharge is something other than rainwater being discharged through the outfall, excluding allowable discharges listed in the permit.
   - (a) True
   - b. False

3. When may a dry weather ORI be conducted?
   - a. When the tide is low
   - (b) When there is less than 0.1" of rain in the past 72 hours and the tide is low
   - c. When there is less than 0.1" of rain in the past 72 hours regardless of tide
   - d. At any time, normally.

4. What are some conditions that would deem too hazardous for personnel to conduct inspection in the water?
   - a. Water levels higher than 1-foot above mean lower low water
   - b. Vessels being actively fueled in the area
   - c. Nothing which prevents kayak from easily exiting the under-pier area
   - (d) All of the above

5. True or False: A wet weather ORI requires that outfalls be inspected from the water.
   - a. True
   - (b) False

6. True or False: All outfalls must be inspected during dry weather every two years. This inspection may be completed in the water where safe or on land via upstream drains.
   - a. True
   - (b) False

7. Which of the following outfalls must be inspected annually?
   - a. All outfalls
   - b. Outfalls characterized as obvious
   - (c) Outfalls characterized as potential, suspect, or obvious
   - d. Only those near high-risk tenants

8. What steps are required when a potential illicit discharge is noted?
   - a. Inspect the drainage area on land for potential sources using a windshield survey
   - b. Refer to the drain maps and follow the lined-up streams
   - (c) A & B
   - d. None of the above

9. Which of the following areas must be inspected during a wet weather ORI?
   - a. All outfalls
   - (b) High risk tenants and areas under construction
   - c. Only those outfalls classified as potential, suspect, or obvious
   - d. Medium and high rainfall tenants

10. Which of the following conditions in a flow indicate a potential illicit discharge?
    - a. Color and clarity
    - b. Odor
    - c. Sheen
    - (d) All of the above

Attachment 9

Tenant Inventory, Risk Rank and Inspection Summary

2018 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Inspection Date	Time	Tenant Business Name	DBA or Other Name	Harbor	Location	2017 Risk Tanking	2018 Risk Ranking	Inspection Type	Inspection POC	Phone Number
3/8/2018	1028	Aala Produce, Inc.	Aala Ship Service	Honolulu	Pier 32	Low	Low	Annual Recon	Rodney Tamamoto	(808) 522-0550, (808) 478-8732
11/5/2018	0900	AES Kalaeloa Venture, LLC	AES Corporation	Kalaeloa	KBPH	Medium	Medium	Regular	Priya Kumar	(808) 282-8807, (808) 682-3409
3/23/2018	1200	Aircraft Service International Group / Hawaii Fueling Facilities Corporation	ASIG/HFFC	Honolulu	Pier 51 A&B	Low	Low	Annual Recon	Glenn Jinbo	(808) 833-3291 x29
2/7/2018	900	Aloha Agricultural Consultants, Inc.	Niu Nursery	Honolulu	KIPA	Low	Low	Final	Sidney Goo	(808) 845-5991, (808) 225-3507
4/2/2018	930							Annual Recon		
3/20/2018	1335	Aloha Marine Lines	Aloha Cargo Transport, Inc., ACT, Northland	Honolulu	Pier 29	Low	Low	Annual Recon	Jonathan Satre	(808) 748-8790; (206) 436-9687
3/14/2018	1425	Aloha Tower Marketplace	AHI Aloha Associates, LLC; PM Realty Group, Aloha Tower Development Corporation (ATDC)	Honolulu	Pier 9	Low	Low	Annual Recon	Marlene Daley	(808) 528-5700 (808) 566-2310
3/14/2018	1400	American Guard Services, Inc.		Honolulu	Piers 2/11	Low	Low	Annual Recon	Shun Almon	(808) 537-3201, (808) 271-8169
10/9/2018	0900 - 1000	American Marine Corporation	American Workboats, Inc.	Honolulu	Pier 14	Medium	Medium	Regular	DC Carter; Rusty Nall	(808) 425-3859, (808) 792-1181, (808) 479-3905; (808) 545-5190, (808) 479-5195
4/2/2018	0935			KIPA	Open Lot	Low	Low	Annual Recon	David W. Griffith	(808) 479-8507
10/30/2018	0915	Atlantis Submarines Hawaii, LLC	Atlantis Cruises and Atlantis Submarines	Honolulu	Pier 27	Low	Low	Annual Recon	Kekua "Kua" Keli'i	(808) 832-6606, (808) 386-0123
3/14/2018	1410				Pier 6	Low	Low	Annual Recon		
3/20/2018	1330	BEI Hawaii		Honolulu	Pier 32	Low	Low	Annual Recon	Joseph Bieniek	(808) 864-2615; (808) 532-7448; (808) 535-6025;
8/1/2018	1000	CCH, Dept of Customer Services		Honolulu	KIPA		Medium	New	Randy Leong	(808) 768-3391
3/29/2018	1200	Clean Islands Council		Kalaeloa	Pier 4	Low		Annual Recon	Tim Sawyer, Patick Gillan, Kim Beasley	(808) 536-5814; (808) 845-8465; (808) 479-0702
11/16/2018	0900 - 0930							Final		
9/26/2018	0900 - 0930							Final		
10/18/2018	1000 - 1130	Dependable Hawaiian Express, Inc.	DHX, Inc.	Honolulu	Pier 21	Medium	Medium	Regular	Kane McEwen; Joe Vele	(808) 841-7311 ext. 1701
12/4/2018	0900 - 1000	Foss Maritime Company	Moana Pa'a Kai, Inc.; Subsiduary of Young Brothers	Honolulu	Piers 20, 21, and 22	Medium	Medium	Regular	Tiffanie Whitworth; Megan Rycraft	(808) 543-9489, (808) 927-4729

Inspection Date	Time	Tenant Business Name	DBA or Other Name	Harbor	Location	2017 Risk Tanking	2018 Risk Ranking	Inspection Type	Inspection POC	Phone Number
3/29/2018	1200	Frank P. White Jr. Properties	Container Storage Co.	Honolulu	KIPA	Low	Low	Annual Recon	Frank White; Gail Thometz	(808) 841-5555
3/20/2018	1200	Fresh Island Fish, LLC		Honolulu	Pier 38	Low	Low	Annual Recon	Derek Higa	(808) 831-4911
3/14/2018	1530	Friends of Falls of Clyde		Honolulu	Pier 7	Low		Final	Chris Woolaway; Bruce Mcewan	(808) 753-3311; (808) 543-9311, (808) 543-9357
5/1/2018	0930 - 1100	Friends of Hokule'a & Hawai'iloa		Honolulu	KIPA	Medium	Medium	Regular	Jay Dowsett	(808) 256-1841
4/2/2018	945	Fukunaga, Paul N.	P.F. Marine	Honolulu	KIPA	Low		Annual Recon	Paul N Fukunaga	(808) 842-1330, (808) 220-9425
5/3/2018	1100 - 1200	Gillis, Eugene	Excavation Services	Honolulu	KIPA	Medium	Medium	Regular	Eugene Gillis	(808) 383-1959, (808) 292-7469
6/26/2018	1530 - 1600							Final		
11/15/2018	1330 - 1430							Final		
11/27/2018	1030 - 1230	GLP Asphalt, LLC	Asphalt Hawaii	Kalaeloa	KBPH	Medium	Medium	Regular	Sara Daniels	(808) 561-4121
11/15/2018	0900 - 1100	Grace Pacific LLC	GP Kalaeloa HMA Plant	Kalaeloa	KBPH	Medium	Medium	Regular	Scott Sevadjian	(808) 203-2805, (808) 348-4895
3/14/2018	1418	Hawaii Maritime Center		Honolulu	Pier 7	Low		Annual Recon	Donald Bell	(808) 392-5230, (808) 847-3511
8/28/2018	1100 - 1230							Final		
11/2/2018	1030 - 1100	Hawaii Stevedores, Inc.		Honolulu	Pier 1	Medium	Medium	Regular	Frank Roznerski	(808) 842-5389, (808) 864-4638; (808) 527-3415
6/15/2018	0830 - 1030			Honolulu	Pier 51	High	Medium	Regular		
11/2/2018	0830 - 1030							Regular		
2/7/2018	0920	Hawaiian Aqua Products, Inc.	Foo W. Lim & Sons, Inc.	Honolulu	KIPA	Medium		Final	Yal M. Lim, Foo W. Lim, Evelyn Lim	(808) 521-5468
11/27/2018	0900 - 1100	Hawaiian Cement		Kalaeloa	KBPH	Medium	Medium	Regular	Dane Wurlitzer	(808) 532-3407, (808) 330-3910
3/23/2018	1200	HC&D	Ameron Hawaii; 'Ameron International Corporation	Honolulu	KIPA	Low	Low	Annual Recon	Linda Goldstein; June Ching	(808) 266-2672
3/29/2018	1200	Healy Tibbitts Builders, Inc.		Kalaeloa	KBPH	Low	Low	Annual Recon	Glen Toyama	(808) 368-1581
3/8/2018	1030	Heumann, James	Wind & Sea Charters	Honolulu	Pier 34	Low	Low	Annual Recon	James M. Heumann	(808) 220-7675
3/20/2018	1130	Honolulu Marathon Association		Honolulu	Pier 2	Low	Low	Annual Recon	Ronald Chun; Jeanette Chun; Valerie Lawson	(808) 255-2602; (808) 946-0539; (808) 255-2600
3/20/2018	1403	HPBS, Inc.		Honolulu	Pier 19	Low	Low	Annual Recon	Fay Leong; Blare; Captain David Lyman; Captain Steven Baker	(808) 532-7233

Inspection Date	Time	Tenant Business Name	DBA or Other Name	Harbor	Location	2017 Risk Tanking	2018 Risk Ranking	Inspection Type	Inspection POC	Phone Number
4/2/2018	0900 - 0930	Ishikawa, Norman & Dolores	Norman's Tractor Service	Honolulu	KIPA	Medium		Final	William; Theresa Alcosiba; John Ishikawa	(808) 778-1084; (808) 689-3644, (808) 778-0344; (808) 218-9824
3/20/2018	1113	ISS Marine Services, Inc.	Inchcape Shipping	Honolulu	Pier 1	Low	Low	Annual Recon	Ali Wong	(808) 521-2111 ext. 18
3/29/2018	1200	Jas W. Glover, Ltd.		Honolulu	KIPA	Low	Low	Annual Recon	Kyle Hirano	(808) 591-8977 ext. 321
3/20/2018	1200	Jems Enterprises, LLC	Hawaiian Ice Company	Honolulu	Pier 38	Low	Low	Annual Recon	Joshua Ibrao	(808) 538-6918 (808) 255-2921
4/16/2018	1330				Pier 38 (New)			Annual Recon		
3/8/2018	1022	JFC International	Japan Food (Hawaii), Inc.; Davenport Hawaii Partners, LP	Honolulu	Pier 34	Low	Low	Annual Recon	Toshiaki Wada	(808) 537-9528
3/20/2018	1020	Kagami, Inc.		Honolulu	Pier 21	Low	Low	Annual Recon	Wayne Kagami	(808) 523-5700
2/7/2018	0850	Kirkwood, Clarke	Hawaiian Catamaran Multihull Design	Honolulu	KIPA	High		Final	Matt Buckman	(808) 306-6012
11/20/2018	0900 - 1000	Kirby Offshore Marine	(Formerly Uaukewai Diving, Salvage & Fishing, Inc.) Formerly known as K-Sea Transportation Hawaii Division	Honolulu	Pier 21	Medium	Medium	Regular	James Pontin; Bill Boland	(808) 462-4222, (808) 208-1089; (808) 522-1000 ext.108
4/20/2018	1000 - 1100	Lansdown, Ian J.	Hawaii's Sailing Center; Ian J.	Honolulu	KIPA	Medium	Medium	Regular	Jeff Lansdown	(808) 230-0940
6/8/2018	0900 - 1100	Marisco, Ltd.		Kalaeloa	KBPH	High	High	Regular	Stephen Hinton	(808) 306-5935, (808) 682-1333
12/13/2018	0900 - 1100							Regular		
3/8/2018	1100	Maritime License Center, Inc.		Kalaeloa	Pier 6	Low		Final	Paul Finley	(808) 589-0123
3/14/2018	1357	Mary Charles and Associates Inc		Honolulu	Pier 10	Low	Low	Annual Recon	Curtis Chee	(808) 589-5500
6/12/2018	0900 - 1100	Matson Navigation Company, Inc.	Matson Terminals, Inc.	Honolulu	Pier 52	High	High	Regular	Keahi Birch	(808) 848-1252; (808) 848-1280; (808) 848-8306
9/27/2018	1000 - 1100							Follow Up		
12/17/2018	0900 - 1030							Regular		
10/16/2018	0900 - 1030	McCabe, Hamilton & Renny		Honolulu	Pier 23	Medium	Medium	Regular	Andrew Souza	(808) 479-0356
4/17/2018	1130			Honolulu	Piers 19 & 29	Low	Low	Annual Recon		
3/20/2018	1200			Kalaeloa	Pier 5	Low	Low	Annual Recon		
4/2/2018	945	Nanakuli Neighborhood Housing Services, Inc.	Nanakuli Housing Corporation Baseyard Hawaii	Honolulu	KIPA	Low	Low	Annual Recon	Wilbert Barber; Paige Barber	(808) 842-0770

Inspection Date	Time	Tenant Business Name	DBA or Other Name	Harbor	Location	2017 Risk Tanking	2018 Risk Ranking	Inspection Type	Inspection POC	Phone Number
3/8/2018	1000 - 1100	Norko Marine Agency, Inc.		Honolulu	Pier 33	Low	Low	Regular	Norman Cheu	(808) 216-4790, (808) 536-4568
3/20/2018	1327	Oceantronics, Inc.		Honolulu	Pier 24	Low	Low	Annual Recon	Fritz M. Amtsberg; Brian; Daniel	(808) 522-5600; (808) 832-5590, (808) 216-0256
10/9/2018	1030 - 1130	Ohai, Leo A.	Oceanic Libra Corporation	Honolulu	Pier 18	Medium	Low	Regular	Nephi Ohai; Louloukau	(808) 690-4030
11/8/2018	1030 - 1130	P&R Water Taxi, Ltd.		Honolulu	Pier 36	Medium	Medium	Regular	Ralph Dewitt	808) 554-3436
11/29/2018	1030 - 1130	Pacific Environmental Corporation	PENCO	Honolulu	Pier 33	Medium	Medium	Regular	Justin, Shanyn	(808) 545-5190, (808) 545-5195
3/29/2018	1200			Honolulu	Pier 14	Low	Low	Annual Recon		
				Kalaeloa	Pier 4					
3/20/2018, 4/6/2018 4/24/2018	1200	Pacific Ocean Producers, Inc.	(Nico's) POP Fishing & Marine, LLC	Honolulu	Pier 38	Low	Low	Annual Recon	Neil Kanemoto	(808) 537-2905, (808) 540-1310, (808) 479-0002
6/7/2018	0900 - 1100	Pacific Shipyards International, LLC	Pacific Marine and Supply, Navatek, Unitek Contracting	Honolulu	Pier 24/25	High	High	Regular	Greg Ball	(808) 848-6211 ext 234, (808) 223-4946
11/26/2018	0830 - 1000							Regular		
3/20/2018	1200	Pang, Sandra	SP Lunch Wagon; Sandy's Lunchwagon	Honolulu	Pier 51	Low	Low	Annual Recon	Sandra Pang	(808) 778-4686
3/14/2018	1423	Paradise Cruise, LTD	Star of Honolulu	Honolulu	Pier 8	Low	Low	Annual Recon	Richard A. Davison	
3/20/2018	1340	Petrospect, Inc.		Honolulu	Pier 21	Low	Low	Annual Recon	Chad Miller, David Harrington	(808) 536-6626
4/20/2018	1200	Pioneer Machinery, Inc.		Honolulu	KIPA	Low	Low	Annual Recon	Rodney Yee	(808) 371-4892
3/20/2018	1413	Pryne, Ty	H.B.N. Yacht Rigging	Honolulu	Pier 21	Low	Low	Annual Recon	Ty Pryne	(808) 479-8844, (808) 597-8120
2/7/2018	0905	Rebecca's Fine Collections, Inc.	R.F.C. Group	Honolulu	KIPA	Low		Final	Rebecca Fan	(808) 478-6688
3/20/2018	1200	Resort Management Group LLC	(former Chevron Lot)	Honolulu	Pier 38	Low		Annual Recon	Reed Kishinami	(808) 478-7741
4/24/2018	1000 - 1030							Final		
4/2/2018	940	R & C Concrete Specialists, Inc.	Ron's Concrete Specialist, Ltd.	Honolulu	KIPA	Low		Annual Recon	James Mainaaupo; John	(808) 845-0467 (808) 429-2142
6/26/2018	1600							Final		
3/20/2018	1340	Sause Bros., Inc.	Canopy and Office	Honolulu	Piers 24 & 27	Low	Low	Annual Recon	Wayne Stachel	(808)306-2177; (808) 521-5082;
10/18/2018	0815 - 0915		Staging Yard	Kalaeloa	Pier 4	Medium	Medium	Regular	Reid Tamashiro (Thomas Transport Service)	(808) 721-1667
3/6/2018	1030 - 1130		Shed and one Portable Office	Kalaeloa	Pier 5	Low	Low	Regular	Mike Leslie	(808) 690-3412 (808) 682-1082
12/6/2018	0900 - 1000	Sea Engineering, Inc.		Honolulu	Pier 32	Medium	Medium	Regular	Andrew Rocheleau, Ray Duran	(808) 561-2629, (808) 792-9859; (808) 554-5028

Inspection Date	Time	Tenant Business Name	DBA or Other Name	Harbor	Location	2017 Risk Tanking	2018 Risk Ranking	Inspection Type	Inspection POC	Phone Number
10/23/2018	1000 - 1030	Siu, Wai Lun	Pier 21 Lunchroom	Honolulu	Pier 21	Medium	Low	Regular	Raymond Siu	(808) 256-2907
3/20/2018	1350	State of Hawaii Department of the Attorney General/Criminal Justice	Attorney General-Asset Forfeiture	Honolulu	Pier 20	Low	Low	Annual Recon	Kern Nishioka; Steven Davis	(808) 586-1383
11/26/2018	0900 - 1030	The Gas Company, LLC		Honolulu	Pier 38	Medium	Medium	Regular	Zoe Williams; AK Colburn; Marc E. Dexter	(808) 594-5637, (808) 594-5548, (808) 351-9720; (808) 594-5569, (808) 594-7831
3/20/2018	1120	The Pasha Group	Pasha hawaii	Honolulu	Pier 2	Low	Low	Annual Recon	Darren Lee	(808) 590-3617
3/14/2018	1410	The Webe Corporation, Ltd.	Ali'I Kai Catamaran (Subsidiary of Robert's Hawaii)	Honolulu	Pier 5	Low	Low	Annual Recon	Bernie, Jason Young, Chad	(808) 539-9491 (808) 631-8671 (808) 636-5839
3/29/2018	0945	Trouble Free Corp.		Kalaeloa	KBPH	Low	Low	Annual Recon	Chris Boyles	(808) 864-8864
3/20/2018	1110	U.S. Bureau of Customs and Border Protection, Department of Homeland Security		Honolulu	Pier 1	Low	Low	Annual Recon	Gose; Peter F. Gonzales	(808) 522-8001 ext. 223; (808) 356-4175
2/7/2018	0915	Unify Recovery Service		Honolulu	KIPA	Medium		Final	Gayle Saito	(808) 256-7266
3/20/2018	1305	United Fishing Agency, Ltd.		Honolulu	Pier 38	Low	Low	Annual Recon	Daniel Otani; Nelson Otani	(808) 536-2148
11/13/2018	0900 - 1030	University of Hawaii		Honolulu	Pier 35	Medium	Medium	Regular	Ross Barnes	(808) 842-9815, (808) 864-0122
3/20/2018	1405	VAK Fisheries, LLC		Honolulu	Pier 19	Low	Low	Annual Recon	Kim Lu	(808) 258-2990
3/14/2018	1430	Welch, Jr., Darrell, G., AIA	Aloha Tower, 4th Floor	Honolulu	Pier 9	Low	Low	Annual Recon	Darrell G. Welch Jr., AIA; Cookie LeMadrid	(808) 585-8522
6/19/2018	0830 - 1200	Young Brothers, Ltd.		Honolulu	Piers 39 and 40	High	High	Regular	Tiffanie Whitworth; Megan Rycraft	(808) 543-9489, (808) 927-4729
11/9/2018	0830 - 1100							Regular		

Not Applicable

Attachment 10

Outfall Reconnaissance Inventory (ORI) –
a. ORI Inspection Form

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDD	Inspection Type: ☐ Dry ☐ Wet
HDOT Location:	Subwatershed:
Inspection Date:	Investigators:
Time (Military):	Form completed by:
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): Rainfall (in.) Last 24 Hrs: 48 Hrs:	Camera: Photo #s:

Land Use in Drainage Area (Check all that apply):

☐ Industrial ☐ Open Space

☐ Ultra-Urban Residential ☐ Institutional

☐ Suburban Residential Other: _____

☐ Commercial Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☐ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Attachment 10

Outfall Reconnaissance Inventory (ORI) –
b. 2018 ORI Wet Weather Report

2018 Wet Weather Outfall Reconnaissance Inventory (ORI) Summary
Honolulu Harbor

Wet weather outfall inspections were conducted for outfalls located at Piers 41 & 42 at the Honolulu Harbor by EnviroServices and Training Center, LLC (ETC) on April 2, 2018. These inspections were conducted in compliance with Consent Decree Provision 16.c and following the procedures described in the Outfall Reconnaissance Inventory and Inspection Program. Maps generated from CityWorks® and information from previous outfall reconnaissance were utilized to prepare for and assist with the inspections.

The result of each inspection was entered into CityWorks®, together with information associated with each outfall's characterization, presence of suspected illicit discharge, and relevant photo documentation.

Inspectors conducted the inspections from the land side, and remained vigilant throughout the inspection. Outfall SDDHO427060 was possibly located under the pier and not visible from the land side. No illicit discharge was observed during the course of inspections. However, small amounts of solid waste and sediment debris potentially from eroded shoreline were observed at three of the outfall locations. This wet weather outfall inspection is summarized in Table 1.

Table 1: Wet Weather Outfall Inspection Summary

Pier	Outfall SDD	Date (2018)	Method of Inspection	Illicit Discharge?	Comment	Characterization
41	SDDHO416500	4/2	Outfall	No	Sediment from eroded shoreline possibly.	Unlikely
41	SDDHO416970	4/2	Outfall	No	Sediment from eroded shoreline possibly.	Unlikely
41	SDDHO416980	4/2	Outfall	No		Unlikely
42	SDDHO427030	4/2	Outfall	No		Unlikely
42	SDDHO427060	4/2	Outfall	No	Not visible from Pier edge.	Unlikely
42	SDDHO427600	4/2	Outfall	No	Trash and sediment from eroded shoreline possibly.	Unlikely

Photograph 1: Outfall SDDHO416500

Photograph 2: Outfall SDDHO416970

Photograph 3: Outfall SDDHO416980

Photograph 4: Outfall SDDHO427030

Photograph 5: Outfall SDDHO427060

Photograph 6: Outfall SDDHO427600

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO416500 (Cityworks ID: 3531)	***Previous Outfall ID:***
HDOT Location: Honolulu Harbor, Pier 41	Subwatershed: Kalihi
Inspection Date: 04/02/2018	Investigators: Chelsea Iannaccio, Kanani Kea, & Sari Kwan
Time (Military): 09:14	Form completed by: Kanani Kea
Lat: 21°19' 11.80"N Long: 157° 52' 57.21"W	GPS Unit: Cityworks GPS Landmark:
Temp (○F): 77 Rainfall (in.) Last 24 Hrs: 0.36 48 Hrs: N/A	Camera: ETC CAM 3 Photo #s: 1

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: Old UH Marine Center facility, currently under construction Kiewit
- Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 108" x 96" _____	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☒	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☒ Other: Sediment	Ocean water in the area appeared murky. Sediment likely discharged from vegetation growth in the area.
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO416970 (Cityworks ID: 3532)	***Previous Outfall ID:***
HDOT Location: Honolulu Harbor, Pier 41	Subwatershed: Kalihi
Inspection Date: 04/02/2018	Investigators: Chelsea Iannaccio, Kanani Kea, & Sari Kwan
Time (Military): 09:14	Form completed by: Kanani Kea
Lat: 21° 19' 10.98"N Long: 153° 52' 57.87"N	GPS Unit: Cityworks GPS Landmark:
Temp (○F): 77 Rainfall (in.) Last 24 Hrs: 0.36 48 Hrs: N/A	Camera: ETC CAM 3 Photo #s: 2

Land Use in Drainage Area (Check all that apply):

- ☒ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: Old PSI facility, currently under construction Kiewit.
- Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 24"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☒	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☒ Other: Sediment	Ocean water in the area appeared murky. Sediment likely discharged from vegetation growth in the area.
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO416980 (Cityworks ID:3533)	***Previous Outfall ID:***
HDOT Location: Honolulu Harbor, Pier 41	Subwatershed: Kalihi
Inspection Date: 04/02/2018	Investigators: Chelsea Iannaccio, Kanani Kea, & Sari Kwan
Time (Military): 09:18	Form completed by: Kanani Kea
Lat: 21" 19' 7.45"N Long: 157° 52' 58.20"W	GPS Unit: Cityworks GPS Landmark:
Temp (○F): 77 Rainfall (in.) Last 24 Hrs: 0.36 48 Hrs:	Camera: ETC CAM 3 Photo #s: 3

Land Use in Drainage Area (Check all that apply):

- ☒ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: Old PSI facility, currently under construction Kiewit.
- Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 16"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO427030 (Cityworks ID: 3537)	***Previous Outfall ID:***
HDOT Location: Honolulu Harbor, Pier 42	Subwatershed: Kalihi
Inspection Date: 04/02/2018	Investigators: Chelsea Iannaccio, Kanani Kea, & Sari Kwan
Time (Military): 09:22	Form completed by: Kanani Kea
Lat: 21° 19' 2.105"N Long: 157° 53' 0.004"W	GPS Unit: Cityworks GPS Landmark:
Temp (○F): 77 Rainfall (in.) Last 24 Hrs: 0.36 48 Hrs: N/A	Camera: ETC CAM 3 Photo #s: 4

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: Old PSI facility, currently under construction Kiewit.
- Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO427060 (Cityworks ID: 3538)	***Previous Outfall ID:***
HDOT Location: Honolulu Harbor, Pier 42	Subwatershed: Kalihi
Inspection Date: 04/02/2018	Investigators: Chelsea Iannaccio, Kanani Kea, & Sari Kwan
Time (Military): 09:23	Form completed by: Kanani Kea
Lat: 21° 19' 1.34"N Long: 157° 53' 0.12"W	GPS Unit: Cityworks GPS Landmark:
Temp (○F): 77 Rainfall (in.) Last 24 Hrs: 0.36 48 Hrs: N/A	Camera: ETC CAM 3 Photo #s: 5

Land Use in Drainage Area (Check all that apply):

- ☒ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: Old PSI facility, currently under construction Kiewit.
- Known Industries: _____

Notes (e.g., origin of outfall, if known): Inspectors were unable to observe the outfall and believe it was located underneath the pier. There was no indication of any illicit discharge occurring surrounding the area.

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO427600 (Cityworks ID: 3541)	***Previous Outfall ID:***
HDOT Location: Honolulu Harbor, Pier 42	Subwatershed: Kalihi
Inspection Date: 04/02/2018	Investigators: Chelsea Iannaccio, Kanani Kea, & Sari Kwan
Time (Military): 09:02	Form completed by: Kanani Kea
Lat: 21° 18' 56.53"N Long: 157° 53' 12.94"W	GPS Unit: Cityworks GPS Landmark:
Temp (○F): 77 Rainfall (in.) Last 24 Hrs: 0.36 48 Hrs: N/A	Camera: ETC CAM 3 Photo #s: 6

Land Use in Drainage Area (Check all that apply):

- ☒ Industrial
- ☐ Ultra-Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: Old PSI facility, currently under construction Kiewit.
- Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other: Sediment	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? Excessive amounts of trash within the outfall area. Trash and debris were observed along the shoreline near the outfall.

Attachment 10

Outfall Reconnaissance Inventory (ORI) – c. 2018 ORI Dry Weather Report

2018 Dry Weather Outfall Reconnaissance Inventory (ORI) Summary
Honolulu Harbor, Keehi Industrial Park Area (KIPA), and Kalaeloa Barbers Point Harbor (KBPH)

Dry weather inspections were conducted at Honolulu Harbor, Keehi Industrial Park Area (KIPA), and Kalaeloa Barbers Point Harbor (KBPH) by EnviroServices and Training Center, LLC (ETC) with the assistance of Harbors Environmental Section (HAR-EE) May 29-September 10, 2018. In early May, the Kilauea volcano on Hawaii Island started to erupt. Its volcanic activities became aggressive and resulted in intense earthquakes and a potential tsunami risk. Due to the volcanic activity on the Hawaii Island and its associated tsunami risk, inspections from the water-side were deemed unsafe and therefore restricted. To accomplish this task in a safe manner, after discussion, HAR-EE and ETC decided to conduct the inspection from the land-side by screening the most accessible up-stream inlets and manholes connected to the outfalls. In August, however, the volcano threat subsided and inspections from the water-side were conducted for safely accessible piers. Maps generated from CityWorks® and information from a previous outfall reconnaissance were utilized to prepare for and assist with the inspections, which were conducted according to the Consent Decree 16.c.1 and the Outfall Reconnaissance Inventory & Inspection Program.

The result of each inspection was entered into CityWorks®, together with information associated with each outfall's characterization, presence of any suspected illicit discharge, and relevant photo documentation.

During this inspection, a total of 152 outfalls were inspected. Active flows were observed at several outfalls indicated in the comments below. However, the flows appeared to be either a condensate from a nearby air conditioning system or resulted from tidal influence, and consisted of clear water and no other abnormal odor or color were observed. Therefore, all 152 outfalls were characterized as Unlikely. An inspection summary of each outfall is listed in Table 1.

Table 1: Dry Weather Outfall Inspection Summary							
Location	**Pier**	**Outfall SDD**	**Date (2018)**	**Method of Inspection**	**Illicit Discharge?**	**Comment**	**Characterization**
Honolulu Harbor	01	SDDHO010100	5/30	Outfall	No		Unlikely
Honolulu Harbor	01	SDDHO010102	5/30	Inlet	No	Tidal influence.	Unlikely
Honolulu Harbor	01	SDDHO010104	5/30	Inlet	No	Tidal influence.	Unlikely
Honolulu Harbor	01	SDDHO010106	5/30	Inlet	No	Tidal influence.	Unlikely
Honolulu Harbor	01	SDDHO010108	5/30	Inlet	No	Fitted with filter fabric.	Unlikely
Honolulu Harbor	01	SDDHO010109	5/30	Inlet	No		Unlikely
Honolulu Harbor	01	SDDHO010110	5/30	Inlet	No	Inaccessible. Blocked by parked car.	Unlikely
Honolulu Harbor	02	SDDHO020500	5/30	Inlet	No	Fitted with filter fabric filled with green waste on top.	Unlikely
Honolulu Harbor	02	SDDHO020600	9/10	Manhole	No		Unlikely
Honolulu Harbor	02	SDDHO020630	5/30	Inlet	No	Tidal influence.	Unlikely
Honolulu Harbor	02	SDDHO020700	9/10	Manhole	No		Unlikely
Honolulu Harbor	02	SDDHO020720	5/30	Inlet	No	Tidal influence.	Unlikely
Honolulu Harbor	02	SDDHO020800	5/30	Inlet	No	Fitted with filter fabric.	Unlikely
Honolulu Harbor	04	SDDHO047662	5/30	Outfall	No		Unlikely
Honolulu Harbor	05	SDDHO051000	5/30	Outfall	No		Unlikely
Honolulu Harbor	05	SDDHO051010	5/30	Outfall	No		Unlikely
Honolulu Harbor	05	SDDHO051040	5/30	Outfall	No		Unlikely
Honolulu Harbor	06	SDDHO061160	5/30	Outfall	No		Unlikely
Honolulu Harbor	06	SDDHO067622	5/30	Outfall	No		Unlikely

Location	Pier	Outfall SDD	Date (2018)	Method of Inspection	Illicit Discharge?	Comment	Characterization
Honolulu Harbor	06	SDDHO067624	5/30	Outfall	No		Unlikely
Honolulu Harbor	07	SDDHO074474	5/30	Outfall	No		Unlikely
Honolulu Harbor	08	SDDHO081230	8/9	Outfall	No	Fully submerged.	Unlikely
Honolulu Harbor	08	SDDHO081235	8/9	Outfall	No		Unlikely
Honolulu Harbor	08	SDDHO081500	8/9	Outfall	No		Unlikely
Honolulu Harbor	08	SDDHO081512	8/9	Outfall	No		Unlikely
Honolulu Harbor	09	SDDHO091570	8/9	Outfall	No		Unlikely
Honolulu Harbor	09	SDDHO091600	8/9	Outfall	No		Unlikely
Honolulu Harbor	11	SDDHO111730	8/9	Outfall	No		Unlikely
Honolulu Harbor	11	SDDHO111732	8/9	Outfall	No		Unlikely
Honolulu Harbor	11	SDDHO111734	8/9	Outfall	No	Observed to be paved over.	Unlikely
Honolulu Harbor	11	SDDHO111736	8/9	Outfall	No		Unlikely
Honolulu Harbor	11	SDDHO111738	8/9	Outfall	No		Unlikely
Honolulu Harbor	11	SDDHO111740	8/9	Outfall	No		Unlikely
Honolulu Harbor	11	SDDHO111742	8/9	Outfall	No		Unlikely
Honolulu Harbor	15	SDDHO152200	5/30	Inlet	No		Unlikely
Honolulu Harbor	18	SDDHO182300	8/9	Outfall	No		Unlikely
Honolulu Harbor	19	SDDHO192400	8/9	Outfall	No		Unlikely
Honolulu Harbor	19	SDDHO192480	8/9	Outfall	No		Unlikely
Honolulu Harbor	20	SDDHO202482	8/9	Outfall	No		Unlikely

Location	Pier	Outfall SDD	Date (2018)	Method of Inspection	Illicit Discharge?	Comment	Characterization
Honolulu Harbor	21	SDDHO212600	5/30	Inlet	No	Contained sediment.	Unlikely
Honolulu Harbor	21	SDDHO212610	5/30	Inlet	No		Unlikely
Honolulu Harbor	21	SDDHO212640	5/30	Inlet	No	Fitted with fabric filter and with some debris on top.	Unlikely
Honolulu Harbor	21	SDDHO212790	8/9	Outfall	No		Unlikely
Honolulu Harbor	21	SDDHO212794	8/9	Outfall	No		Unlikely
Honolulu Harbor	21	SDDHO212798	8/9	Outfall	No	Could not locate. No active flow observed on land-side.	Unlikely
Honolulu Harbor	22	SDDHO222800	8/9	Outfall	No		Unlikely
Honolulu Harbor	23	SDDHO233000	5/29	Outfall	No		Unlikely
Honolulu Harbor	24	SDDHO243070	5/29	Outfall	No		Unlikely
Honolulu Harbor	24	SDDHO243200	5/29	Inlet	No	Contained water but no flow.	Unlikely
Honolulu Harbor	24	SDDHO243240	5/29	Inlet	No	Fitted with Catch Basin Donut. Tidal influence.	Unlikely
Honolulu Harbor	24	SDDHO243242	7/17	Inlet	No		
Honolulu Harbor	24	SDDHO243244	5/29	Inlet	No	Inlet damaged and in need of repair. Related Work Order created in Cityworks.	Unlikely
Honolulu Harbor	25	SDDHO253550	5/29	Inlet	No	All upstream inlets fitted with catch basin donut.	Unlikely
Honolulu Harbor	26	SDDHO263610	8/9	Outfall	No		Unlikely
Honolulu Harbor	27	SDDHO273630	8/9	Outfall	No		Unlikely
Honolulu Harbor	29	SDDHO293650	8/9	Outfall	No		Unlikely
Honolulu Harbor	29	SDDHO293670	5/29	Outfall	No		Unlikely
Honolulu Harbor	31	SDDHO313900	8/9	Outfall	No		Unlikely
Honolulu Harbor	31	SDDHO313920	8/9	Outfall	No		Unlikely

Location	Pier	Outfall SDD	Date (2018)	Method of Inspection	Illicit Discharge?	Comment	Characterization
Honolulu Harbor	31	SDDHO313950	8/9	Outfall	No		Unlikely
Honolulu Harbor	31	SDDHO314000	8/9	Outfall	No	Could not locate. No active flow observed on land-side.	Unlikely
Honolulu Harbor	31	SDDHO314010	8/9	Outfall	No		Unlikely
Honolulu Harbor	31	SDDHO314150	8/9	Outfall	No		Unlikely
Honolulu Harbor	32	SDDHO324180	8/9	Outfall	No		Unlikely
Honolulu Harbor	32	SDDHO324200	8/9	Outfall	No		Unlikely
Honolulu Harbor	34	SDDHO344300	5/29	Inlet	No	Partially blocked by car. No active flow observed on land-side.	Unlikely
Honolulu Harbor	34	SDDHO344310	5/29	Inlet	No		Unlikely
Honolulu Harbor	34	SDDHO344320	5/29	Inlet	No	Partially blocked by parked car. No active flow observed on land-side.	Unlikely
Honolulu Harbor	34	SDDHO344350	5/29	Inlet	No	Fitted with fabric filter and plastic.	Unlikely
Honolulu Harbor	34	SDDHO344360	5/29	Inlet	No	Fitted with catch basin filtration device.	Unlikely
Honolulu Harbor	35	SDDHO354450	5/29	Inlet	No	Lots of debris inside inlet. Fitted with catch basin filtration device.	Unlikely
Honolulu Harbor	35	SDDHO354460	5/29	Inlet	No	Fitted with catch basin filtration device.	Unlikely
Honolulu Harbor	35	SDDHO354470	5/29	Inlet	No	Tidal influence. Fitted with catch basin filtration device.	Unlikely
Honolulu Harbor	35	SDDHO354472	5/29	Inlet	No	Fitted with catch basin filtration device.	Unlikely
Honolulu Harbor	35	SDDHO354474	5/29	Inlet	No	Fitted with catch basin filtration device.	Unlikely
Honolulu Harbor	36	SDDHO364500	5/29	Outfall	No		Unlikely
Honolulu Harbor	36	SDDHO364600	5/29	Outfall	No	Tidal influence.	Unlikely
Honolulu Harbor	37	SDDHO374700	5/29	Outfall	No	Active flow observed. No color, odor, or other abnormal observations. Condensate from nearby facility (Hawaiian Ice).	Unlikely
Honolulu Harbor	37	SDDHO374900	7/17	Outfall	No		Unlikely

Location	Pier	Outfall SDD	Date (2018)	Method of Inspection	Illicit Discharge?	Comment	Characterization
Honolulu Harbor	37	SDDHO375000	5/29	Outfall	No	Tidal influence.	Unlikely
Honolulu Harbor	38	SDDHO385050	8/9	Outfall	No		Unlikely
Honolulu Harbor	38	SDDHO385100	5/29	Outfall	No		Unlikely
Honolulu Harbor	38	SDDHO385150	8/9	Inlet	No	Inhibited by heavy vegetation. Nearest upstream inlet contained filter fabric.	Unlikely
Honolulu Harbor	39	SDDHO395745	5/29	Inlet	No		Unlikely
Honolulu Harbor	40	SDDHO405800	6/19	Inlet	No		Unlikely
Honolulu Harbor	41	SDDHO416500	5/29	Outfall	No	Tidal influence.	Unlikely
Honolulu Harbor	41	SDDHO416970	5/29	Outfall	No	Tidal influence.	Unlikely
Honolulu Harbor	41	SDDHO416980	5/29	Outfall	No		Unlikely
Honolulu Harbor	41	SDDHO416990	5/29	Inlet	No	Within a construction site. Fitted with filter fabric and bermed around with biosocks.	Unlikely
Honolulu Harbor	41	SDDHO417662	5/29	Inlet	No	Within a construction site. Fitted with filter fabric and bermed around with biosocks.	Unlikely
Honolulu Harbor	41	SDDHO417664	5/29	Inlet	No	Within a construction site. Fitted with filter fabric and bermed around with biosocks.	Unlikely
Honolulu Harbor	42	SDDHO427030	5/29	Outfall	No	Within a construction site.	Unlikely
Honolulu Harbor	42	SDDHO427060	5/29	Outfall	N/A	Inaccessible. Blocked by boat. Upstream inlet was removed and underground pipe weas sealed.	Unlikely
Honolulu Harbor	42	SDDHO427560	5/29	Inlet	No	Within a construction site. Contained filter fabric and bermed with biosocks.	Unlikely
Honolulu Harbor	42	SDDHO427580	5/29	Inlet	No	Within a construction site. Fitted with filter fabric and bermed around with biosocks.	Unlikely
Honolulu Harbor	42	SDDHO427600	5/29	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO517800	6/1	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO517850	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO517880	8/10	Outfall	No		Unlikely

Location	Pier	Outfall SDD	Date (2018)	Method of Inspection	Illicit Discharge?	Comment	Characterization
Honolulu Harbor	51	SDDHO517960	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518000	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518070	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518080	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518090	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518130	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518182	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518190	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518194	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518198	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518206	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518350	8/10	Outfall	No		Unlikely
Honolulu Harbor	51	SDDHO518380	7/17	Outfall	No	Covered by thick vegetation. No active flow observed on land-side.	Unlikely
Honolulu Harbor	52	SDDHO528210	8/10	Outfall	No		Unlikely
Honolulu Harbor	52	SDDHO528500	8/10	Outfall	No		Unlikely
Honolulu Harbor	52	SDDHO528542	8/10	Outfall	No		Unlikely
Honolulu Harbor	52	SDDHO528556	8/10	Outfall	No		Unlikely
Honolulu Harbor	53	SDDHO538560	8/10	Outfall	No		Unlikely
Honolulu Harbor	53	SDDHO538850	8/10	Outfall	No		Unlikely
Honolulu Harbor	53	SDDHO538894	8/10	Outfall	No		Unlikely

Location	Pier	Outfall SDD	Date (2018)	Method of Inspection	Illicit Discharge?	Comment	Characterization
Honolulu Harbor	53	SDDHO538900	6/1	Outfall	No		Unlikely
Honolulu Harbor	53	SDDHO538910	6/1	Outfall	No	Closed, sealed with cement.	Unlikely
Honolulu Harbor	53	SDDHO538930	6/1	Outfall	No		Unlikely
KIPA	60	SDDOH607605	5/29	Outfall	No		Unlikely
KIPA	60	SDDOH607610	8/10	Outfall	No		Unlikely
KIPA	60	SDDOH607615	5/29	Outfall	No		Unlikely
KIPA	60	SDDOH607620	5/29	Outfall	No	Lots of trash and debris.	Unlikely
KIPA	60	SDDOH607625	5/29	Outfall	No	Heavily vegetated.	Unlikely
KBPH	04	SDDBP043630	5/30	Outfall	No		Unlikely
KBPH	04	SDDBP043660	5/30	Outfall	No		Unlikely
KBPH	05	SDDBP055000	5/30	Inlet	No		Unlikely
KBPH	05	SDDBP055100	5/30	Manhole	No		Unlikely
KBPH	05	SDDBP055200	5/30	Inlet	No		Unlikely
KBPH	05	SDDBP055300	5/30	Inlet	No		Unlikely
KBPH	05	SDDBP055400	5/30	Manhole	No		Unlikely
KBPH	05	SDDBP055500	5/30	Inlet	No		Unlikely
KBPH	05	SDDBP055700	5/30	Inlet	No		Unlikely
KBPH	05	SDDBP055800	6/8	Manhole	No	Tidal influence.	Unlikely
KBPH	05	SDDBP055900	5/30	Inlet	No		Unlikely
KBPH	06	SDDBP066200	5/30	Inlet	No	Inaccessible. Covered by rubber mat. No active flow observed on land-side.	Unlikely
KBPH	06	SDDBP066210	6/8	Manhole	No	Tidal influence.	Unlikely
KBPH	06	SDDBP066500	6/8	Inlet	No		Unlikely
KBPH	06	SDDBP066700	6/8	Manhole	No	Tidal influence.	Unlikely
KBPH	06	SDDBP066800	6/8	Inlet	No		Unlikely
KBPH	07	SDDBP077000	6/8	Inlet	No		Unlikely
KBPH	07	SDDBP077100	5/30	Inlet	No	Could not locate. May not exist.	N/A
KBPH	07	SDDBP077110	5/30	Outfall	No	Filled with debris.	Unlikely
KBPH	07	SDDBP077112	5/30	Outfall	No		Unlikely
KBPH	07	SDDBP077200	5/30	Inlet	No		Unlikely
KBPH	07	SDDBP077300	5/30	Inlet	No		Unlikely
KBPH	07	SDDBP077400	5/30	Inlet	No		Unlikely

Location	Pier	Outfall SDD	Date (2018)	Method of Inspection	Illicit Discharge?	Comment	Characterization
KBPH	07	SDDBP077600	5/30	Inlet	No		Unlikely
KBPH	07	SDDBP077700	5/30	Outfall	No		Unlikely

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO010100	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1119	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290407

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO010102	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1122	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290410 - P1290411

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known): Inlet inspected. Tidal influence

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO010104	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1124	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290414

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected drain inlet, tidal influence

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO010106	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1126	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290417

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected drain inlet, tidal influence

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___42”___	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO010108	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1128	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290420

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected drain inlet, tidal influence

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO010109	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1130	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290423

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO010110	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1137	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290428

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inaccessible, blocked by parked car

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___16”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO020500	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1144	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290431

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other:_____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO020600	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 9/10/2018	Investigators: Ying Zhang, Sari Kwan
Time (Military): 1104	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: IMG_4158

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known): inspected manholes

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO020630	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1109	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290403 - P1290405

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet, tidal influence

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: __24”__	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO020700	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 9/10/2018	Investigators: Ying Zhang, Sari Kwan
Time (Military): 1109	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: IMG_4164

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected manholes

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24”___	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO020720	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1103	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290396

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet, tidal influence

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24”___	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO020800	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1100	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290391 - P1290394

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO047662	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1049	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290387- P1290389

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☒ Other: concrete	☐ Circular ☐ Elliptical ☒ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 114" x 48"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO051000	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1046	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290382

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___8”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO051010	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1048	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290385

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___8”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO051040	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1044	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290380

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___16”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO061160	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1037	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290376

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO067622	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1039	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290378

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18" (to be verified)____	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO067624	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1037	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290374

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___to be verified___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO074474	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1037	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290372

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24"_(to be verified)__	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO081230	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0757	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: P1290366

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☒ Other: Concrete___	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☐ Single ☒ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___96" x 36"___	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO081235	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0807	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: P1310354

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☒ Other: Concrete	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO081500	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0757	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: P1290366

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☒ Other: Concrete__	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☐ Single ☒ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___96" x 36"___	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO081512	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0816	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: P1310362

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO091570	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed:
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0823	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: P1310365

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO091600	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0829	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: P1310369

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 12" (to be verified)	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO111730	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0837	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: P1310373

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place__

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24"_(to be verified)__	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO111732	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0822	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0071- DSCN0071

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___8" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO111734	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0827	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0073-DSCN0074

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___8”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO111736	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0831	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0075

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place__

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___8”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO111738	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0834	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0080- DSCN0082

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place__

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel (to be verified) ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___8”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO111740	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0836	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0084- DSCN0085

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel (to be verified) ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___8”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO111742	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0837	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0087

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Aloha Tower Market Place

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___8”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO152200	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 0945	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: P1290312

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___8”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO182300	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying, Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0852	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0098

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Leo Ohai __

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:_____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO192400	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0857	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0102

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: VAK Fisheries LLC, Travel Plaza Transportation LLC

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:_____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___30”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO192480	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0900	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0104

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: McCabe Hamilton and Remy, Travel Plaza Transportation LLC

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other:_____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___30" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO202482	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0908	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0108

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel (to be verified) ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO212600	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 0848	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSC00529 - DSC00531

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO212610	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 0844	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSC00523- DSC00526

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO212640	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 0841	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSC00521

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet, fitted with fabric filter and with some debris on top.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☒ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___48" x 30"___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO212790	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0937	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSC00514

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☒ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___10" x 10"___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO212794	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0920	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0111

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___30”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO212798	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military):	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s:

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO222800	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0923	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0116

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO233000	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1424	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00503

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO243070	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1425	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00506

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO243200	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1420	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00497 - DSC00498

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet, water but no flow

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☒ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO243240	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1417	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00494 - DSC00495

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet, fitted with Catch Basin Donut. Could hear sound of potential tidal influence.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☒ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___30”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO243242	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 7/17/2018	Investigators: Chelsea Iannaccio, Sari Kwan
Time (Military): 1321	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 83 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC camera Photo #s: SDDHO243242 photo 1

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Pacific Shipyards International

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24" x 6" (to be determined)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO243244	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1405	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00489 - DSC00490

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet. Inlet damaged and in need of repair. Related Work Order created in Cityworks.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO253550	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1403	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00486 - DSC00487

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected upstream inlets. All upstream inlets fitted with Catch Basin Donut.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO263610	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0939	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSCN0119

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___30" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO273630	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Sari Kwan
Time (Military): 0951	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: SDDHO273630

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36" (to be verified)___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO293650	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0956	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0125 - DSCN0126

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36" (to be verified)___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	Filter fabric needs replacing
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO293670	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1348	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00477

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: __60" x 24" (to be verified)__	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☒ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	Lined with filter fabric
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO313900	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1006	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0128 - DSCN0130

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	Lined with filter fabric
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO313920	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1058	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSCN0155

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	Lined with filter fabric
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO313950	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshmimura, Sari Kwan
Time (Military): 1102	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0157 – DSCN0159

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	Lined with filter fabric
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO314000	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military):	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Photo #s:

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): could not locate

Section 2: Outfall Description *(description sourced from previous inspection data)*

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: __36”___	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☐ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	Lined with filter fabric
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO314010	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1112	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSCN0164 - DSCN0167

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	Filter fabric needs to be changed
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO314150	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1119	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0169 – DSCN0170

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO324180	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1124	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0172 – DSCN0174

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO324200	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1129	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0177 – DSCN0178

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO344300	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1202	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00442

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet, partially blocked by car.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO344310	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1158	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00439 - DSC00440

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO344320	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1157	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00436 - DSC00437

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet, partially blocked by car

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO344350	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1146	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00434

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet. Fitted with fabric filter and plastic.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO344360	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1145	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00431 - DSC00432

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet. Fitted with catch basin filtration device.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO354450	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1140	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00422 - DSC00424

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected drain inlet 4452. Fitted with catch basin filtration device. Lots of debris inside.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: To be verified	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO354460	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1139	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00418 - DSC00420

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected drain inlet 4462. Fitted with catch basin filtration device.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO354470	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1135	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00413 - DSC00414

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected drain inlet 4472. Tidal influence. Fitted with catch basin filtration device.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☒ Yes ☐ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☒ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO354472	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1144	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00426 - DSC00427

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet. Fitted with catch basin filtration device.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO354474	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1144	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00428 – DSC00429

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet. Fitted with catch basin filtration device.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO364500	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1137	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00416

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36”___	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO364600	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1128	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00411

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): tidal influence

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☒ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO374700	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1123	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00409

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Active flow observed. No color, odor, or other abnormal observations. Condensate from nearby facility (Hawaiian Ice).

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☒ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO374900	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 7/17/2018	Investigators: Chelsea Iannaccio, Sari Kwan
Time (Military): 1305	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: SDDHO374900.1

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known): tidal influence

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☒ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☒	Description of discharge source: possibly condensation from nearby building			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO375000	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1116	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00405

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☒ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”__	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO385050	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1143	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: DSCN0183

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☒ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO385100	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1101	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00397 - DSC00398

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☒ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO385150	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/9/2018	Investigators: Ying Zhang, Sari Kwan
Time (Military): 1154	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors camera Photo #s: SDDHO385150_inlet

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known): Inhibited by heavy vegetation. Nearest upstream inlet contained fabric filter.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___30”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO395745	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1246	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00474 - DSC00475

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO405800	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 6/19/2018	Investigators: Ying Zhang, Sari Kwan
Time (Military): 0959	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: Cityworks GPS Landmark:
Temp (°F): 84 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00905

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Young Brothers

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO416500	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1042	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00389

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: Under construction
Known Industries:___

Notes (e.g., origin of outfall, if known): tidal influence

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___108" x 96"___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO416970	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1042	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00391

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: Under construction
Known Industries:___

Notes (e.g., origin of outfall, if known): Tidal influence

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12" (to be verified)___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☒ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO416980	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 0953	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00369 - DSC00370

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: Under construction
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other:_____	Diameter/Dimensions: ___16”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO416990	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1000	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00375

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: Under construction
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet. Fitted with filter fabric.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO417662	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 0958	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00373- DSC00374

Land Use in Drainage Area (Check all that apply):

☐ Industrial ☐ Open Space

☐ Ultra-Urban Residential ☐ Institutional

☐ Suburban Residential Other: Under construction

☐ Commercial Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet. Fitted with filter fabric and bermed around with biosocks.

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO417664	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1002	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00376

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: Under construction
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet. Fitted with filter fabric and bermed around with biosocks.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO427030	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1002	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00376

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: Under construction
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO427060	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1002	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00377

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inaccessible. Blocked by boat. Upstream inlet was removed and underground pipe was sealed.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___4”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☒ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO427560	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1018	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00382

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inspected nearest inlet. Within a construction site. Contained fabric filter and bermed with biosock.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: __24”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO427580	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1018	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00384

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known): Inspected nearest inlet. Within a construction site. Contained fabric filter and bermed with biosock.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24”___	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO427600	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 1013	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00380

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: Under construction
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”__	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO517800	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 6/1/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 0829	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: DSC00534

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Horizon Lines

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO517850	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0834	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 81 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0186

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____Matson Terminal_____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO517880	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0926	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 81 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0193

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___42”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO517960	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0930	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 81 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0195

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☒ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518000	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0945	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 81 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0195

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___48”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☒ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518070	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0945	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 81 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0214

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518080	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0950	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0223

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____Matson Terminal_____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518090	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0954	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0233

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518130	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1002	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0246

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36”___	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518182	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/18	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 0958	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0236

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___6”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518190	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1003	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0248

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___6”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518194	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1006	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0251

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___6”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518198	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1009	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0255

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___6”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518206	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1014	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0262

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___6”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518350	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1011	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0258

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36”___	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO518380	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 7/17/2018	Investigators: Chelsea Iannaccio, Sari Kwan
Time (Military): 1250	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 83 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: SDDHO518380 photo 1

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known): Heavily vegetated. Could not observe.

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___24" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☒	☐ Excessive ☒ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO528210	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1016	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0267

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☒ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___6”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO528500	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1025	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0274

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☒ Other: Concrete	☐ Circular ☒ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO528542	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1023	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0270

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☒ Other: Concrete	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___14" x 14"___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO528556	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1027	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0276

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☒ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO538560	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1033	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0279

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☒ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”__	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO538850	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1035	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0282

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☐ Single ☒ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___96”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO538894	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Mitchell Martello, Ladd Yoshimura, Sari Kwan
Time (Military): 1045	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: Harbors Camera Photo #s: DSCN0287

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO538900	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 6/1/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 0949	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: DSC00607

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO538910	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 6/1/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 0950	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: DSC00608

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known): sealed with cement

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO538930	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 6/1/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 0947	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: DSC00605

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: Matson Terminal

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☒ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDHO607625	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Honolulu Harbor	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 0905	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00363 - DSC00364

Land Use in Drainage Area (Check all that apply):

☒ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___ _____

Notes (e.g., origin of outfall, if known): highly vegetated

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☒ **Open drainage**	☐ Concrete ☒ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☒ Parabolic ☐ Other: _____		Depth: 42” Top Width: 144” Bottom Width: 36”	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☒	☒ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDOH607605	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Keehi Industrial Park	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 0830	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00352

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g. origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☒ **Open drainage**	☒ Concrete ☒ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☒ Other: Sheet flow		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDOH607610	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Keehi Industrial Park	Subwatershed: Nuuanu
Inspection Date: 8/10/2018	Investigators: Ying Zhang, Sari Kwan
Time (Military): 1208	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 82 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: IMG_3893

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known): Inaccessible.

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☒ **Open drainage**	☐ Concrete ☒ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☒ Other: Sheet flow		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDOH607615	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Keehi Industrial Park	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 0840	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00356

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☒ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☒ **Open drainage**	☒ Concrete ☒ Earthen ☐ rip-rap ☐ Other: _____	☒ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: 12” Top Width: 36” Bottom Width: 24”	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDOH607620	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Keehi Industrial Park	Subwatershed: Nuuanu
Inspection Date: 5/29/2018	Investigators: Ying Zhang, Chelsea Iannaccio, Sari Kwan
Time (Military): 0844	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 80 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC 8 Photo #s: DSC00358 - DSC00361

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries:___

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☒ **Open drainage**	☒ Concrete ☒ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☒ Other: Box culvert to natural ditch		Depth: 36” Top Width: 36” Bottom Width: 36”	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP043630	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1327	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290434

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 72" x 18"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP043660	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1328	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290436

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other:_____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___18”___	In Water: ☐ No ☐ Partially ☒ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP055000	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1339	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290438 – P1290440

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP055100	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1343	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290442 - P1290446

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest manhole

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36" (to be verified)___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP055200	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1347	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290448 - P1290449

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP055300	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1349	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290451 - P1290452

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP055400	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1351	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290454 - P1290457

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest manhole

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other:_____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36" (to be verified)___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP055500	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1353	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290460 - P1290461

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP055700	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1355	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290463 - P1290464

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☒ Other: Stains	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP055800	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 6/8/2018	Investigators: Ying Zhang, Chelsea Iannaccio
Time (Military): 1125	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 86 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Camera Photo #s: IMG_6466

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest manhole, tidal influence

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36" (to be verified)___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP055900	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1359	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290472 - P1290474

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”__	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP066210	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 6/8/2018	Investigators: Ying Zhang, Chelsea Iannacio
Time (Military): 1123	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 86 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: IMG_6464

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest manhole, tidal influence

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP066500	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 6/8/2018	Investigators: Ying Zhang, Chelsea Iannaccio
Time (Military): 1106	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 86 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: IMG_6450

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP066700	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 6/8/2018	Investigators: Ying Zhang, Chelsea Iannaccio
Time (Military): 1120	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 86 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: IMG_6460

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest manhole, tidal influence

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36”___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP066800	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 6/8/2018	Investigators: Ying Zhang, Chelsea Iannaccio
Time (Military): 1112	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 86 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: IMG_6454

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP077000	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 6/8/2018	Investigators: Ying Zhang, Chelsea Iannaccio
Time (Military): 1115	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 86 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: IMG_6458

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP077100	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1421	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s:

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): could not locate nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP077110	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1419	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290499 - P1290500

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet, surrounded by heavy vegetation

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___36" (to be verified)___	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☒ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP077112	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1409	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290479

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☒ Other: Concrete	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: __36" x 10" (to be verified)__	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP077200	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1418	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290497

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP077300	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1415	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290494 - P1290495

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP077400	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1412	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290489 - P1290490

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☒ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☒	☐ Oily ☐ Flow Line ☐ Paint ☒ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP077600	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1411	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290485

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known): inspected nearest inlet

Section 2: Outfall Description (*description sourced from previous inspection data*)

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___12”___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Outfall ID: SDDBP077700	Inspection Type: ☒ Dry ☐ Wet
HDOT Location: Kalaeloa Barbers Point Harbor	Subwatershed: Nuuanu
Inspection Date: 5/30/2018	Investigators: Ying Zhang, Sari Kwan, Kanani Kea
Time (Military): 1409	Form completed by: Sari Kwan
Latitude: Longitude:	GPS Unit: GPS Landmark:
Temp (°F): 85 Rainfall (in.) Last 24 Hrs: 0 48 Hrs: 0	Camera: ETC Blue Photo #s: P1290481 - P1290482

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Ultra-Urban Residential
☐ Suburban Residential
☒ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

Notes (e.g., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☒ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: ___8" x 4" (to be verified)___	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☒ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☒ No ***If No, Skip to Section 5***				
Flow Description	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	
	Time to fill		Sec	
☐Flow #2	Flow depth		In	
	Flow width		Ft, In	
	Measured length		Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

Outfall Reconnaissance Inventory Form

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)
Upstream Investigation	☐	Description of discharge source:			☐ Illicit Discharge (Trigger to Obvious)
Other Observations					

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Sediment ☐ Trash ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	
Other Observations			

Section 6: Overall Outfall Characterization

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

Attachment 11

Illicit Discharge Investigation –
a. Tenant

Discharges Investigations in 2018

Tenant Business Name	Date of Incident	Method of Discovery	Description	Action Taken
Matson Terminals Inc.	6/12/2018	Routine Inspection	During the inspection, water staining and related flow path leading from the Fructose Transfer Station were observed on a paved surface that extended to a storm drain nearby. It also appeared that the water had entered the inlet.	Inspector verbally warned Matson on-site. An enforcement letter dated July 12, 2018 was send to Matson.

Attachment 11

Illicit Discharge Investigation –
b. Miscellaneous

Work Order Id	Description	Priority	Status	Submit To	Proj Start Date	Proj Finish Date
5530	Illicit Discharge Investigation	3	CLOSED	Martello, Mitchell	01/12/2018 10:53	01/12/2018 10:53
6932	Illicit Discharge Investigation	3	1 - ASSIGNED	Yim, Spencer	11/23/2018 04:22	12/3/2018 04:00
7006	Illicit Discharge Investigation	3	CLOSED	Yim, Spencer	12/20/2018 09:35	12/20/2018 12:00
7017	Illicit Discharge Investigation	3	1 - ASSIGNED	Freitas, Michele	12/24/2018 07:26	12/24/2018 07:26
7022	Illicit Discharge Investigation	3	1 - ASSIGNED	Freitas, Michele	12/24/2018 03:04	12/24/2018 03:04

Attachment 12

Construction Project Inventory and Inspection Summary

Summary of Construction Site BMP Inspections in 2018
- KBPH Stockpile 2A Removal Project

Inspection Date	Type	Summary of Findings and Recommendations
1/11/2018	Regular	Track-out was observed on temporarily paved road and a cloud of dust was observed behind the onsite sweeper. It appeared that the filter device fitted inside the sweeper needed to be changed. The contractor shall mitigate the situation immediately. Small gully was observed along side the biosocks at driving ramp. It is recommended the biosocks be repositioned to slow down the speed of the runoff from the top of Stockpile 2A. Please keep up the good housekeeping and remove salvaged equipment from the site as soon as practical. Update SWPPP to include recent soil stabilization activities.
1/26/2018	Regular	Insufficient biosocks overlap was observed at the north end of Stockpile 2A. Please ensure that all perimeter biosocks have sufficicient overlaps of at least six inches. If the area is active in use, the biosocks should be placed back at the end of each hauling day. Equipment staged overnight onsite should be underlain with absorbent materials or other containment. No active hauling at the time of the inspection.
2/8/2018	Regular	It appeared that the sediment accumulation near the north end of the driving ramp was almost leveled with the biosocks. It is recommended that another layer of biosocks be placed along the driving ramp in this area to further contain accumulated sediment. No active hauling at the time of the inspection.
2/22/2018	Regular	The sediment accumulation near the north end of the driving ramp was level with the biosocks (this potential deficiency was mentioned in last round of inspection report). Please place another layer of biosocks along the driving ramp in this area to minimize sediment from migrating offsite. Due to recent rain, a small gully was forming along the north side of the driving ramp to the top of Stockpile 2A. Sediment accumulation along the biosocks placed at the slope in the mid-section of Stockpile 2A, over flowed. We recommend that more biosocks be deployed at these two area to further slow down the runoff. No active hauling at the time of the inspection.
3/8/2018	Regular	More biosocks were placed along the driving ramp and the slope in the mid-section of Stockpile 2A, following the recommendations from the last round of inspection. A potential flow path was observed at the access point to a down slope. Recommend that this access area be further bermed up to minimize runoff from the top of Stockpile 2A. Please keep the SWPPP updated on a timely basis and keep all relevant records/documents (e.g., monthly compliance reports, plan modification log, stabilization log) onsite. No active hauling at the time of the inspection.
3/22/2018	Regular	The access point to a down slope appeared to have been bermed up. Please keep the SWPPP updated on a timely basis to reflect the status of BMP implemented on-site (e.g., updating Sheets GRADING AND EROSION CONTROL PLAN -1 and GRADING AND EROSION CONTROL PLAN - 2 to reflect the recent BMP modification, keeping track of changes on Plan Modification Log). No active hauling at the time of the inspection.
4/4/2018	Regular	Please keep up the good general housekeeping practices and ensure that absorbent materials or other BMP are placed underneath heavy-duty equipment whiling parked on the site (Photo 4). No active hauling at the time of the inspection due to the recent rains.
6/4/2018	Regular	The stabilized construction entrance was partially filled with fine soil particles (Photo 1). It is recommended that the entrance be maintained prior to next active hauling to minimize tracking off-site. nsufficient biosocks overlaps were observed at two locations (Photos 5 and 14). But those potential deficiencies were fixed right away upon notification (Photos 6 and 15). No active hauling at the time of the inspection.
7/26/2018	Regular	The stabilized construction entrance was partially filled with fine soil particles (Photo 1). It is recommended that the entrance be maintained prior to next active hauling to minimize tracking off-site. Insufficient biosocks overlaps were observed at two locations (Photos 10 and 11). It appeared that the biosock in Photo 10 was cut open and not sure if this was an action of random vandalism. Therefore, it is recommended that regular inspections of on-site biosocks be conducted despite the fact that site has been inactive for the past several weeks, to ensure they are positioned properly. Broken sections need to be fixed on a timely basis. No active hauling at the time of the inspection.

Summary of Construction Site BMP Inspections in 2018
- KBPH Stockpile 2A Removal Project

Inspection Date	Type	Summary of Findings and Recommendations
9/21/2018	Regular	Insufficient biosocks overlap was observed (Photo 11). And the biosocks were repositioned upon notification (Photo 12). It is recommended that contractor's selfinspection per HAR 11-55 Appendix C be continued until all exposed soils are properly stabilized. Your inspection fequency could be reduced but should be documented according to HAR 11-55 Appendix C. No active hauling at the time of the inspection. Representative from D.R.Horton indicated that the remaining stockpile was not suitable for their residential project use, and therefore, no more materials would be excavated off-site from now on. He also indicated that D.R.Horton would like to terminate the Right-of-Entry Agreement for this site, and hopefully submit their Notice of Cessation to HDOH prior to the expiration of their permit term. Based on above information, we would like to consider this inspection as a semi-final BMP inspection, and suspend future BMP inspection until the site is ready for a final inspection, when all exposed soil are properly stabilized and the terms contained in the Right-of-Entry Agreement are deemed fulfilled by Harbors Division.
10/29/2018	Final	No active hauling at the time of the inspection. Entrance to the down slope access point was further bermed up by about two to three feet (Photo 5). Two rows of biosocks were placed perpendicular to the direction of runoff on the slope (Photo 6). Biosocks were also left in place along the perimeters of Stockpile 2A on the west, south, and east sides, and along the driving ramp to the top of Stockpile 2A (Photos 3, 11, and 12). This is the final inspection of this project. Based on the email received from Dan Wiley (representative from D.R. Horton) on 10/30/2018, soil cement was applied to all exposed areas of Stockpile 2A (in the morning of 10/29/2018), as agreed upon according to the close-out meeting held between D.R. Harton and HDOT Harbors Division on 10/3/2018. Copies of self-inspection checklist since 9/24/2018 were provided to Harbors on 10/30/2018 through emails. D.R. Horton planned to submit their Notice of Cessation to HDOH by November 7, 2018, or no later than the expiration date of the current permit.

Summary of Construction Site BMP Inspections in 2018
- Matson Whart and Yard Improvement at Sand Island

Inspection Date	Type	Summary of Findings and Recommendations
5/9/2018	Initial	An oily stain was observed on the concrete pavement at the pier side. Please clean up any spill/leak on a timely basis. Some loose debris was observed by the small pile of biosocks on the pier side. Please clean up this area. This is the initial site BMP Inspection. Representatives from Matson: Dean and Keahi Birch. The Contractor is to provide Harbors a photo showing where the rain gauge be installed as a follow-up.
7/3/2018	Regular	Loose sediment was observed at work areas along pier side and within CSS. Please keep up the good housekeeping practices and clean up active work areas on a regular basis. As a follow-up to the initial site BMP inspection, the rain gauge was mounted to the metal fence within the staging area. Please be advised that the rain gauge should be installed at a reasonable distance away from obstacles such as buildings and trees. To correct the situation, please raise the rain gauge so that the top of the rain gauge extends at least two to three inches above the top of the mounting post.
8/31/2018	Regular	Please continue to keep up the good housekeeping practices and clean up active work areas on a regular basis.
10/2/2018	Regular	Please properly label/mark these IBCs stored withing the staging area, to indicate their contents.
10/16/2018	Regular	Dust fence installed along the southeast corner of the staging area appeared to be loose partially near the bottom. Please fasten and secure the dust fence on a timly basis.
11/7/2018	Regular	The excavated contaminated soil was not fully covered. Upon notification, the Contractor repositioned the plastic sheet at the time of the inspection, to ensure that the stockpiles are fully covered. Please keep up the general housekeeping condition at all active sites. This is a belated inspection in place of the originally scheduled one on 10/30/2018. A flash flood warning was issued on that day. Due to safety concerns caused by the stormy weather conditions, the Contractor needed to cease construction activities and the inspection was rescheduled.
11/13/2018	Regular	The container used for concrete washout waste appeared to be close to 100% full. Please empty and maintain this container on a timely basis to prevent overflow or spillage. Please keep up the general housekeeping condition at all active sites.
11/28/2018	Regular	The container used for concrete washout waste appeared to be reaching its full capacity. Please empty and maintain this container on a timely basis to prevent overflow or spillage. Please keep up the general housekeeping condition at all active sites.
12/11/2018	Regular	Please empty the concrete washout bin on a timly basis. Loose sediment was observed on the pavement inside the Staging Yard (Photo 10). Please clean up this area and keep up the general housekeeping condition at all active sites.
12/20/2018	Regular	The plastic used to cover one stockpile inside the Staging Yard started to degrade (Photo 9). Please replace the cover on a timly basis. Please clean up all loose sediment on a timly basis and keep up the general housekeeping condition at all active sites (Photos 13 and 16).

Summary of Construction Site BMP Inspections in 2018
- TOELL

Inspection Date	Type	Summary of Findings and Recommendations
5/8/2018	Initial	Insufficient overlaps of biosocks were observed along the east side of the BELLA PIETRA building. After notification, the Contractor corrected them right away and follow-up photos were received on the same day. Harbors Inspector became aware upon completion of the inspection, that the scope of this project actually involved demolition of BELLA PIETRA building, partial bridge to adjacent structure, Storage Shed (across from BELLA PIETRA building), and attached conveyance system. Due to space constraints, the Contractor will primarily use water to suppress any fugitive dust during active demolition phase, and more frequent sweeping will also be implemented to minimize dust from migrating off-site. It is very likely that asbestos-containing materials and/or leaad-based paint would be found among these structures. The Contractor was aware of this and indicated that storage of any hazardous waste would be segregated from the regular ones, and these hazards would be properly disposed of. We recommend that a spill kit be kept on-site in response to potential spill/leak. This is the initial BMP inspection for NOELL USA Nimitz Facility project
7/3/2018	Regular	Please check the two adjacent storm drain inlets regularly, and clean/replace the filter fabric inserts when necessary. A few 55-gallon drums and some small size containers were observed inside the building. The construction contractor indicated that those containers will be disposed of in the near future. We recommend that a spill kit be kept on-site to respond to potential spills/leaks.
8/28/2018	Regular	Sheen was observed during trenching excavation fronting the structure (on the west side). IDPP was notified and on-site at the time of the inspection. Please continue to inform IDPP coordinator Carol Mitsuyasu at (808) 753-8899, Harbors Property Manager or Environmental Section upon discovery. Minor tire tracking and loose sediment were observed at the temporary construction entrance. Shortly after, one of the contractor employees started to sweep the area. Please continue this effort and sweep up this area regularly and by the end of each working day when entrance is in use. Stockpiles were observed inside the structure frame. Existing berm and wall served as one layer of BMP to minimize the dust and loose sediment from migrating off-site. It is recommend that a spill kit be kept on-site to respond to potential spills/leaks. Please continue to keep a copy of updated SWPPP on-site
10/2/2018	Regular	Petroleum contaminated soil was encountered during the footing excavation. Excavated contaminated soil was temporarily stockpiled on-site pending analytical results for disposal. The stockpile was covered with plastic and bermed around. Please continue to sweep up the equipment entrance/exit areas regularly and by the end of each working day when entrance is in use. Some of the biosocks placed along the south boundary were deteriorating. Please repair or replace those biosocks to prevent further spillage. In addition, please place one roll of biosocks along the dust fence adjacent to North Nimitz Highway, and ensure the ends overlap at least six inches. It is recommend that a spill kit be kept on-site to respond to potential spills/leaks. Please keep a copy of updated SWPPP on-site if possible
10/16/2018	Regular	Please continue to sweep up the equipment entrance/exit areas regularly and by the end of each working day when entrance is in use. It is recommended that a spill kit be kept on-site in response to potential spills/leaks. Please keep self-inspection records and SWPPP on-site for inspection.
10/30/2018	Regular	A flash flood warning was issued earlier in the morning. Therefore, the Construction cancelled their activities on the day. Filter fabric was removed from all adjacent drain inlets at the time of the inspection and would be placed back after the heavy rain. It is recommended that a spill kit be kept on-site or available in the service trucks parked on-site in response to potential spills/leaks. Please keep self-inspection records and SWPPP on-site for inspection.
11/13/2018	Regular	Minor equipment track-out was observed at one of the entrances. Please sweep up any loose debris back on to the site on a timely basis and by the end of each working day. Insufficient biosocks overlap was observed along North Nimitz Highway. Please reposition the biosocks to ensure the ends overlap at least six inches. The street inlet on Photo 8 shall be fitted with biosocks or similar BMP. Nearby biosocks were in deteriorated condition and should be disposed of properly. A possible hand-washing water appeared to have drained into one of the adjacent storm drain inlets. Please note that hand-washing water must be contained. No washing water shall be allowed to discharge to Harbors small MS4 directly or indirectly.

Summary of Construction Site BMP Inspections in 2018
- TOELL

Inspection Date	Type	Summary of Findings and Recommendations
11/29/2018	Regular	Minor equipment track-out was observed at one of the entrances. Please sweep up any track-out and loose debris back on to the site on a timely basis and at least by the end of each working day. One five-gallon bucket labeled as "Hazardous Waste" was spotted by the foot traffic entrance on the east (Photo 8). The hand-written content on the label was fading away and became illegible. Please properly label this container. Any hazardous waste must be properly disposed of.
12/11/2018	Regular	Please keep up the good general housekeeping conditions.
12/27/2018	Regular	Insufficience biosock overlap was observed along the east boundary of the project site (Photo 2). Please ensure all perimeter biosocks overlap at least six inches. Please keep up the good general housekeeping conditions.

Summary of Construction Site BMP Inspections in 2018
- The New Kapalama Container Terminal

Inspection Date	Type	Summary of Findings and Recommendations
2/25/2018	Initial	Stabilized construction ingress/egress is not in place. However, no land disturbance is planned for the near future. No vehicle trackings were observed at the time of inspection. The contractor acknowledged that no groundbreaking or intrusive activities will be conducted onsite until the stabilized construction ingress/egress is in place and verified by Harbors Inspector. If any gasoline, diesel fuel, or other chemicals are stored onsite, please equip the container(s) with a secondary containment. During fueling operation, please keep the spill kit readily nearby. The spill kit shall be replenished on a regular basis. Loose gravel were observed on the concrete foundation and piled at the top of the berm (Photo 16). Please clean up the area on a regular basis. At the time of the inspection, there were modifications to the proposed project boundary to include forthcoming demolition of former PSI facility at Pier 41, which would make this project subject to buffer compliance. Correspondingly, the SWPPP was updated to reflect the changes. Please continue this practice for this project. In addition, please keep the Monthly Compliance Report onsite.
3/1/2018	Regular	Stabilized construction ingress/egress is not in place. However, no land disturbance is planned for the near future. No vehicle trackings were observed at the time of inspection. The contractor acknowledged that no groundbreaking or intrusive activities will be conducted onsite until the stabilized construction ingress/egress is in place and verified by Harbors Inspector. Drain inlet protection has a manufactured hole in it to allow excess water to flow to prevent flooding. Due to metal cross bar in the existing drain inlet, the hole may cause water to overflow quicker allowing sediment to enter the MS4 system. Ben suggested that KIWC monitor the drain inlet and see if it is a problem that needs to be corrected. It was also suggested that KIWC remove the sediments already on the Witch's hat so water can flow through it faster.
3/14/2018	Regular	Stabilized construction ingress/egress is not in place. However, no land disturbance is planned for the near future. Vvehicle trackings were observed at the time of inspection. The contractor acknowledged that a subcontractor was performing saw-cutting activities without a vacuum in place and vehicles tracked through the left-in-place slurry. The contractor will cealn the site using either by sweeping or water and vacuum. Overlapping was corrected the way of inspection. Ben observed a repaired bio-sock that ws zip-tied in the center of the sock causing the diameter of the sock to decrease leaving a gap on the bottom. The contractor was informed that that was an improper way to repair the bio-sock and that they will have to either replace the repair or get another bio-sock to overlap. KIWC responded that they will re-do the repair correctly.. Drain inlet observed with ponding water in it. KIWC will open and clear the witch's hat to allow water to flow freely.
3/28/2018	Regular	Stabilized construction ingress/egress in place (rumble strips). Vehicle trackings was observed at the time of inspection. It appears that water used for dust control caused the tracking, regardless of the rumble strips. KIWC to keep an eye on the rumble strip and may need to modify at a later date. The contractor acknowledged they will clean the site using either by sweeping or water and vacuum. Overlapping was corrected the day of inspection. Two (2) drain inlet in PSI area requires bio sock around it. KIWC waiting for shipment to arrive and will correct as soon as it become available.
4/11/2018	Regular	Stabilized construction ingress/egress in place (rumble strips). Light vehicle tracking was observed at the time of inspection. KIWC was told to maintain daily (at the end of the shift). Overlapping was corrected the day of inspection. KIWC was informed to perform site walk and repair any bio sock that was placed on top of each other (around DOA site). Areas 1 and 2 (see Attachment 1) had misplaced Bio Sock near the fence openings. KIWC will repositioning. Area 4 had a gap in the bio sock, KIWC was informed to reposition the bio sock to close the gap. Area 3: Drain inlet filter sock requires maintenance. KIWC to install new green bio sock.

Summary of Construction Site BMP Inspections in 2018
- The New Kapalama Container Terminal

Inspection Date	Type	Summary of Findings and Recommendations
6/5/2018	Regular	Stabilized construction ingress/egress in place (rumble strips). Light vehicle tracking was observed at the time of inspection. KIWC performing street sweeping at the end of every shift. [Area 1 on Attachment 1] Ben informed KIWC to remove old railway steel rail from onto of bio sock and repair the bio sock and reposition correctly. [Area 2 on Attachment 1] Ben informed KIWC that bio sock should be placed on the dust fence fabric tail. KIWC to unpin the fabric tail and reposition the bio sock properly. [Area 3 on Attachment 1] Ben informed KIWC to place bio sock on dust fence near Auiki Street Truck Storage Road to prevent run off on the existing pavement behind it. Ben informed KIWC to perform routine maintenance on Drain Inlets with former PSI Area. KIWC does not have active work in the immediate area.
8/1/2018	Regular	Stabilized construction ingress/egress in place (rumble strips). Light vehicle tracking was observed at the time of inspection. KIWC installed second row of rumble strips. YKE and KIWC to monitor and see if tracking improves. [Area 4 on the BMP Map, Attachment 1], an additional row of bio-socks was requested near the concrete and AC piles near former UHMC building. Trash was observed in the Auiki Street Truck Storage [Area 2 on BMP Map] and near end of RW #2 Excavation [Area 5 on BMP Map]. Trash Bin was opened during inspection. KIWC corrected immediately [Area 6 on BMP Map]. [Area 3 on BMP Map] Portal Toilet observed too close to drain inlet. KIWC to relocate.
10/3/2018	Regular	Stabilized construction ingress/egress in place (rumble strips and gravel). Light vehicle tracking was observed at the time of inspection. Area 1 will require sweeping and repositioning the rumble strips so trucks cannot drive around it. Area 6 will require sweeping. KIWC informed YKE that they are having their fleet vehicles roll over the gravel and rumble strips twice when excessive dirt is present on their tires before exiting. Area 2 and 4 requires cleaning the Witch's Hat inside the existing drain inlet. At Area 3, YKE suggested that KIWC put additional bio sock around the staged steel H-beam to reduce the potential of rust from entering the drain inlet. KIWC will confirm before implementation. Area 5, YKE observed small section of the silt fence surrounding the surcharge pile had fallen. KIWC will repair.
10/17/2018	Regular	Stabilized construction ingress/egress in place (rumble strips and gravel). Light vehicle tracking was observed at the time of inspection. AREA 1 was observed with light vehicle tracking. KIWC reported that they still have a professional sweeping service twice a week. Ben reported that KIWC should perform routine cleaning of rumble strips. AREA 2 Ben requested KIWC move the steel beams away from the existing drain inlet. KIWC should maintain the biosock around the steel beams. AREA 3 Trash was observed in storage area within the future HC 10498 Project Area. KIWC directed to walk through the storage area and clean any loose
11/1/2018	Regular	Stabilized construction ingress/egress in place (rumble strips and gravel). Light vehicle tracking was observed at the time of inspection. AREA 1 was observed with light vehicle tracking. Due to the rain over the past two days, KIWC added additional sweeping which is scheduled at the end of the day.
11/14/2018	Regular	A fire occurred outside of the construction site which damaged existing bio-sock. KIWC will need to replace. KIWC informed BKA that fire started in the back of a passing garbage truck so to avoid damage to the vehicle, the driver dumped the rubbish on the pavement near the site. Fire departement put out the fire and the garbage company cleaned the site.
11/28/2018	Regular	KIWC to provide updated Monthly Compliance Report for October and November.
12/12/2018	Regular	At Area 1, bio sock was moved and did not provide minimum 1 foot overlap, KIWC will correct. At Area 2, silt fence post was broken and will require repair.
12/26/2018	Regular	Minor track-outs were observed at both entrance. Please continue to sweep up the entrance on a regular basis (e.g., by the end of each working day)

Attachment 13

Reviewed Harbors Division Projects

Summary of HDOT Harbors Division Projects Reviewed in 2018

HC Number	Comment Date	NPDES Permit No	Project Location	Harbor	Project Title	Project Description	Exempt Project	Reviewed Documents and Remarks
HC 10602	7/16/2018, 8/15/2018		Pier 51	Honolulu Harbor	Electrical Pull Boxes Repair at Pier 51, Honolulu Harbor	The scope of work for this project consists of repairing various utility boxes in the container yard of Pier 51, including the followings: A. Mobilization and demobilization. B. Providing a BMP Plan. C. Repairing various utility boxes as shown on the drawings including demolition or retrofit of existing boxes and associated electrical work.	Yes	BMP Plan
HC 10628	4/11/2018		Pier 2 Terminal	Honolulu Harbor	Install Air Curtains at Pier 2 Terminal	The work to be done on this project includes furnishing all labor, materials and equipment necessary to install air door curtains at the Pier 2 Terminal Building, Honolulu Harbor, Oahu, Hawaii.	Yes	Preliminary Plans & Drawings, Specifications & Proposal
HC 10642	8/31/2018		Pier 40	Honolulu Harbor	Repair Sewerline at Pier 40 of Honolulu Harbor	The work to be donw includes, but is not necessarily limited to, the following major items of work: A. Replacement of the existing sanitary waste, soil and vent piping exposed below floor slab and exterior pavement up to the existing sewer manhole. Reconnect new sanitary waste to existing fixtures as noted. 1. Removal and re-installation of one standard water closet, two existing accessible-type water closets, two accessible-type lavatories, one accessible-type urinal, one kitchen sink, and one service sink to suite new sanitary piping as necessary. Fixtures shall be thoroughly cleaned and serviced prior to re-installation. Provide new rough-ins and accessories as necessary. 2. Reconnect to existing fixture vent stacks. B. Replacement of three existing floor drains, repair tiled flooring to match existing. Repair walls along with flooring if necessary.	Yes	Preliminary Plans & Drawings, Specifications & Proposal; BMP Plan
HC 10643	9/28/2018		Pier 40	Honolulu Harbor	Pavement Repair at Pier 40	The scope of work consists of repairing the asphalt and concrete pavements at Pier 40, Honolulu Harbor.	Yes	BMP Plan

Summary of HDOT Harbors Division Projects Reviewed in 2018

HC Number	Comment Date	NPDES Permit No	Project Location	Harbor	Project Title	Project Description	Exempt Project	Reviewed Documents and Remarks
HC 10651	4/16/2018		Piers 10 -11	Honolulu Harbor	Substructure and Waterline Repairs at Piers 10-11, Honolulu Harbor.	This project is scoped for substructure and waterline repairs at Piers 10 and 11, Honolulu Harbor	Yes	BMP Plan
HC 10665	2/13/2018, 3/29/2018, 12/7/2018		Piers 3 and 15	Honolulu Harbor	Temporary Relocation of Harbor Police Boats to Pier 3 (Part of: Relocate Harbor Police to Former Fire Station, Pier 15, Honolulu Harbor)	In general, the work involves the installation of new rubber tire bumper guards and cast iron mooring cleats at Pier 3, Honolulu Harbor, Oahu, State of Hawaii. This work will allow the temporary relocation of harbor police boats to Pier 3 pending the completion of the renovation of the former Pier 15 fire station into a new harbor police facility. Plans (35%): In general, the work involves the design to renovate the former Fire Station at Pier 15 into a Harbor Police Facility. Improvements include a new armory, office spaces, dornitory, sally port, bathrooms, shower & lockers, roll-up doors, security cameras, central air conditioning, jet ski hoist, police boat crane, new conference room and classrooms, new physical training room and new enclosed lobby and reception area. (90%) In general, the work involves the design to renovate the former Fire Station at Pier 15 into a Harbors Police Facility. Improvements include a new armory, office spaces, dormitory, sally port, bathrooms, shower & lockers, roll-up doors, security cameras, central air conditionining, jet ski hoise, police boat crane, new conference room and classrooms, new physical training room and new enclosed lobby and reception area.	Yes	Plans and Drawings (65%, 90%); BMP Plan.
HC 10670	6/22/2018	HI R10C108	Piers 51C to 53	Honolulu Harbor	FY 17 One-Year Maintenance Contractor for Pavement Repairs at 51C, 52-53 Container Yard, Honolulu Harbor	This project is scloped for pavement maintenance at Piers 51C to 53 Containyer Yard of Honolulu Harbor		BMP Plan

Summary of HDOT Harbors Division Projects Reviewed in 2018

HC Number	Comment Date	NPDES Permit No	Project Location	Harbor	Project Title	Project Description	Exempt Project	Reviewed Documents and Remarks
HC 10672	5/9/2018		Pier 33	Honolulu Harbor	Subsidence Repairs at Pier 33, Honolulu Harbor.	The scope of work for this project consists of performing subsidence repairs at Pier 33 of Honolulu Harbor. The estimated construction cost is between $250,000 and $500,000. The work to be done includes, but is not necessarily limited to, the following major items of work: A. Mobilizatin and demobilization. B. Providing a Best management Practices (BMP) Plan. C. Performing subsidence repairs including the following: 1. Placing fabric form bags. 2. Repairing voids behind the bulkhead and concrete repairs to seal openings in the sheet pile wall. 3. Filling an abandoned cesspool with CLSM.	Yes	Pre-Final Design Plans and Specifications
HC 10680C	7/24/2018		KIPA	Honolulu Harbor	Keehi Industrial Lots Improvements Phase III, Part B, Honolulu Harbor	This project consists of reviewing the scopes of services.	Yes	Phase III, Part B
HC 10685	9/7/2018		Pier 7	Honolulu Harbor	Subsidence Repairs at Pier 7, Honolulu Harbor	The scope of work for this project consist of subsidence repairs at Pier 7 of Honolulu Harbor	Yes	Preliminary Plans and Specifications & Proposal
HC 10687	6/29/2018		Pier 22	Honolulu Harbor	Repair Concrete Builkhead at Pier 22, Honolulu Harbor	This project is scoped for concrete bulkhead repair at Pier 22 of Honolulu Harbor.	Yes	BMP Plan
HC 10688	2/15/2018		Pier 29	Honolulu Harbor	Repair Waterline at Pier 29, Honolulu Harbor	The scope of work for this project consists of replacing an existing waterline, waterline hatch and covers, and a fireline at Pier 29 at Honolulu Harbor.	Yes	Plans and Drawings, Specifications & Proposal
HC 10689	2/20/2018		Pier 38	Honolulu Harbor	Repair Fencers and Bollards at Pier 38, Honolulu Harbor	The project is scoped for fencers and bollards repair at Pier 38 of Honolulu Harbor	Yes	Preliminary Plans and Specifications & Proposal

Summary of HDOT Harbors Division Projects Reviewed in 2018

HC Number	Comment Date	NPDES Permit No	Project Location	Harbor	Project Title	Project Description	Exempt Project	Reviewed Documents and Remarks
HC 10690	3/14/2018		Pier 39-1A	Honolulu Harbor	Fender System Repair at Piers 39-1A	The scope of work consists of repairing the fender system at Pier 39-1A, Honolulu Harbor, Oahu, Hawaii, including the following major items of work: A. Mobilization and demobilization. B. Replacing the fender system including building up the concrete face for installation of new fenders. C. Performing repairs to concrete spalls and delaminations on the concrete bulkhead. D. Installing a concrete sealer with corrosion inhibitor in the project location as shown on the plans. E. Repainting cleats.	Yes	Preliminary Plans and Specifications
HC 10691	8/21/2018		Pier 39	Honolulu Harbor	Repair Concrete Pavement at Pier 39, Honolulu Harbor	This project is scoped for concrete pavement repair at Pier 39 of Honolulu Harbor.	Yes	Preliminary Plans and Specifications & Proposal
HC 10693	1/8/2018			KBPH	Fence Repairs at KBPH	The scope of work consists of repairing and replacing of existing fence and gate at Kalaeloa Barbers Point Harbor along Malakole Road and access road. The estimated cost of construction is between $150,000 and $300,000. The work to be done consists of removing the existing fence, gate frame, and support braces; installing new footings and new PVC fence; and maintaining security.	Yes	Preliminary Plans and Specifications & Proposal
HC 10694	9/18/2018, 10/30/2018		Pier 11	Honolulu Harbor	Repair Rooftop Air Conditioning Units at Pier 11 of Honolulu Harbor.	The scope of work mainly focus on repairing of rooftop air conditioning units at Pier 11 of Honolulu Harbor	Yes	BMP Plan
HC 10696	3/16/2018		Piers 8 and 10	Honolulu Harbor	Substructure Repairs at Piers 8 and 10	This project is scoped for substructure repairs at Piers 8 and 10 of Honolulu Harbor	Yes	(Pre-Final)Design Plans and Specifications
HC 10697	10/22/2018		Pier 7	KBPH	Erosion Repair at Pier 7, KBPH.	The project is scoped for erosion repair at Pier 7 of KBPH		BMP Plan
HC 10700	1/9/2018, 8/9/2018, 8/30/2018		Piers 10 and 11	Honolulu Harbor	Repair Roll-Up Doors at Piers 10-11 & Baseyard	This project is scoped for roll-up doors repair at Piers 10-11 and Baseyard.	Yes	Preliminary Plans and Specifications & Proposal; BMP Plan
HC 10702	4/18/2018, 5/15/2018		Piers 39 and 40	Honolulu Harbor	Repair Light Poles at Piers 39 & 40, Honolulu Harbor	This project is scloped for light roles repair at Piers 39 & 40 of Honolulu Harboe	Yes	BMP Plan

Summary of HDOT Harbors Division Projects Reviewed in 2018

HC Number	Comment Date	NPDES Permit No	Project Location	Harbor	Project Title	Project Description	Exempt Project	Reviewed Documents and Remarks
HC 10703	1/9/2018, 8/14/2018		Piers 19, 24, and 32	Honolulu Harbor	Pavement Repairs at Piers 19, 24, & 32 of Honolulu Harbor	The scope of work consists of repairing damaged asphalt pavement at Piers 19, 24, & 32, Honolulu Harbor. The estimated cost of construction is between 200,000 and 400,000. The major items of work to be done include, but are not limited to the following: 1. Removal and disposal of existing asphalt pavement and base course materials. 2. Applying bituminous tack coat. 3. Placing aggregate base course materials. 4. Placing hot mix asphalt pavement. 5. Placing pavement markings. 6. Providing a BMP Plan.	Yes	Preliminary Plans, Specifications & Proposal; BMP Plan
HC 10704	1/3/2018		Pier 1	Honolulu Harbor	Repair Fencing at Pier 1, Honolulu Harbor	This project is scoped for fencing repair at Pier 1, Honolulu Harbor.	Yes	Preliminary Plans, Specifications & Proposal
HC 10706	11/20/2018		Pier 28	Honolulu Harbor	Repair Waterline at Pier 28, Honolulu Harbor	This project is scoped for waterline repair at Pier 28 of Honolulu Harbor.	Yes	Preliminary Plans, Specifications & Proposal
HC 10710	4/11/2018		Pier 51	Honolulu Harbor	Repair Fenders at Pier 51	This project is scope for fender repair at Pier 51 of Honolulu Harbor	Yes	Preliminary Plans, Specifications & Proposal
HC 10711	8/28/2018		Pier 39	Honolulu Harbor	Concrete Pavement Repair at Pier 39, Honolulu Harbor	The work to be done includes, but is not necessarily limited to, the following major items of work: A. Replacement of the existing sanitary waste, soil and vent piping exposed below floor slab and exterior pavement up to the existing sewer manhole. Reconnect new sanitary waste to existing fixtures as noted. 1. Removal and re-installation of one standard water closet, two existing accessible-type water closets, two accessible-type lavatories, one accessible-type urinal, one kitchen sink, and one service sink to suite new sanitary piping as necessary. Fixtures shall be thoroughly cleaned and serviced prior to re-installation. Provide new rough-ins and accessories as necessary. 2. Reconnect to existing fixture vent stacks. B. Replacement of three existing floor drains, repair tiled flooring to match existing. Repair walls along with flooring if necessary.	Yes	Preliminary Plans and Specifications; BMP Plan

Summary of HDOT Harbors Division Projects Reviewed in 2018

HC Number	Comment Date	NPDES Permit No	Project Location	Harbor	Project Title	Project Description	Exempt Project	Reviewed Documents and Remarks
HC 10712	11/9/2018		Pier 2 Terminal	Honolulu Harbor	Installation of Air Curtains at Pier 2 Terminal, Phase 2, Honolulu Harbor	The scope of work consists of installing air curtains at Pier 2 Terminal of Honolulu Harbor	Yes	Preliminary Plans and Specifications & Proposal
HC 10715	4/9/2018		Pier 11 Gallery	Honolulu Harbor	Repair Railings at Pier 11 Gallery, Honolulu Harbor	This project is scoped for railing repairs at Pier 11 Gallery of Honolulu Harbor.	Yes	Preliminary Plans and Specifications & Proposal
HC 10717	7/11/2018		Pier 24	Honolulu Harbor	Subsidence Repairs at Pier 24, Honolulu Harbor.	This project is scoped for subsidence repairs at Pier 24 of Honolulu Harbor.	Yes	BMP Plan
HC 10718	10/3/2018		Pier 20	Honolulu Harbor	Maintenance Dreding at Pier 20, Honolulu Harbor	This project is scoped for maintenance dredging at Pier 20 of Honolulu Harbor	Yes	Preliminary Plans and Specifications
HC 10719	9/14/2018		Pier 10	Honolulu Harbor	Repair Rooftop Air Conditioning Units at Pier 10, Honolulu Harbor	This project is scoped for rooftop air conditioning units repair at Pier 10 of Honolulu Harbor.	Yes	Preliminary Plans and Specifications & Proposals.
HC 10724	8/15/2018		Pier 36	Honolulu Harbor	Subsidence Repairs at Pier 36, Honolulu Harbor	This project is scoped for subsidence repairs at Pier 36 of Honolulu Harbor.	Yes	Preliminary Plans and Specifications & Proposals.
HC 10727	12/14/2018		Pier 11 Shed	Honolulu Harbor	Repair Tile Roof at Pier 11 Shed, Honolulu Harbor	This project is scoped for tile roof repair at Pier 11 shed of Honolulu Harbor	Yes	Preliminary Plans and Specifications & Proposals.
HC 10730	12/12/2018			KBPH	Fence Repairs at KBPH	This project is scoped for fence repairs at KBPH	Yes	Preliminary Plans and Specifications & Proposal.
HC 10733	10/22/2018		Fort Armstrong	Honolulu Harbor	FY 19 One-Year Maintenance Contract for Pavement Repairs at Fort Armstrong, Honolulu Harbor	This project is scoped for pavement maintenance for FY 19 at Fort Armstrong of Honolulu Harbor.		Preliminary Plans and Specifications & Proposal.
HC 10734	7/3/2018, 12/18/2018		Pier 40B	Honolulu Harbor	Concrete Deck Repair at Pier 40B	The scope of work consists of repairing a sinkhole at Pier 40B, Honolulu Harbor, Oahu, Hawaii. The work to be done includes, but is not necessarily limited to, the following major items of work: A. Mobilization and demobilizatrion B. Providing a BMP Plan C. Replacing a damaged portion of the concrete slab and the pile cap.	Yes	Preliminary Plans and Specifications; BMP Plan

Summary of HDOT Harbors Division Projects Reviewed in 2018

HC Number	Comment Date	NPDES Permit No	Project Location	Harbor	Project Title	Project Description	Exempt Project	Reviewed Documents and Remarks
HC 10735.1	11/30/2018		Piers 31 to 34	Honolulu Harbor	Shed Demo at Piers 31 to 34, Honolulu Harbor	The scope of work consists of demolishing shed at Piers 31 to 34 including but not limited to the following items of work: (A) Environmental Protection. (B) Mobilization and demobilization. (C) All incidental items required to complete the work. (D) Any other work indicated on plans.		Specifications (85%)
HC 10739	10/9/2018		Pier 11 Shed	Honolulu Harbor	Repair Steel Truss at Pier 11 Shed, Honolulu Harbor	This project is scoped for steel truss repair at Pier 11 Shed of Honolulu Harbor	Yes	Preliminary Plans and Specifications
HC 10741	9/12/2018		Pier 51	Honolulu Harbor	Repair Bollards at Pier 51, Honolulu Harbor	The scope of work consists of bollards repair at Pier 51 of Honolulu Harbor	Yes	Preliminary Plans and Specifications & Proposal
HC 10742	12/13/2018		Pier 11	Honolulu Harbor	Fence Repairs at Honolulu Harbor	The scope of work consists of repairing fence repair at Pier 11 of Honolulu Harbor	Yes	Preliminary Plans and Specifications & Proposal
HC 10750	12/24/2018	HI R10C108	Piers 51C to 53	Honolulu Harbor	FY19 One-Year Maintenance Contract for Pavement Repairs at Piers 51C to 53 Container Yard, Honolulu Harbor	The scope of work consists of repairing damaged asphalt pavement at Piers 51C, 52, and 53.		Preliminary Plans and Specifications & Proposal

Non-NPDES NOI-C Project

Attachment 14

Reviewed Tenant Projects

Summary of HDOT Harbors Division Tenant Projects Reviewed in 2018

Tenant	Comment Date	NPDES Permit No	Project Location	Harbor	Project Title	Project Description	Exempt Project	Reviewed Documents and Remarks
Hawaii Pacific University	2/7/2018		Piers 8 and 9	Honolulu Harbor	HPU Suites 3100 & 3200 Student Living	This project is a retrofit HPU Aloha Tower Building. Owner is requesting a change of use and occupancy for the majority of the third level of the property from office (OCC"B") to residential dormitory (OCC R-2). Existing square footage and envelope to remain as existing. Improvements are predominently interior in nature and involve reconfigurarion of walls to meet programatic needs and code requirements of occupancy change including restroom and bathing facilities.	Yes	Plans and Drawings
Hawaii Pacific University	2/8/2018		Piers 8 and 9	Honolulu Harbor	New Residential Dining Facility for Aramark	Scope of work consists of improving an existing vacant tenant space to accommodate a new eating establishment. Work shall include selective demolition, new interior partition walls, replacement of existing storefront, new finishes & fixtures. Additionally work includes mechanical, plumbing and electrical to accommodate the new layout. The project is indoors and consists of an estimated 5000 SF of indoor work and 2000 SF of outdoor work. Partial of the outdoor work is covered by the second floor. All of the trenching and concrete patch work will be indoors. An estimated 400 SF of trenching and concrete patching will be performed during the project duration.	Yes	Plans and Drawings; SWPPP
Hawaii Pacific University	5/4/2018		Piers 8 and 9	Honolulu Harbor	Spaghetti Factory	This project mainly focuses on interior remodal of an existing restaurant within existing envelop, with minimal soil disturbance.	Yes	Plans and Drawings
Hawaii Pacific University	5/4/2018		Piers 8 and 9	Honolulu Harbor	The New Private Dining Room	This project maintaly focuses on interior remodal of an existing building, with minimal soil disturbance	Yes	Plans and Drawings
TOELL USA	10/11/2018		Pier 23	Honolulu Harbor	TOELL USA New Parking Area	TOELL USA Corporation will be demolishing the existing husking shed building to provide additional parking stalls for the new TOELL USA Nimitz Factory.		Notification Form

Non-NPDES NOI-C Project

Attachment 15

Kalaeloa Barbers Point Harbor Stockpile Inspection Report

KALAELOA BARBERS POINT HARBOR
2018 ANNUAL STOCKPILE INSPECTION

Date of Inspection: October 29, 2018
Inspectors (HAR-EE): Spencer Yim & Joy Zhang

An annual inspection of the coral stockpiles at Kalaeloa Barbers Point Harbor (KBPH) was conducted to determine the general condition of the chemical stabilization, sediment barriers and natural vegetation barriers. Chemical stabilization and sediment barriers were last applied to Stockpiles 3 and 4 in November 2012. Stockpile 5 received chemical stabilization treatment in February 2014. Removal of Stockpile 2A by D. R. Horton ceased in 2018 due to unsuitability of the dredged materials encountered at lower depths. Chemical stabilization was being applied at the time of this inspection in conjunction with runoff control BMPs to enhance on-site infiltration.

As found in the previous 2017 annual inspection, natural vegetation growth increased substantially at most of the stockpiles due to ample rainfall received over the past year. Vegetation growth has stabilized much of the bottom slope areas and reduces bio-sock exposure to the elements – enhancing and prolonging their effectiveness. Vegetation growth has also served to stabilize most of the sloped areas around the remaining stockpiles.

Stockpile 1: This stockpile was completely removed by Kapolei Development earlier in 2015. As shown in Figure 1, the site is sloped inward to retain runoff and vegetation is growing over much of the site.

Figure 1: Former site of Stockpile 1

Stockpile 2A: As reported last year (2017), D.R. Horton obtained approval of their NPDES NOI-C permit, Storm Water Pollution Prevention Plan (SWPPP) and other necessary DOT-Harbors approvals and commenced removal of stockpile material from Stockpile 2A in March 2017. Removal operations continued through August 2018 and regular inspections (i.e., bimonthly from April to September and biweekly vice versa) by Harbors Property Management (HAR-PM) and the Engineering Environmental Section (HAR-EE) were conducted to assist with compliance with the Right-of-Entry (ROE) Agreement and the NPDES NOI-C permit.

In September 2018, the Project Manager from D.R. Horton Informed Harbors Division Property Management Section that the remaining stockpile was not suitable for their residential project use, and therefore, no more material would be excavated from Stockpile 2A. The Project Manager also informed the HAR-EE Inspector that D.R. Horton had decided to terminate the Right-of-Entry Agreement for this site and would submit their Notice of Cessation to HDOH prior to the expiration of their permit term.

A final inspection by DOT-Harbors Environmental Section of the project site was conducted on October 29, 2018. The project had installed a raised-berm along its complete perimeter along with additional biosocks to ensure that storm runoff accumulated at the top of the stockpile remained on site. Soil sement – a proprietary dust control, erosion control and soil stabilizer – was applied to all exposed areas of Stockpile 2A during the morning of October 29, 2018 prior to the final site inspection. Perimeter bio-socks were left in place on the west, south, and east sides, and along the driving ramp to the top of Stockpile 2A.

It is roughly estimated that D.R. Horton removed a total of about 200,000 cubic yards of Stockpile 2A material from March 2017 through the summer of 2018 when removal operations ceased. DOT-Harbors Engineering is currently conducting field tests of the remaining Stockpile 2A materials to determine if the remaining material is suitable for other purposes in the ongoing development of KBPH. Figures 2 to 5 are photos related to Stockpile 2A taken during the final inspection.

Figure 2: Access road to top of Stockpile 2A after application of soil sement stabilizer.

Figure 3: Top of Stockpile 2A looking west along raised-berm perimeter.

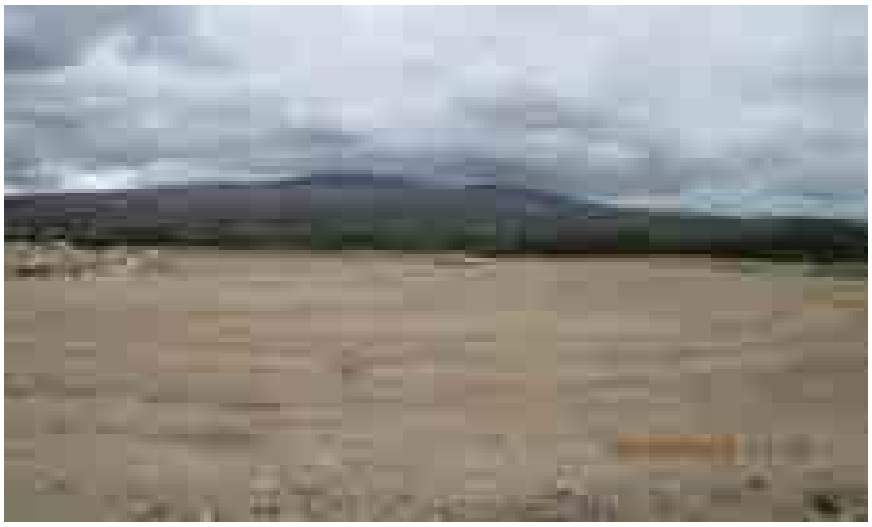


Figure 4: Top of Stockpile 2A looking north showing raised-berm perimeter

Figure 5: West end of Stockpile 2A showing raised-berm perimeter along north edge.

Stockpiles 2B and 2C: Vegetation growth has increased substantially around and between Stockpiles 2B and 2C. See Figures 6 and 7. There were no signs of erosion - so re-application of chemical stabilization is not recommended.

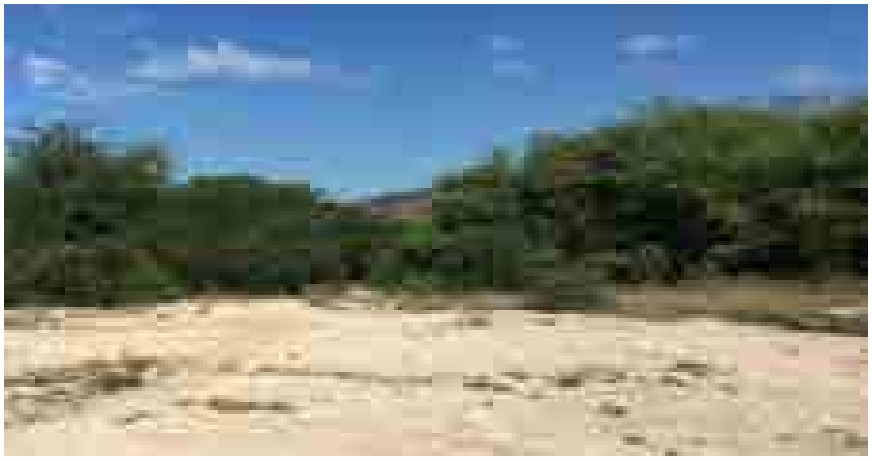


Figure 6: Stockpile 2C looking northward toward Stockpile 2B.

Figure 7: West side of Stockpile 2C

Stockpile 3: The vegetation growth was again found to be heavy at the base of and along the slope of Stockpile 3 as was observed in 2017 and continues to provide very effective, natural erosion control (Figures 6 and 7). The heavy vegetation is also protecting the bio-socks from the elements. The bio-socks which are laid inside concrete pile butts are still in good condition and do not require replacement.

Figure 6: Concrete pile butt & bio-sock along the western base of Stockpile 3 embedded inside the thick vegetation and barely visible.

Figure 7: Looking southwest from Stockpile 3 toward Stockpile 4, with John Wayne Road to the right.

Stockpile 4: The vegetation growth around the base perimeter of Stockpile 4 has grown thicker and taller than was observed in December 2017 (Figures 8 and 9). The thick vegetative growth provides effective erosion control and protects the bio-socks from elements. The small size of this stockpile combined with the vegetation growth and lack of any evidence of erosion precludes the need to re-apply chemical stabilization to this stockpile.

Figure 8: Heavy vegetation growth around Stockpile 4 looking northward with John Wayne Road to the left.

Figure 9: Heavy vegetation along south slope of Stockpile 4 looking eastward.

Removal of Stockpiles 3 & 4. The DOT Harbors Division terminated the Department of Hawaiian Home Lands (DHHL) Right-of-Entry (ROE) due to inactivity in 2017. It is currently investigating the feasibility of re-purposing the dredged material at Stockpiles 3 & 4 – as well as Stockpiles 2A, 2B, and 2C - in support of the development of KBPH in accordance with its 2040 master plan. Removal of Stockpiles 3 & 4 is essential as their current locations will impede the development of the eastern side of KBPH.

Stockpile 5: Stockpile 5 was again found to have signs of runoff erosion - and possibly wind erosion as well – as was observed in December 2017 (Figures 10 to 12). However, the sediment eroded by storm water from this site is contained in a downstream drainage/retention basin with considerable vegetative growth (see Figures 11 & 12) and quite far from the ocean - thus minimizing the risk of the stockpile material reaching nearby waterways and the ocean. Chemical reapplication is not deemed necessary and is not recommended at this time.

Figure 10: Looking southward across Stockpile 5.

Figure 11: Pile butts on the perimeter of Stockpile 5 and drainage/retention basis along western slope.

Figure 12 - Pile butts & drainage/retention basin along Stockpile 5 looking northward.

Summary & Recommendations: Rainfall at Kalaeloa Barbers Point Harbor during 2018 sustained vegetative growth on and around Stockpiles 2B, 2C, 3, and 4 that continue to stabilize the stockpiles and, in conjunction with existing BMPs (concrete pile butts and bio-socks), provide adequate wind and soil erosion protection. This growth largely eliminates the need for re-application of chemical stabilizing agents at any of the stockpiles. The vegetation has also served to prolong the life of most of the bio-socks by limiting their exposure to the elements.

The removal of Stockpile 2A material by D. R. Horton's contractor under its Harbors Division ROE agreement – ceased during the summer of 2018 due to the unsuitability of the stockpile materials for their residential project use. Upon ceasing the removal operation, the Stockpile 2A project site was graded to drain inward with raised-berms and biosocks along its complete perimeter to minimize storm runoff leaving the site. Soil sement stabilizer was also applied to the site to retard wind and storm water erosion. Re-purposing of the Stockpile 2A material as well as those from other KBPH stockpiles is currently being investigated for potential use by Harbors Division KBPH development projects.

Attachment 16

MS4 Inspection Log

2018 MS4 Inspection Log

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
10646	11/28/2018 09:00	McLean, Robert	CLOSED	HO02,	11/28/2018 01:25	6938	INLET STATUS	SDIHO010290	197	Followup Work Not Required
10647	11/28/2018 09:00	McLean, Robert	CLOSED	HO02,	11/28/2018 01:28	6938	INLET STATUS	SDIHO010292	198	Followup Work Not Required
10648	11/28/2018 09:00	McLean, Robert	CLOSED	HO02,	11/28/2018 01:24	6938	INLET STATUS	SDIHO010288	196	Followup Work Not Required
10644	11/28/2018 08:00	McLean, Robert	CLOSED	HO51, Horizon Lines	11/28/2018 01:03	6927	INLET STATUS	SDIHO517802	61	Followup Work Not Required
10645	11/28/2018 06:30	McLean, Robert	CLOSED	HO53, CFS#2	11/28/2018 01:10	6928	INLET STATUS	SDIHO538912	673	Followup Work Not Required
10643	11/20/2018 12:26	McLean, Robert	CLOSED	HO26, Pier 26	11/20/2018 12:27	6923	INLET STATUS	SDIHO263592	136	Followup Work Required
10642	11/20/2018 12:16	Gomes, Gregory	CLOSED	HO25, Former corner of Pier 26 shed	11/20/2018 12:19	6922	INLET STATUS	SDIHO243522	424	Followup Work Required
10640	11/20/2018 07:00	McLean, Robert	CLOSED	HO30,	11/20/2018 12:07	6916	INLET STATUS	SDIHO313904	521	Followup Work Not Required
10589	09/27/2018 07:00	McLean, Robert	CLOSED	BP04,	09/27/2018 09:23	6689	INLET STATUS	SDIBP044102	57	Followup Work Not Required
9530	09/8/2018 06:30	Gomes, Gregory	CLOSED	HO29, Pier 29 yard	09/24/2018 12:13	5585	INLET STATUS	SDIHO293672	222	Followup Work Not Required
10578	09/7/2018 10:15	McLean, Robert	CLOSED	HO40, Young Brothers entrance	09/7/2018 12:24	6549	INLET STATUS	SDIHO405610	541	Followup Work Not Required
10575	09/7/2018 10:15	McLean, Robert	CLOSED	HO39, Young Brothers entrance	09/7/2018 12:25	6546	INLET STATUS	SDIHO395612	582	Followup Work Not Required
10566	09/7/2018 10:00	McLean, Robert	CLOSED	HO32,	09/7/2018 12:21	6537	INLET STATUS	SDIHO324236	458	Followup Work Not Required
10568	09/7/2018 09:30	McLean, Robert	CLOSED	HO32, PENCO/BEI yard	09/7/2018 12:15	6539	INLET STATUS	SDIHO324242	215	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
10576	09/7/2018 09:15	McLean, Robert	CLOSED	HO32, PENCO/BEI yard	09/7/2018 12:10	6547	INLET STATUS	SDIHO324244	224	Followup Work Not Required
10586	09/7/2018 06:30	McLean, Robert	CLOSED	HO53, Matson Facilities and	09/7/2018 11:59	6650	OPEN LINE	SDOHO528769	218	Followup Work Not Required
10577	08/29/2018 09:30	McLean, Robert	CLOSED	HO32,	08/29/2018 01:46	6548	INLET STATUS	SDIHO314162	462	Followup Work Required
10567	08/29/2018 09:29	McLean, Robert	CLOSED	HO31, Pier 31-33 shed	08/29/2018 09:30	6538	INLET STATUS	SDIHO314154	221	Followup Work Not Required
10569	08/29/2018 08:29	McLean, Robert	CLOSED	HO31, Pier 31 yard	08/29/2018 09:19	6540	OPEN LINE	SDOHO314073	665	Followup Work Not Required
10582	08/29/2018 06:57	McLean, Robert	CLOSED	HO31, Pier 31 yard	08/29/2018 09:06	6553	OPEN LINE	SDOHO314071	159	Followup Work Not Required
10565	08/27/2018 07:00	McLean, Robert	CLOSED	HO25, Former corner of Pier 26 shed	08/27/2018 12:59	6536	INLET STATUS	SDIHO243522	424	Followup Work Required
10564	08/27/2018 06:50	McLean, Robert	CLOSED	HO24, Parking lot at front door of Bella	09/7/2018 12:27	6535	INLET STATUS	SDIHO243074	408	Followup Work Required
10563	08/22/2018 06:30	McLean, Robert	CLOSED	HO53, Sand Island	08/27/2018 11:59	6534	OPEN LINE	SDOHO538563	124	Followup Work Not Required
10585	08/22/2018 09:00	McLean, Robert	CLOSED	HO53, Matson Facilities and	08/25/2018 04:45	6615	OPEN LINE	SDOHO528769	218	Followup Work Not Required
10573	08/15/2018 09:55		CLOSED	pier 31 shed open area	08/15/2018 01:15	6544	OPEN LINE	SDOHO314401	232	Followup Work Not Required
10580	08/15/2018 09:40	McLean, Robert	CLOSED	pier 31 shed open area	08/15/2018 01:30	6551	OPEN LINE	SDOHO314397	230	Followup Work Not Required
10572	08/15/2018 09:30	McLean, Robert	CLOSED	pier 31 shed open area	08/15/2018 01:26	6543	OPEN LINE	SDOHO314403	234	Followup Work Not Required
10571	08/15/2018 09:06	McLean, Robert	CLOSED	pier 31 shed open area	08/15/2018 01:19	6542	OPEN LINE	SDOHO314393	235	Followup Work Not Required
10574	08/15/2018 09:00		CLOSED	pier 31 shed open area	08/15/2018 01:17	6545	OPEN LINE	SDOHO314399	231	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
10570	08/15/2018 09:00		CLOSED	pier 31 shed open area	08/15/2018 01:24	6541	OPEN LINE	SDOHO314405	238	Followup Work Not Required
10581	08/15/2018 08:55	McLean, Robert	CLOSED	pier 31 shed open area	08/15/2018 01:12	6552	OPEN LINE	SDOHO314395	229	Followup Work Not Required
10579	08/15/2018 08:20	McLean, Robert	CLOSED	HO31,	08/15/2018 12:55	6550	INLET STATUS	SDIHO314152	704	Followup Work Not Required
10521	08/15/2018 07:45	McLean, Robert	CLOSED	HO08, Aloha Tower Market Place parking	08/15/2018 12:31	6465	INLET STATUS	SDIHO081286	237	Followup Work Not Required
10512	08/15/2018 07:15	McLean, Robert	CLOSED	HO08, Aloha Tower Market Place parking	08/15/2018 12:17	6456	INLET STATUS	SDIHO081282	239	Followup Work Not Required
10500	08/15/2018 06:58	McLean, Robert	CLOSED		08/15/2018 12:04	6431	INLET STATUS	SDIHO0538914	785	Followup Work Not Required
10501	08/15/2018 06:50	McLean, Robert	CLOSED	HO02,	08/15/2018 11:56	6432	INLET STATUS	SDIHO020812	718	Followup Work Not Required
10502	08/15/2018 06:45	McLean, Robert	CLOSED	HO02,	08/15/2018 11:47	6433	INLET STATUS	SDIHO020814	719	Followup Work Not Required
10514	08/14/2018 07:45	McLean, Robert	CLOSED	HO02, Channel Street	08/14/2018 10:37	6458	INLET STATUS	SDIHO020640	284	Followup Work Not Required
9529	08/11/2018 06:30	McLean, Robert	CLOSED	HO29, Pier 29 yard	08/11/2018 01:21	5584	INLET STATUS	SDIHO293620	722	Followup Work Not Required
10516	08/8/2018 09:45	McLean, Robert	CLOSED	HO01, Pier 1 yard	08/8/2018 10:52	6460	INLET STATUS	SDIHO010162	290	Followup Work Not Required
10520	08/8/2018 09:15	McLean, Robert	CLOSED	HO08, Aloha Tower Market Place parking	08/15/2018 12:18	6464	INLET STATUS	SDIHO081284	238	Followup Work Required
10554	08/8/2018 09:05	McLean, Robert	CLOSED	HO09, Irwin Park	08/8/2018 10:32	6501	INLET STATUS	SDIHO091308	298	Followup Work Required
10523	08/8/2018 08:50	McLean, Robert	CLOSED	HO09, Irwin Park	08/8/2018 10:30	6470	INLET STATUS	SDIHO091294	300	Followup Work Required
10551	08/8/2018 08:45	McLean, Robert	CLOSED	HO09, Irwin Park	08/8/2018 10:36	6498	INLET STATUS	SDIHO091290	295	Followup Work Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
10555	08/8/2018 08:35	McLean, Robert	CLOSED	HO09, Irwin Park	08/8/2018 10:24	6502	INLET STATUS	SDIHO091310	297	Followup Work Required
10553	08/8/2018 08:25	McLean, Robert	CLOSED	HO09, Irwin Park	08/8/2018 10:20	6500	INLET STATUS	SDIHO091296	296	Followup Work Required
10552	08/8/2018 08:10	McLean, Robert	CLOSED	HO09, Irwin Park	08/8/2018 10:15	6499	INLET STATUS	SDIHO091292	294	Followup Work Required
10530	08/8/2018 08:03	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/8/2018 10:13	6477	INLET STATUS	SDIHO091470	307	Followup Work Not Required
10529	08/8/2018 08:02	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/8/2018 10:11	6476	INLET STATUS	SDIHO091478	311	Followup Work Not Required
10522	08/8/2018 08:00	McLean, Robert	CLOSED	HO08, Aloha Tower Market Place parking	08/15/2018 12:35	6466	INLET STATUS	SDIHO081288	236	Followup Work Not Required
10506	08/8/2018 08:00	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/8/2018 10:06	6448	INLET STATUS	SDIHO091610	347	Followup Work Not Required
10488	08/8/2018 06:42	McLean, Robert	CLOSED	HO38, Commercial Fishing Village	08/8/2018 06:46	6378	OPEN LINE	SDOHO385003	4	Followup Work Not Required
10515	08/3/2018 06:30	McLean, Robert	CLOSED	HO02, Pier 2 yard	08/3/2018 08:56	6459	INLET STATUS	SDIHO010172	176	Followup Work Not Required
10559	08/2/2018 08:20	McLean, Robert	CLOSED	HO11, Pier 11 shed	08/2/2018 09:03	6506	INLET STATUS	SDIHO111796	157	Followup Work Not Required
10517	08/2/2018 12:05	McLean, Robert	CLOSED	HO01, Pier 1 container yard	08/2/2018 12:52	6461	INLET STATUS	SDIHO010152	266	Followup Work Not Required
10519	08/2/2018 12:00	McLean, Robert	CLOSED	HO01, Pier 1 container yard	08/2/2018 12:51	6463	INLET STATUS	SDIHO010112	272	Followup Work Not Required
10518	08/2/2018 11:55	McLean, Robert	CLOSED	HO01, Pier 1 container yard	08/2/2018 12:47	6462	INLET STATUS	SDIHO010202	267	Followup Work Not Required
10513	08/2/2018 08:20	McLean, Robert	CLOSED	HO11, Pier 11 shed	08/2/2018 09:00	6457	INLET STATUS	SDIHO111766	633	Followup Work Not Required
10556	08/2/2018 08:20	McLean, Robert	CLOSED	HO11, Pier 11 shed	08/2/2018 08:57	6503	INLET STATUS	SDIHO111764	159	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
10557	08/2/2018 08:20	McLean, Robert	CLOSED	HO11, Pier 11 shed	08/2/2018 08:51	6504	INLET STATUS	SDIHO111798	158	Followup Work Required
10558	08/2/2018 08:20	McLean, Robert	CLOSED	HO11, Pier 11 shed	08/2/2018 08:54	6505	INLET STATUS	SDIHO111796	157	Followup Work Not Required
10560	08/2/2018 08:20	McLean, Robert	CLOSED	HO11, Pier 11 shed	08/2/2018 08:55	6507	INLET STATUS	SDIHO111794	160	Followup Work Not Required
10543	08/1/2018 06:32	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 05:52	6490	INLET STATUS	SDIHO091648	338	Followup Work Not Required
10537	08/1/2018 01:07	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:07	6484	INLET STATUS	SDIHO091456	305	Followup Work Not Required
10508	08/1/2018 12:48	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:36	6450	INLET STATUS	SDIHO091356	332	Followup Work Required
10509	08/1/2018 12:46	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:33	6451	INLET STATUS	SDIHO091360	331	Followup Work Required
10510	08/1/2018 12:45	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:30	6452	INLET STATUS	SDIHO091362	330	Followup Work Required
10511	08/1/2018 12:44	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:27	6453	INLET STATUS	SDIHO091364	326	Followup Work Required
10525	08/1/2018 12:42	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:20	6472	INLET STATUS	SDIHO091432	318	Followup Work Required
10526	08/1/2018 12:41	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:18	6473	INLET STATUS	SDIHO091434	317	Followup Work Required
10503	08/1/2018 12:40	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:16	6445	INLET STATUS	SDIHO091572	344	Followup Work Required
10505	08/1/2018 12:38	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:11	6447	INLET STATUS	SDIHO091624	346	Followup Work Required
10539	08/1/2018 12:37	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:07	6486	INLET STATUS	SDIHO091630	339	Followup Work Not Required
10540	08/1/2018 12:36	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:05	6487	INLET STATUS	SDIHO091622	340	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
10541	08/1/2018 12:35	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:01	6488	INLET STATUS	SDIHO091620	341	Followup Work Not Required
10542	08/1/2018 12:34	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 05:52	6489	INLET STATUS	SDIHO091604	342	Followup Work Not Required
10507	08/1/2018 12:34	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/8/2018 07:58	6449	INLET STATUS	SDIHO091608	343	Followup Work Not Required
10544	08/1/2018 12:33	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 05:48	6491	INLET STATUS	SDIHO091650	337	Followup Work Not Required
10538	08/1/2018 12:30	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:37	6485	INLET STATUS	SDIHO091656	336	Followup Work Required
10531	08/1/2018 12:30	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:13	6478	INLET STATUS	SDIHO091462	302	Followup Work Not Required
10532	08/1/2018 12:30	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 05:45	6479	INLET STATUS	SDIHO091652	335	Followup Work Not Required
10527	08/1/2018 12:28	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:32	6474	INLET STATUS	SDIHO091654	334	Followup Work Not Required
10528	08/1/2018 12:27	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 02:07	6475	INLET STATUS	SDIHO091486	301	Followup Work Not Required
10533	08/1/2018 12:25		CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:28	6480	INLET STATUS	SDIHO091488	314	Followup Work Not Required
10546	08/1/2018 12:25	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 02:08	6493	INLET STATUS	SDIHO091490	315	Followup Work Not Required
10534	08/1/2018 12:23	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:23	6481	INLET STATUS	SDIHO091480	312	Followup Work Not Required
10545	08/1/2018 12:22	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:25	6492	INLET STATUS	SDIHO091482	313	Followup Work Not Required
10535	08/1/2018 12:20	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:17	6482	INLET STATUS	SDIHO091472	308	Followup Work Not Required
10547	08/1/2018 12:18	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:17	6494	INLET STATUS	SDIHO091474	309	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
10536	08/1/2018 12:08	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:13	6483	INLET STATUS	SDIHO091464	303	Followup Work Not Required
10549	08/1/2018 12:05	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:06	6496	INLET STATUS	SDIHO091458	306	Followup Work Not Required
10524	08/1/2018 12:00	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	08/2/2018 07:25	6471	INLET STATUS	SDIHO091430	319	Followup Work Required
10550	08/1/2018 11:58		CLOSED	HO09, Aloha Tower Drive	08/1/2018 01:05	6497	INLET STATUS	SDIHO091452	246	
10491	08/1/2018 08:48	McLean, Robert	CLOSED	HO31, Pier 31 entrance road	08/1/2018 10:17	6415	INLET STATUS	SDIHO313968	442	Followup Work Required
10490	08/1/2018 08:45	McLean, Robert	CLOSED	HO31, Roadway between HECO and	08/1/2018 10:20	6414	INLET STATUS	SDIHO313972	533	Followup Work Not Required
10495	08/1/2018 08:35	McLean, Robert	CLOSED	HO31, Pier 31 Shed	08/1/2018 10:16	6419	INLET STATUS	SDIHO313954	697	Followup Work Not Required
10494	08/1/2018 08:33	McLean, Robert	CLOSED	HO31, Pier 31 shed	08/1/2018 10:14	6418	INLET STATUS	SDIHO313958	636	Followup Work Not Required
10493	08/1/2018 08:28	McLean, Robert	CLOSED	HO30,	08/1/2018 10:13	6417	INLET STATUS	SDIHO313924	520	Followup Work Not Required
10492	08/1/2018 08:01	McLean, Robert	CLOSED	HO30,	08/1/2018 08:26	6416	INLET STATUS	SDIHO313904	521	Followup Work Not Required
10499	08/1/2018 07:30	McLean, Robert	CLOSED	HO31, Pier 31 yard	08/1/2018 07:27	6423	OPEN LINE	SDOHO314049	157	Followup Work Not Required
10498	08/1/2018 06:30	McLean, Robert	CLOSED	HO31, Pier 31 yard	08/1/2018 07:14	6422	INLET STATUS	SDIHO314130	445	Followup Work Not Required
10548	08/1/2018 12:07		CLOSED	HO09, Aloha Tower Market Place	08/1/2018 01:10	6495	INLET STATUS	SDIHO091466	304	Followup Work Not Required
10497	07/27/2018 12:30	McLean, Robert	CLOSED	HO31, Pier 31 Shed	07/30/2018 01:36	6421	INLET STATUS	SDIHO313902	211	Followup Work Not Required
10496	07/27/2018 12:25	McLean, Robert	CLOSED	HO31, Pier 31 Shed	07/27/2018 01:43	6420	INLET STATUS	SDIHO313922	143	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
10482	07/26/2018 08:30	McLean, Robert	CLOSED	HO18, Pier 18	07/26/2018 10:44	6337	INLET STATUS	SDIHO182310	360	Followup Work Not Required
10485	07/26/2018 08:00	McLean, Robert	CLOSED	HO18, Pier 18	07/26/2018 11:21	6359	INLET STATUS	SDIHO182304	364	Followup Work Not Required
10486	07/26/2018 07:30	McLean, Robert	CLOSED	HO18, Pier 18 Hawaii Pilots Association	07/26/2018 11:31	6360	INLET STATUS	SDIHO182302	365	Followup Work Not Required
10489	07/26/2018 07:15	McLean, Robert	CLOSED	HO18, Pier 18	07/26/2018 10:31	6379	INLET STATUS	SDIHO182306	439	Followup Work Required
10483	07/26/2018 06:45	McLean, Robert	CLOSED	HO18, Pier 18	07/26/2018 10:37	6357	INLET STATUS	SDIHO182308	363	Followup Work Not Required
10484	07/26/2018 06:45	McLean, Robert	CLOSED	HO18, Pier 18, Harbors Division	07/26/2018 11:05	6358	INLET STATUS	SDIHO182320	366	Followup Work Not Required
10487	07/26/2018 06:30	McLean, Robert	CLOSED	HO19, Pier 19 Shed	07/26/2018 11:36	6377	INLET STATUS	SDIHO192410	219	Followup Work Not Required
9891	06/21/2018 09:30	Medeiros, Thomas	CLOSED	HO08, Aloha Tower Market Place parking	06/21/2018 10:12	6273	INLET STATUS	SDIHO081240	240	Followup Work Not Required
9890	06/21/2018 09:00		CLOSED	HO08, Nimitz Highway	06/21/2018 10:07	6272	INLET STATUS	SDIHO081244	243	Followup Work Not Required
9888	06/21/2018 08:00	McLean, Robert	CLOSED	HO38, Commercial Fishing Village	06/21/2018 10:05	6270	OPEN LINE	SDOHO385059	3	Followup Work Not Required
9889	06/20/2018 09:00	McLean, Robert	CLOSED	HO38, Commercial Fishing Village	06/20/2018 12:26	6271	OPEN LINE	SDOHO385057	2	Followup Work Not Required
9709	04/30/2018 12:00	McLean, Robert	CLOSED	pier 31 shed open area	07/24/2018 05:33		OPEN LINE	SDOHO314405	238	Followup Work Required
9716	04/23/2018 12:32		CLOSED	HO26, Pier 26	04/23/2018 12:33		INLET STATUS	SDIHO263592	136	Followup Work Not Required
9557	04/13/2018 08:30	McLean, Robert	CLOSED	HO23, DHX yard; Former molasses	04/13/2018 09:07	5713	INLET STATUS	SDIHO232680	397	Followup Work Not Required
9486	04/13/2018 08:30	McLean, Robert	CLOSED	HO23, DHX yard; Former molasses	04/13/2018 09:04	5562	INLET STATUS	SDIHO232682	375	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
9559	04/13/2018 08:10	McLean, Robert	CLOSED	HO39, Young Brothers entrance	04/13/2018 08:59	5715	INLET STATUS	SDIHO395612	582	Followup Work Not Required
9563	04/13/2018 07:55	McLean, Robert	CLOSED	HO40, Young Brothers entrance	04/13/2018 08:54	5719	INLET STATUS	SDIHO405610	541	Followup Work Not Required
9569	04/13/2018 07:20		CLOSED	HO01, Pier 1 container yard	04/13/2018 08:50	5725	INLET STATUS	SDIHO010208	268	Followup Work Not Required
9570	04/13/2018 07:10		CLOSED	HO01, Pier 1 container yard	04/13/2018 08:46	5726	INLET STATUS	SDIHO010224	274	Followup Work Not Required
9482	04/13/2018 07:00	McLean, Robert	CLOSED	HO21, Pier 21 between Pier 21	04/13/2018 08:40	5558	INLET STATUS	SDIHO212792	358	Followup Work Not Required
9601	04/12/2018 08:10		CLOSED	pier 15 scuppers	04/12/2018 01:40	5793	INLET STATUS	SDIHO154367	4362	Followup Work Not Required
9504	04/12/2018 08:00	McLean, Robert	CLOSED	pier 15 scuppers	04/12/2018 01:39	5580	INLET STATUS	SDIHO154358	4358	Followup Work Not Required
9568	04/9/2018 09:05	McLean, Robert	CLOSED	HO18, Pier 18	04/9/2018 01:05	5724	INLET STATUS	SDIHO182310	360	Followup Work Required
9567	04/9/2018 10:25	McLean, Robert	CLOSED	HO18, Pier 18	04/9/2018 01:23	5723	INLET STATUS	SDIHO182306	439	Followup Work Not Required
9564	04/9/2018 09:10	McLean, Robert	CLOSED	HO18, Pier 18 Hawaii Pilots Association	04/9/2018 01:10	5720	INLET STATUS	SDIHO182302	365	Followup Work Not Required
9565	04/9/2018 09:10	McLean, Robert	CLOSED	HO18, Pier 18, Harbors Division	04/9/2018 01:15	5721	INLET STATUS	SDIHO182320	366	Followup Work Not Required
9485	04/9/2018 09:00	McLean, Robert	CLOSED	HO23, DHX yard; Former molasses	04/9/2018 12:57	5561	INLET STATUS	SDIHO232442	376	Followup Work Not Required
9558	04/9/2018 08:50		CLOSED	HO23, DHX yard; Former molasses	04/9/2018 12:52	5714	INLET STATUS	SDIHO232438	373	Followup Work Not Required
9483	04/9/2018 08:45	McLean, Robert	CLOSED	HO23, DHX yard; Former molasses	04/9/2018 12:34	5559	INLET STATUS	SDIHO232440	372	Followup Work Not Required
9484	04/9/2018 08:30	McLean, Robert	CLOSED	HO23, DHX yard; Former molasses	04/9/2018 12:32	5560	INLET STATUS	SDIHO232448	374	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
9531	04/9/2018 08:00	McLean, Robert	CLOSED	HO02, Pier 2 yard	04/9/2018 12:22	5692	INLET STATUS	SDIHO020176	178	Followup Work Not Required
9674	04/9/2018 07:22	McLean, Robert	CLOSED	HO26, Pier 26	04/9/2018 12:25	5999	INLET STATUS	SDIHO263592	136	Followup Work Required
9675	04/9/2018 07:12	McLean, Robert	CLOSED	HO26, Pier 26	04/9/2018 12:26	5999	INLET STATUS	SDIHO263572	419	Followup Work Required
9710	03/20/2018 12:00		CLOSED	pier 31 shed open area	04/23/2018 12:08		OPEN LINE	SDOHO314401	232	Followup Work Not Required
9711	03/20/2018 12:00	McLean, Robert	CLOSED	pier 31 shed open area	04/23/2018 12:13		OPEN LINE	SDOHO314399	231	Followup Work Not Required
9712	03/20/2018 12:00		CLOSED	pier 31 shed open area	04/23/2018 12:17		OPEN LINE	SDOHO314395	229	Followup Work Not Required
9713	03/20/2018 12:00		CLOSED	pier 31 shed open area	04/23/2018 12:23		OPEN LINE	SDOHO314393	235	Followup Work Not Required
9714	03/20/2018 12:00		CLOSED	pier 31 shed open area	04/23/2018 12:26		OPEN LINE	SDOHO314397	230	Followup Work Not Required
9715	03/20/2018 12:00	McLean, Robert	CLOSED		04/23/2018 12:31		PERMANENT_STO	0	0	Followup Work Not Required
9707	03/20/2018 12:00	McLean, Robert	CLOSED	HO30,	04/23/2018 12:01		INLET STATUS	SDIHO313904	521	Followup Work Not Required
9497	03/20/2018 09:55		CLOSED	HO18, Pier 18 roadway and parking	03/20/2018 01:15	5573	INLET STATUS	SDIHO182430	370	Followup Work Not Required
9539	03/20/2018 09:01	McLean, Robert	CLOSED	HO31, Roadway between HECO and	03/20/2018 11:43	5694	INLET STATUS	SDIHO313972	533	Followup Work Not Required
9553	03/20/2018 08:55	McLean, Robert	CLOSED	HO30,	03/20/2018 12:01	5706	INLET STATUS	SDIHO313924	520	Followup Work Not Required
9552	03/20/2018 08:45	McLean, Robert	CLOSED	HO31, Pier 31 shed	03/20/2018 12:04	5705	INLET STATUS	SDIHO313958	636	Followup Work Not Required
9554	03/20/2018 08:45	McLean, Robert	CLOSED	HO30,	03/20/2018 01:06	5707	INLET STATUS	SDIHO313904	521	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
9543	03/20/2018 08:34	McLean, Robert	CLOSED	HO32, Pier 32 shed	03/20/2018 12:41	5698	INLET STATUS	SDIHO324232	461	Followup Work Required
9542	03/20/2018 08:16	McLean, Robert	CLOSED	HO34, Pier 34	03/20/2018 12:48	5697	INLET STATUS	SDIHO344352	470	Followup Work Not Required
9550	03/20/2018 08:15	McLean, Robert	CLOSED	pier 31 shed open area	03/20/2018 01:11	5704	OPEN LINE STATUS	SDOHO314393	235	Followup Work Not Required
9545	03/20/2018 08:11	McLean, Robert	CLOSED	pier 31 shed open area	03/20/2018 01:10	5704	OPEN LINE STATUS	SDOHO314395	229	Followup Work Not Required
9540	03/20/2018 08:10	McLean, Robert	CLOSED	HO32, Pier 32 shed	03/20/2018 12:34	5695	INLET STATUS	SDIHO324202	464	Followup Work Not Required
9547	03/20/2018 08:06	McLean, Robert	CLOSED	pier 31 shed open area	03/20/2018 10:15	5704	OPEN LINE STATUS	SDOHO314399	231	Followup Work Not Required
9541	03/20/2018 08:05	McLean, Robert	CLOSED	HO32, Pier 32 shed	03/20/2018 12:38	5696	INLET STATUS	SDIHO324204	463	Followup Work Not Required
9546	03/20/2018 08:04	McLean, Robert	CLOSED	pier 31 shed open area	03/20/2018 01:12	5704	OPEN LINE STATUS	SDOHO314397	230	Followup Work Not Required
9551	03/20/2018 07:49	McLean, Robert	CLOSED	pier 31 shed open area	03/20/2018 01:03	5704	OPEN LINE STATUS	SDOHO314405	238	Followup Work Required
9544	03/20/2018 07:12	McLean, Robert	CLOSED	HO31, Pier 31 yard	03/20/2018 07:17	5703	OPEN LINE STATUS	SDOHO314071	159	Followup Work Not Required
9548	03/20/2018 06:55		CLOSED	pier 31 shed open area	03/20/2018 01:08	5704	OPEN LINE STATUS	SDOHO314401	232	Followup Work Not Required
9549	03/20/2018 06:45	McLean, Robert	CLOSED	pier 31 shed open area	03/20/2018 06:58	5704	OPEN LINE STATUS	SDOHO314403	234	Followup Work Required
9562	03/9/2018 07:29	McLean, Robert	CLOSED	HO02,	03/9/2018 07:31	5718	INLET STATUS	SDIHO010270	187	Followup Work Not Required
9505	03/9/2018 07:16	McLean, Robert	CLOSED	HO02,	03/9/2018 07:17	5581	INLET STATUS	SDIHO010286	195	Followup Work Not Required
9566	03/9/2018 06:56	McLean, Robert	CLOSED	HO08, Aloha Tower	03/9/2018 07:02	5722	INLET STATUS	SDIHO081260	242	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
9503	03/9/2018 06:44	McLean, Robert	CLOSED	HO09, Aloha Tower Market Place	03/9/2018 06:49	5579	INLET STATUS	SDIHO091384	323	Followup Work Required
9495	03/8/2018 08:05	McLean, Robert	CLOSED	HO18, Parking lot between Pier 19	03/8/2018 09:05	5571	INLET STATUS	SDIHO182434	371	Followup Work Not Required
9496	03/8/2018 08:02	McLean, Robert	CLOSED	HO18, Pier 18 roadway and parking	03/8/2018 09:03	5572	INLET STATUS	SDIHO182432	368	Followup Work Not Required
9498	03/8/2018 07:42	McLean, Robert	CLOSED	HO19, Pier 19 Ferry Terminal	03/8/2018 07:43	5574	INLET STATUS	SDIHO192520	398	Followup Work Not Required
9501	03/8/2018 07:14	McLean, Robert	CLOSED	HO23, Ferry Terminal parking lot	03/8/2018 07:16	5577	INLET STATUS	SDIHO192562	379	Followup Work Not Required
9499	03/8/2018 07:00	McLean, Robert	CLOSED	HO23, Ferry Terminal parking lot	03/8/2018 07:04	5575	INLET STATUS	SDIHO192554	378	Followup Work Not Required
9500	03/8/2018 06:52	McLean, Robert	CLOSED	HO19, Ferry Terminal parking lot	03/8/2018 06:58	5576	INLET STATUS	SDIHO192544	377	Followup Work Not Required
9494	03/7/2018 08:50		CLOSED	HO23, DHX yard	03/7/2018 11:51	5570	INLET STATUS	SDIHO232686	399	Followup Work Not Required
9492	03/7/2018 08:05	McLean, Robert	CLOSED	HO23, road fronting loading dock for DHX	03/7/2018 11:50	5568	INLET STATUS	SDIHO232812	400	Followup Work Not Required
9489	03/7/2018 07:50	McLean, Robert	CLOSED	HO23, road on Diamond Head side	03/7/2018 11:24	5565	INLET STATUS	SDIHO233008	403	Followup Work Not Required
9493	03/7/2018 07:14	McLean, Robert	CLOSED	HO23, road near Hawaii Flour Mills	03/7/2018 11:40	5569	INLET STATUS	SDIHO232814	401	Followup Work Not Required
9491	03/7/2018 06:55	McLean, Robert	CLOSED	HO23, road on Diamond Head side	03/7/2018 11:33	5567	INLET STATUS	SDIHO233030	402	Followup Work Required
9490	03/6/2018 08:04	McLean, Robert	CLOSED	HO23, road on Diamond Head side	03/6/2018 10:59	5566	INLET STATUS	SDIHO233006	404	Followup Work Not Required
9488	03/6/2018 08:00	McLean, Robert	CLOSED	HO23, McCabe, Hamilton and Renny,	03/7/2018 05:38	5564	INLET STATUS	SDIHO233010	405	Followup Work Not Required
9487	03/6/2018 07:55	McLean, Robert	CLOSED	HO23, McCabe, Hamilton and Renny,	03/6/2018 10:54	5563	INLET STATUS	SDIHO233010	405	Followup Work Not Required

Inspection Id	Date Inspected	Inspected By	Status	Location	Finish Date	Work Order Id	Entity Type	Entity Uid	Entity Sid	Resolution
9502	03/6/2018 07:44	McLean, Robert	CLOSED	HO23, Roadway at northeast corner of	03/6/2018 10:50	5578	INLET STATUS	SDIHO233002	406	Followup Work Not Required
9556	03/6/2018 07:30	McLean, Robert	CLOSED	HO25, Pier 25	03/6/2018 10:46	5712	INLET STATUS	SDIHO243502	685	Followup Work Not Required
9555	03/6/2018 07:27	McLean, Robert	CLOSED	HO24, Sause Brothers Parking lot	03/6/2018 10:35	5708	INLET STATUS	SDIHO243202	420	Followup Work Not Required
9561	03/6/2018 07:19	McLean, Robert	CLOSED	HO26, Former Pier 26 Transit Shed	03/6/2018 10:27	5717	INLET STATUS	SDIHO263552	412	Followup Work Not Required
9560	03/6/2018 07:02	McLean, Robert	CLOSED	HO26, Former Pier 26 Transit Shed	03/6/2018 10:41	5716	INLET STATUS	SDIHO263554	418	Followup Work Not Required
9600	03/6/2018 06:50	McLean, Robert	CLOSED	HO26, Former Pier 26 Transit Shed	03/6/2018 10:18	5791	INLET STATUS	SDIHO263556	417	Followup Work Not Required
8886	01/3/2018 07:00	McLean, Robert	CLOSED	HO26, Pier 26	01/5/2018 10:12	4921	INLET STATUS	SDIHO263572	419	Followup Work Required

Attachment 17

Permanent BMP Inspection Log

PBMP Inspection Log

Work Order Id	Priority	Status	Submit To	Proj Start Date	Description	Actual Start	Actual Finish	Location	Proj Finish Date
5584	3	CLOSED	McLean, Robert	01/25/2018 12:24	Inspect Comprehensive & Clean BMP	08/11/2018 06:30	08/11/2018 02:00	HO29, Pier 29 yard	02/24/2018 12:24
5585	3	CLOSED	McLean, Robert	01/25/2018 12:25	Inspect Comprehensive & Clean BMP	01/1/2018 12:00	09/8/2018 12:00	HO29, Pier 29 yard	02/24/2018 12:25
5704	3	CLOSED	McLean, Robert	02/1/2018 11:24	Inspect Comprehensive & Clean BMP	03/20/2018 06:39	03/20/2018 10:40	Pier 31	03/3/2018 11:24
6892	3	CLOSED	McLean, Robert	11/8/2018 01:50	Replace	10/30/2018 06:30	11/8/2018 07:30	PIER 12	11/8/2018 01:50

Attachment 18

Street Sweeper Log

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
5735	Bulk Waste Disposal	3	CLOSED		02/5/2018 06:54	02/5/2018 07:37		
6124	Bulk Waste Disposal	3	CLOSED	McLean, Robert		05/11/2018 12:00		
6442	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/30/2018 06:30	07/31/2018 02:00		
6955	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/3/2018 07:55	12/3/2018 08:00		
6967	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/7/2018 09:17	12/7/2018 09:21		
6972	Sweep - Weekly	3	CANCEL	McLean, Robert	12/10/2018 06:00	12/14/2018 02:30		
5531	Refuse Collect Ad Hoc	3	CLOSED		01/11/2018 06:30	01/12/2018 08:37	Green Waste	0.97
5536	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	01/16/2018 06:30	01/17/2018 08:30	Green Waste	1.4
5942	Bulk Waste Disposal	3	CLOSED	Gomes, Gregory	03/13/2018 06:30	03/14/2018 02:00	Green Waste	2.21
6032	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/10/2018 06:30	04/10/2018 02:00	Green Waste	1.82
6108	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/3/2018 06:30	05/3/2018 02:00	Green Waste	0.94
6278	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/25/2018 06:30	06/27/2018 12:00	Green Waste	4.84
6371	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/25/2018 06:30	07/25/2018 10:00	Green Waste	2.43
6804	Bulk Waste Disposal	3	CLOSED	Gomes, Gregory	10/9/2018 06:30	10/9/2018 09:30	Green Waste	1.97
6962	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/5/2018 06:30	12/6/2018 09:00	Green Waste	1
7005	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/19/2018 08:45	12/19/2018 09:18	Green Waste	
4923	Bulk Waste Disposal	3	CLOSED		01/2/2018 07:37	01/2/2018 07:40	h Tank / Fire Ext	
4930	Bulk Waste Disposal	3	CLOSED		01/4/2018 08:00	01/4/2018 08:03	h Tank / Fire Ext	
4931	Bulk Waste Disposal	3	CLOSED		01/4/2018 08:10	01/4/2018 08:16	h Tank / Fire Ext	
5538	Bulk Waste Disposal	3	CLOSED		01/16/2018 09:33	01/16/2018 09:35	h Tank / Fire Ext	
5539	Bulk Waste Disposal	3	CLOSED		01/16/2018 09:50	01/16/2018 09:54	h Tank / Fire Ext	
5544	Bulk Waste Disposal	3	CLOSED		01/18/2018 10:00	01/18/2018 10:03	h Tank / Fire Ext	
5553	Bulk Waste Disposal	3	CLOSED		01/23/2018 06:57	01/23/2018 06:59	h Tank / Fire Ext	
5597	Bulk Waste Disposal	3	CLOSED		01/26/2018 12:00	01/26/2018 12:05	h Tank / Fire Ext	
5598	Bulk Waste Disposal	3	CLOSED		01/26/2018 12:15	01/26/2018 12:20	h Tank / Fire Ext	
5711	Bulk Waste Disposal	3	CLOSED		02/1/2018 12:01	02/1/2018 12:07	h Tank / Fire Ext	
5739	Bulk Waste Disposal	3	CLOSED		02/5/2018 06:50	02/5/2018 06:53	h Tank / Fire Ext	
5752	Bulk Waste Disposal	3	CLOSED		02/9/2018 07:24	02/9/2018 07:31	h Tank / Fire Ext	
5808	Bulk Waste Disposal	3	CLOSED		02/13/2018 09:14	02/13/2018 09:18	h Tank / Fire Ext	
5820	Bulk Waste Disposal	3	CLOSED		02/16/2018 08:06	02/16/2018 08:15	h Tank / Fire Ext	
5831	Bulk Waste Disposal	3	CLOSED		02/23/2018 07:20	02/23/2018 07:26	h Tank / Fire Ext	
5849	Bulk Waste Disposal	3	CLOSED		02/27/2018 06:51	02/27/2018 06:52	h Tank / Fire Ext	
5855	Bulk Waste Disposal	3	CLOSED		02/28/2018 11:50	02/28/2018 12:00	h Tank / Fire Ext	
5864	Bulk Waste Disposal	3	CLOSED		03/2/2018 01:00	03/2/2018 01:05	h Tank / Fire Ext	
5868	Bulk Waste Disposal	3	CLOSED		03/5/2018 07:12	03/5/2018 07:16	h Tank / Fire Ext	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
5887	Bulk Waste Disposal	3	CLOSED		03/7/2018 07:36	03/7/2018 07:39	n Tank / Fire Ext	
5933	Bulk Waste Disposal	3	CLOSED		03/12/2018 06:31	03/12/2018 06:32	n Tank / Fire Ext	
5987	Bulk Waste Disposal	3	CLOSED		03/27/2018 07:13	03/27/2018 02:00	n Tank / Fire Ext	
6003	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/2/2018 12:40	04/2/2018 12:45	n Tank / Fire Ext	
6006	Bulk Waste Disposal	3	CLOSED		04/2/2018 07:03	04/3/2018 07:10	n Tank / Fire Ext	
6018	Bulk Waste Disposal	3	CLOSED		04/5/2018 11:50	04/5/2018 11:55	n Tank / Fire Ext	
6030	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/9/2018 12:40	04/9/2018 12:50	n Tank / Fire Ext	
6071	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/23/2018 11:51	04/23/2018 11:52	n Tank / Fire Ext	
6093	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/1/2018 09:05	05/1/2018 09:15	n Tank / Fire Ext	
6105	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/3/2018 12:00	05/3/2018 12:20	n Tank / Fire Ext	
6114	Bulk Waste Disposal	3	CLOSED	Bautista, Frederick	05/7/2018 08:03	05/7/2018 08:05	n Tank / Fire Ext	
6116	Bulk Waste Disposal	3	CLOSED	Bautista, Frederick	05/7/2018 08:15	05/7/2018 08:18	n Tank / Fire Ext	
6119	Bulk Waste Disposal	3	CLOSED	Bautista, Frederick	05/8/2018 06:50	05/8/2018 06:52	n Tank / Fire Ext	
6125	Bulk Waste Disposal	3	CLOSED	Bautista, Frederick	05/11/2018 06:47	05/11/2018 06:49	n Tank / Fire Ext	
6135	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/15/2018 06:50	05/15/2018 06:52	n Tank / Fire Ext	
6137	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/15/2018 07:11	05/15/2018 07:23	n Tank / Fire Ext	
6149	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/18/2018 11:45	05/18/2018 11:50	n Tank / Fire Ext	
6161	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/24/2018 07:00	05/24/2018 07:02	n Tank / Fire Ext	
6187	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/25/2018 07:33	05/25/2018 07:36	n Tank / Fire Ext	
6196	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/29/2018 07:29	05/29/2018 07:57	n Tank / Fire Ext	
6228	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/4/2018 07:19	06/4/2018 08:12	n Tank / Fire Ext	
6237	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/7/2018 06:55	06/7/2018 06:56	n Tank / Fire Ext	
6246	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/8/2018 06:55	06/8/2018 07:00	n Tank / Fire Ext	
6254	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/12/2018 06:53	06/12/2018 06:55	n Tank / Fire Ext	
6256	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/13/2018 06:59	06/13/2018 07:34	n Tank / Fire Ext	
6267	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/19/2018 06:39	06/19/2018 06:42	n Tank / Fire Ext	
6280	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/22/2018 07:20	06/22/2018 07:23	n Tank / Fire Ext	
6283	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/25/2018 12:30	06/25/2018 12:40	n Tank / Fire Ext	
6284	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/25/2018 12:45	06/25/2018 12:55	n Tank / Fire Ext	
6290	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/28/2018 07:06	06/28/2018 07:07	n Tank / Fire Ext	
6331	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/16/2018 06:43	07/16/2018 06:47	n Tank / Fire Ext	
6332	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/16/2018 06:56	07/16/2018 07:01	n Tank / Fire Ext	
6333	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/16/2018 07:50	07/16/2018 07:59	n Tank / Fire Ext	
6335	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/17/2018 07:18	07/17/2018 07:28	n Tank / Fire Ext	
6342	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/19/2018 07:15	07/19/2018 07:18	n Tank / Fire Ext	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6346	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/20/2018 07:07	07/20/2018 07:08	h Tank / Fire Ext	
6354	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/24/2018 07:25	07/24/2018 07:28	h Tank / Fire Ext	
6374	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/25/2018 06:58	07/25/2018 07:00	h Tank / Fire Ext	
6410	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/26/2018 12:00	07/26/2018 12:10	h Tank / Fire Ext	
6430	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/27/2018 07:16	07/27/2018 07:19	h Tank / Fire Ext	
6469	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/31/2018 07:30	08/31/2018 07:33	h Tank / Fire Ext	
6509	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/1/2018 07:31	08/1/2018 07:37	h Tank / Fire Ext	
6524	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/3/2018 06:51	08/3/2018 06:53	h Tank / Fire Ext	
6525	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/3/2018 08:20	08/3/2018 08:25	h Tank / Fire Ext	
6527	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/6/2018 06:58	08/6/2018 07:03	h Tank / Fire Ext	
6533	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/7/2018 07:22	08/7/2018 07:27	h Tank / Fire Ext	
6567	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/9/2018 09:39	08/9/2018 09:41	h Tank / Fire Ext	
6570	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/10/2018 07:20	08/10/2018 07:23	h Tank / Fire Ext	
6582	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/13/2018 07:31	08/13/2018 07:35	h Tank / Fire Ext	
6599	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/20/2018 07:25	08/20/2018 07:32	h Tank / Fire Ext	
6655	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/29/2018 12:00	08/29/2018 03:00	h Tank / Fire Ext	
6669	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/4/2018 12:30	09/4/2018 12:40	h Tank / Fire Ext	
6693	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/10/2018 07:40	09/10/2018 07:58	h Tank / Fire Ext	
6710	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/14/2018 12:00	09/14/2018 12:05	h Tank / Fire Ext	
6714	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/17/2018 11:45	09/17/2018 11:50	h Tank / Fire Ext	
6715	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/17/2018 11:45	09/17/2018 11:55	h Tank / Fire Ext	
6764	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/27/2018 12:10	09/27/2018 12:20	h Tank / Fire Ext	
6775	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/2/2018 09:40	10/2/2018 09:45	h Tank / Fire Ext	
6776	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/2/2018 11:45	10/2/2018 11:50	h Tank / Fire Ext	
6794	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/4/2018 08:15	10/4/2018 08:25	h Tank / Fire Ext	
6806	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/9/2018 08:30	10/9/2018 08:35	h Tank / Fire Ext	
6807	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/9/2018 08:00	10/9/2018 08:15	h Tank / Fire Ext	
6819	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/12/2018 07:56	10/12/2018 08:05	h Tank / Fire Ext	
6834	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/17/2018 09:10	10/17/2018 09:15	h Tank / Fire Ext	
6843	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/18/2018 07:45	10/19/2018 07:58	h Tank / Fire Ext	
6847	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/22/2018 07:20	10/22/2018 07:30	h Tank / Fire Ext	
6853	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/24/2018 07:02	10/24/2018 07:08	h Tank / Fire Ext	
6854	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/25/2018 07:14	10/25/2018 07:19	h Tank / Fire Ext	
6857	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/26/2018 07:17	10/26/2018 07:24	h Tank / Fire Ext	
6864	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/29/2018 08:15	10/29/2018 08:30	h Tank / Fire Ext	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6877	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/5/2018 09:10	11/5/2018 09:14	n Tank / Fire Ext	
6878	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/5/2018 09:16	11/5/2018 09:20	n Tank / Fire Ext	
6879	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/5/2018 09:26	11/5/2018 09:35	n Tank / Fire Ext	
6891	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/8/2018 07:54	11/8/2018 08:05	n Tank / Fire Ext	
6907	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/13/2018 07:19	11/13/2018 07:28	n Tank / Fire Ext	
6942	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/29/2018 09:18	11/29/2018 09:19	n Tank / Fire Ext	
6945	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/30/2018 08:09	12/1/2018 08:13	n Tank / Fire Ext	
6957	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/3/2018 08:17	12/3/2018 08:23	n Tank / Fire Ext	
6966	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/7/2018 07:29	12/7/2018 07:35	n Tank / Fire Ext	
6986	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/13/2018 07:44	12/13/2018 07:49	n Tank / Fire Ext	
7020	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/24/2018 07:44	12/24/2018 07:54	n Tank / Fire Ext	
7035	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/27/2018 08:01	12/27/2018 08:03	n Tank / Fire Ext	
5740	Bulk Waste Disposal	3	CLOSED		02/5/2018 08:34	02/5/2018 08:40	Recycled Metal	
5884	Bulk Waste Disposal	3	CLOSED		03/7/2018 06:22	03/7/2018 06:28	Recycled Metal	
6839	ounds Maintenance Spec	3	CLOSED	McLean, Robert	10/19/2018 06:30	10/19/2018 10:00	Recycled Metal	2.02
6996	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/17/2018 06:30	12/17/2018 02:00	Recycled Metal	1.75
4925	Bulk Waste Disposal	3	CLOSED		01/2/2018 06:30	01/2/2018 02:00	Refuse	4.28
4929	Refuse Collect Ad Hoc	3	CLOSED		01/3/2018 06:30	01/3/2018 02:00	Refuse	2.37
4933	Refuse Collect Ad Hoc	3	CLOSED		01/4/2018 06:30	01/4/2018 02:00	Refuse	1.96
4934	Refuse Collect Ad Hoc	3	CLOSED		01/5/2018 06:30	01/5/2018 02:00	Refuse	2.36
5515	Refuse Collect Ad Hoc	3	CLOSED		01/8/2018 06:00	01/8/2018 02:30	Refuse	6.19
5517	Refuse Collect Ad Hoc	3	CLOSED		01/9/2018 06:30	01/9/2018 02:00	Refuse	3
5521	Refuse Collect Ad Hoc	3	CLOSED		01/10/2018 06:30	01/10/2018 02:00	Refuse	2.78
5526	Refuse Collect Ad Hoc	3	CLOSED		01/11/2018 06:30	01/11/2018 02:00	Refuse	3.44
5532	Refuse Collect Ad Hoc	3	CLOSED		01/12/2018 06:30	01/12/2018 02:00	Refuse	2.47
5534	Refuse Collect Ad Hoc	3	CLOSED		01/14/2018 06:00	01/14/2018 10:00	Refuse	3.38
5535	Refuse Collect Ad Hoc	3	CLOSED		01/16/2018 06:30	01/16/2018 02:00	Refuse	5.82
5540	Refuse Collect Ad Hoc	3	CLOSED		01/17/2018 06:30	01/17/2018 02:00	Refuse	3.14
5542	Refuse Collect Ad Hoc	3	CLOSED		01/19/2018 06:30	01/19/2018 02:00	Refuse	2.41
5547	Refuse Collect Ad Hoc	3	CLOSED		01/19/2018 06:30	01/19/2018 02:00	Refuse	2.15
5550	Refuse Collect Ad Hoc	3	CLOSED		01/22/2018 06:30	01/22/2018 02:00	Refuse	4.89
5557	Refuse Collect Ad Hoc	3	CLOSED		01/24/2018 06:30	01/24/2018 02:00	Refuse	5.08
5588	Refuse Collect Ad Hoc	3	CLOSED		01/25/2018 06:30	01/25/2018 02:00	Refuse	2.49
5591	Bulk Waste Disposal	3	CLOSED	Gomes, Gregory	01/26/2018 06:30	01/29/2018 02:00	Refuse	2.12
5596	Refuse Collect Ad Hoc	3	CLOSED		01/26/2018 06:30	01/26/2018 02:00	Refuse	2.76

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
5699	Refuse Collect Ad Hoc	3	CLOSED		01/30/2018 06:30	01/30/2018 02:00	Refuse	3.73
5702	Refuse Collect Ad Hoc	3	CLOSED		01/31/2018 06:30	01/31/2018 02:00	Refuse	4.81
5710	Refuse Collect Ad Hoc	3	CLOSED		02/1/2018 06:30	02/2/2018 02:00	Refuse	4.92
5728	Refuse Collect Ad Hoc	3	CLOSED		02/2/2018 06:30	02/2/2018 02:00	Refuse	3.04
5733	Refuse Collect Ad Hoc	3	CLOSED		02/5/2018 06:30	02/5/2018 02:00	Refuse	4.98
5742	Refuse Collect Ad Hoc	3	CLOSED		02/6/2018 06:30	02/6/2018 02:00	Refuse	3.1
5744	Refuse Collect Ad Hoc	3	CLOSED		02/7/2018 06:30	02/7/2018 02:00	Refuse	1.72
5745	Refuse Collect Ad Hoc	3	CLOSED		02/8/2018 06:30	02/8/2018 02:00	Refuse	2.2
5750	Refuse Collect Ad Hoc	3	CLOSED		02/9/2018 06:30	02/9/2018 02:00	Refuse	3.18
5803	Refuse Collect Ad Hoc	3	CLOSED		02/12/2018 06:30	02/13/2018 02:00	Refuse	5.93
5806	Refuse Collect Ad Hoc	3	CLOSED		02/13/2018 06:30	02/13/2018 02:00	Refuse	2.88
5807	Refuse Collect Ad Hoc	3	CLOSED		02/14/2018 06:30	02/14/2018 02:00	Refuse	2.53
5811	Refuse Collect Ad Hoc	3	CLOSED		02/15/2018 06:36	02/15/2018 02:00	Refuse	2.84
5813	Refuse Collect Ad Hoc	3	CLOSED		02/16/2018 06:30	02/16/2018 02:00	Refuse	2.82
5817	Refuse Collect Ad Hoc	3	CLOSED		02/18/2018 06:00	02/18/2018 10:00	Refuse	2.47
5818	Refuse Collect Ad Hoc	3	CLOSED		02/20/2018 06:37	02/20/2018 02:00	Refuse	5.01
5824	Refuse Collect Ad Hoc	3	CLOSED		02/21/2018 06:30	02/21/2018 02:00	Refuse	3.64
5829	Refuse Collect Ad Hoc	3	CLOSED		02/22/2018 06:30	02/23/2018 02:00	Refuse	2.3
5836	Refuse Collect Ad Hoc	3	CLOSED		02/23/2018 06:30	02/23/2018 02:00	Refuse	3.35
5840	Refuse Collect Ad Hoc	3	CLOSED		02/26/2018 06:30	02/26/2018 02:00	Refuse	6.87
5848	Refuse Collect Ad Hoc	3	CLOSED		02/27/2018 06:30	02/27/2018 02:00	Refuse	3.5
5853	Refuse Collect Ad Hoc	3	CLOSED		02/28/2018 06:30	02/28/2018 02:00	Refuse	2.7
5854	Refuse Collect Ad Hoc	3	CLOSED		03/1/2018 06:30	03/1/2018 02:00	Refuse	1.88
5861	Bulk Waste Disposal	3	CLOSED		03/2/2018 06:30	03/2/2018 02:00	Refuse	
5865	Refuse Collect Ad Hoc	3	CLOSED		03/5/2018 06:30	03/5/2018 02:00	Refuse	4.58
5878	Refuse Collect Ad Hoc	3	CLOSED		03/6/2018 06:30	03/6/2018 02:00	Refuse	2.32
5883	Refuse Collect Ad Hoc	3	CLOSED		03/7/2018 06:30	03/7/2018 02:00	Refuse	1.68
5885	Bulk Waste Disposal	3	CLOSED		03/7/2018 10:15	03/7/2018 11:00	Refuse	
5893	Refuse Collect Ad Hoc	3	CLOSED		03/8/2018 06:30	03/8/2018 02:00	Refuse	2.37
5924	Refuse Collect Ad Hoc	3	CLOSED		03/9/2018 06:30	03/9/2018 12:00	Refuse	1.94
5932	Refuse Collect Ad Hoc	3	CLOSED		03/12/2018 06:36	03/12/2018 02:00	Refuse	4.4
5934	Refuse Collect Ad Hoc	3	CLOSED		03/13/2018 06:31	03/13/2018 02:00	Refuse	2.53
5947	Refuse Collect Ad Hoc	3	CLOSED		03/14/2018 06:30	03/14/2018 02:00	Refuse	1.79
5948	Refuse Collect Ad Hoc	3	CLOSED		03/15/2018 06:30	03/15/2018 02:00	Refuse	2.28
5949	Refuse Collect Ad Hoc	3	CLOSED		03/16/2018 06:30	03/16/2018 02:00	Refuse	2.39

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
5965	Refuse Collect Ad Hoc	3	CLOSED		03/19/2018 06:30	03/19/2018 02:00	Refuse	5.07
5966	Refuse Collect Ad Hoc	3	CLOSED		03/20/2018 06:30	03/20/2018 02:00	Refuse	2.55
5968	Refuse Collect Ad Hoc	3	CLOSED		03/21/2018 06:30	03/21/2018 02:00	Refuse	2.93
5970	Refuse Collect Ad Hoc	3	CLOSED		03/22/2018 06:30	03/22/2018 02:00	Refuse	2.53
5976	Refuse Collect Ad Hoc	3	CLOSED		03/23/2018 06:30	03/23/2018 02:00	Refuse	2.26
5981	Refuse Collect Ad Hoc	3	CLOSED		03/25/2018 06:30	03/25/2018 02:00	Refuse	3.01
5982	Refuse Collect Ad Hoc	3	CLOSED		03/27/2018 06:30	03/27/2018 02:00	Refuse	4.48
5983	Refuse Collect Ad Hoc	3	CLOSED		03/28/2018 06:30	03/28/2018 02:00	Refuse	2.53
5984	Refuse Collect Ad Hoc	3	CLOSED		03/29/2018 06:30	03/29/2018 02:00	Refuse	2.58
5995	Refuse Collect Ad Hoc	3	CLOSED		03/31/2018 06:00	03/31/2018 10:00	Refuse	3.24
6002	Refuse Collect Ad Hoc	3	CLOSED		04/2/2018 06:30	04/2/2018 02:00	Refuse	4.34
6007	Refuse Collect Ad Hoc	3	CLOSED		04/3/2018 06:29	04/3/2018 02:00	Refuse	2.81
6017	Refuse Collect Ad Hoc	3	CLOSED		04/4/2018 06:30	04/5/2018 02:00	Refuse	2.55
6019	Refuse Collect Ad Hoc	3	CLOSED		04/5/2018 06:30	04/5/2018 02:00	Refuse	3.09
6025	Refuse Collect Ad Hoc	3	CLOSED		04/6/2018 06:30	04/6/2018 02:00	Refuse	2.93
6026	Refuse Collect Ad Hoc	3	CLOSED		04/9/2018 06:30	04/9/2018 02:00	Refuse	5.6
6033	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/10/2018 06:30	04/10/2018 02:00	Refuse	1.96
6037	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/11/2018 06:30	04/11/2018 02:00	Refuse	3.43
6042	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/12/2018 06:30	04/12/2018 02:00	Refuse	1.98
6046	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/13/2018 06:30	04/13/2018 02:00	Refuse	2.39
6048	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/16/2018 06:30	04/16/2018 02:00	Refuse	4.6
6054	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/17/2018 06:30	04/17/2018 02:00	Refuse	3.02
6057	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/18/2018 06:30	04/18/2018 02:00	Refuse	2.38
6058	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/19/2018 06:30	04/19/2018 02:00	Refuse	2.03
6064	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/20/2018 06:30	04/23/2018 02:00	Refuse	2.35
6066	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/20/2018 06:30	04/23/2018 02:00	Refuse	1.05
6068	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/23/2018 06:00	04/23/2018 02:00	Refuse	4.33
6075	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/24/2018 06:30	04/24/2018 02:00	Refuse	3.12
6077	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/25/2018 06:30	04/25/2018 02:00	Refuse	1.87
6081	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/27/2018 06:30	04/27/2018 02:00	Refuse	3.77
6086	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/26/2018 06:30	04/30/2018 02:00	Refuse	1.7
6088	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	04/30/2018 06:30	04/30/2018 02:00	Refuse	4.51
6089	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/1/2018 06:30	05/2/2018 02:00	Refuse	3.27
6094	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/1/2018 12:10	05/1/2018 12:25	Refuse	
6099	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/2/2018 06:30	05/3/2018 02:00	Refuse	2.31

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6103	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/3/2018 06:30	05/3/2018 02:00	Refuse	2.53
6107	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/4/2018 06:30	05/4/2018 02:00	Refuse	3.1
6117	Refuse Collect Ad Hoc	3	CLOSED	Bautista, Frederick	05/8/2018 06:30	05/8/2018 02:00	Refuse	3.69
6121	Refuse Collect Ad Hoc	3	CLOSED	Bautista, Frederick	05/9/2018 06:30	05/9/2018 02:00	Refuse	1.93
6123	Refuse Collect Ad Hoc	3	CLOSED	Bautista, Frederick	05/10/2018 06:30	05/10/2018 02:00	Refuse	2.67
6127	Refuse Collect Ad Hoc	3	CLOSED	Bautista, Frederick	05/11/2018 06:30	05/11/2018 02:00	Refuse	2.9
6130	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/14/2018 06:30	05/14/2018 02:00	Refuse	5.78
6131	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/14/2018 11:45	05/14/2018 11:49	Refuse	
6132	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/15/2018 06:30	05/15/2018 02:00	Refuse	3.21
6144	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/16/2018 06:30	05/16/2018 02:00	Refuse	1.84
6147	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/17/2018 06:30	05/17/2018 02:00	Refuse	1.63
6150	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/18/2018 06:30	05/18/2018 02:00	Refuse	2.21
6151	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/21/2018 06:30	05/21/2018 02:00	Refuse	4.79
6158	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/22/2018 06:30	05/22/2018 02:00	Refuse	2.82
6159	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/23/2018 06:30	05/23/2018 02:00	Refuse	2.23
6160	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/24/2018 06:30	05/24/2018 02:00	Refuse	2.14
6190	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/25/2018 06:30	05/25/2018 02:00	Refuse	2.23
6191	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/27/2018 06:30	05/27/2018 10:00	Refuse	2.72
6193	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/29/2018 06:30	05/29/2018 02:00	Refuse	3.77
6197	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/30/2018 06:30	05/30/2018 02:00	Refuse	2.16
6215	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	05/31/2018 06:30	05/31/2018 02:00	Refuse	2.29
6220	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/1/2018 06:30	06/1/2018 02:00	Refuse	2.56
6226	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/4/2018 06:30	06/5/2018 02:00	Refuse	5.36
6232	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/5/2018 06:30	06/5/2018 02:00	Refuse	4.17
6234	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/6/2018 06:30	06/6/2018 02:00	Refuse	2.85
6235	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/7/2018 06:30	06/7/2018 02:00	Refuse	2.17
6244	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/8/2018 06:30	06/8/2018 02:00	Refuse	2.52
6245	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/10/2018 06:30	06/10/2018 10:00	Refuse	2.44
6249	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/12/2018 06:30	06/12/2018 02:00	Refuse	4.62
6250	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/13/2018 06:30	06/13/2018 02:00	Refuse	2.9
6259	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/14/2018 06:30	06/14/2018 02:00	Refuse	2.56
6261	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/15/2018 06:30	06/15/2018 02:00	Refuse	2.59
6264	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/18/2018 06:30	06/18/2018 02:00	Refuse	4.81
6274	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/19/2018 06:30	06/19/2018 02:00	Refuse	1.53
6275	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/21/2018 06:30	06/21/2018 02:00	Refuse	4.16

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6276	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/22/2018 06:30	06/22/2018 02:00	Refuse	2.52
6282	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/25/2018 06:30	06/25/2018 02:00	Refuse	4.72
6287	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/26/2018 06:30	06/26/2018 02:00	Refuse	2.94
6288	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/27/2018 06:30	06/27/2018 02:00	Refuse	3.54
6289	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/28/2018 06:30	06/28/2018 02:00	Refuse	2.13
6294	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	06/29/2018 06:30	06/29/2018 02:00	Refuse	2.88
6302	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/3/2018 06:30	07/3/2018 02:00	Refuse	6.29
6306	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/5/2018 06:37	07/5/2018 02:00	Refuse	4.29
6307	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/6/2018 06:30	07/6/2018 02:00	Refuse	2.42
6310	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/9/2018 06:30	07/9/2018 02:00	Refuse	4.72
6320	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/10/2018 12:00	07/10/2018 12:05	Refuse	
6321	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/10/2018 06:30	07/10/2018 02:00	Refuse	2.99
6325	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/11/2018 06:30	07/11/2018 02:00	Refuse	4.37
6327	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/13/2018 06:30	07/13/2018 02:00	Refuse	4.18
6334	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/16/2018 06:30	07/16/2018 02:00	Refuse	5.1
6336	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/17/2018 06:30	07/17/2018 02:00	Refuse	2.85
6338	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/18/2018 06:30	07/18/2018 02:00	Refuse	2.43
6341	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/19/2018 06:30	07/19/2018 02:00	Refuse	2.68
6344	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/20/2018 06:30	07/20/2018 02:00	Refuse	3.19
6349	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/23/2018 06:30	07/23/2018 02:00	Refuse	5.69
6355	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/24/2018 06:30	07/24/2018 02:00	Refuse	3
6373	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/25/2018 06:30	07/25/2018 02:00	Refuse	2.55
6380	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/26/2018 06:30	07/26/2018 02:00	Refuse	2.6
6427	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/27/2018 06:30	07/27/2018 02:00	Refuse	2.29
6441	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/30/2018 06:30	07/30/2018 02:00	Refuse	4.7
6454	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/31/2018 06:30	07/31/2018 02:00	Refuse	2.38
6508	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/1/2018 06:30	08/1/2018 02:00	Refuse	2.16
6511	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/2/2018 06:30	08/2/2018 02:00	Refuse	2.4
6521	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/3/2018 06:30	08/3/2018 02:00	Refuse	2.3
6526	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/6/2018 06:30	08/6/2018 02:00	Refuse	6.06
6531	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/7/2018 06:30	08/7/2018 02:00	Refuse	2.21
6556	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/8/2018 06:30	08/8/2018 02:00	Refuse	2
6566	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/9/2018 06:30	08/9/2018 02:00	Refuse	2.82
6569	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/10/2018 06:30	08/10/2018 02:00	Refuse	2.17
6581	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/13/2018 06:30	08/13/2018 02:00	Refuse	4.92

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6585	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/14/2018 06:30	08/14/2018 02:00	Refuse	2.1
6591	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/15/2018 06:30	08/15/2018 02:00	Refuse	2.84
6594	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/16/2018 06:30	08/16/2018 02:00	Refuse	1.83
6595	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/18/2018 06:30	08/18/2018 10:00	Refuse	3.18
6596	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/20/2018 06:00	08/20/2018 02:00	Refuse	4.21
6613	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/21/2018 06:30	08/21/2018 02:00	Refuse	1.79
6614	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/22/2018 06:30	08/22/2018 02:00	Refuse	2.29
6651	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/27/2018 06:30	08/27/2018 02:00	Refuse	3.99
6654	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/28/2018 06:30	08/28/2018 02:00	Refuse	3.78
6656	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/29/2018 06:30	08/29/2018 02:00	Refuse	3.08
6659	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	08/30/2018 06:30	08/30/2018 02:00	Refuse	2.09
6665	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/31/2018 06:30	08/31/2018 02:00	Refuse	2.44
6667	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/2/2018 06:00	09/2/2018 10:00	Refuse	3.7
6670	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/4/2018 06:30	09/4/2018 02:00	Refuse	3.39
6671	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/4/2018 09:00	09/4/2018 11:00	Refuse	0.17
6673	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/5/2018 06:30	09/6/2018 02:00	Refuse	3.16
6686	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/6/2018 06:30	09/6/2018 02:00	Refuse	2.69
6687	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/7/2018 06:30	09/7/2018 02:00	Refuse	2.7
6692	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/10/2018 06:30	09/11/2018 02:00	Refuse	5.61
6700	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/11/2018 06:30	09/11/2018 02:00	Refuse	3.45
6703	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/13/2018 06:30	09/13/2018 02:00	Refuse	1.34
6704	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/12/2018 06:30	09/12/2018 02:00	Refuse	0.31
6707	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/14/2018 06:30	09/14/2018 02:00	Refuse	2.69
6711	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/17/2018 06:30	09/17/2018 08:00	Refuse	0.96
6716	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/17/2018 06:30	09/17/2018 02:00	Refuse	6.14
6717	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/18/2018 06:30	09/18/2018 02:00	Refuse	3.91
6718	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/19/2018 06:30	09/19/2018 02:00	Refuse	2.68
6723	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/20/2018 06:30	09/20/2018 02:00	Refuse	1.74
6724	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/21/2018 06:30	09/21/2018 02:00	Refuse	1.85
6730	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/24/2018 06:30	09/24/2018 02:00	Refuse	4.54
6732	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/25/2018 06:30	09/25/2018 02:00	Refuse	3.26
6761	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/26/2018 06:30	09/26/2018 02:00	Refuse	2.22
6763	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/27/2018 06:30	09/27/2018 02:00	Refuse	1.62
6765	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	09/28/2018 06:30	09/28/2018 02:00	Refuse	2.34
6766	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/28/2018 06:30	09/28/2018 02:00	Refuse	1.86

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6771	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/1/2018 06:30	10/2/2018 02:00	Refuse	5.56
6774	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/2/2018 06:30	10/2/2018 02:00	Refuse	2.33
6780	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/3/2018 06:30	10/3/2018 02:00	Refuse	2.19
6791	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/4/2018 06:30	10/4/2018 02:00	Refuse	2.23
6796	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/4/2018 06:30	10/8/2018 02:00	Refuse	2.64
6800	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/8/2018 06:30	10/8/2018 02:00	Refuse	5.64
6805	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/9/2018 06:30	10/9/2018 02:00	Refuse	2.67
6811	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/10/2018 06:30	10/10/2018 02:00	Refuse	2.18
6815	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/11/2018 06:30	10/11/2018 02:00	Refuse	2.61
6818	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/12/2018 06:30	10/12/2018 02:00	Refuse	2.62
6823	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/15/2018 06:30	10/15/2018 08:30	Refuse	0.23
6825	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/15/2018 06:30	10/15/2018 02:00	Refuse	4.49
6830	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/16/2018 06:30	10/16/2018 02:00	Refuse	2
6832	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/18/2018 06:30	10/18/2018 02:00	Refuse	2.91
6840	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/18/2018 06:30	10/18/2018 02:00	Refuse	2.49
6844	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/19/2018 06:30	10/19/2018 02:00	Refuse	2.97
6846	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/22/2018 06:30	10/22/2018 02:00	Refuse	2.59
6851	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/23/2018 06:30	10/25/2018 02:00	Refuse	4.63
6852	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/24/2018 06:30	10/24/2018 02:00	Refuse	1.67
6855	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/25/2018 06:30	10/25/2018 02:00	Refuse	2.57
6856	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/26/2018 06:30	10/26/2018 02:00	Refuse	2.13
6866	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/29/2018 06:30	10/29/2018 02:00	Refuse	4.82
6869	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/30/2018 06:30	10/31/2018 02:00	Refuse	2.5
6870	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/31/2018 06:30	10/31/2018 02:00	Refuse	2.65
6872	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/1/2018 06:30	11/1/2018 02:00	Refuse	2.5
6875	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/2/2018 06:30	11/5/2018 02:00	Refuse	3.09
6876	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/5/2018 06:30	11/5/2018 02:00	Refuse	5.73
6881	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/7/2018 06:30	11/7/2018 02:00	Refuse	5.17
6893	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/8/2018 06:30	11/8/2018 02:00	Refuse	2.45
6899	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/9/2018 06:30	11/9/2018 02:00	Refuse	2.96
6902	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/11/2018 06:30	11/11/2018 10:00	Refuse	3.37
6906	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/13/2018 06:30	11/13/2018 02:00	Refuse	4.24
6910	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/14/2018 06:30	11/14/2018 02:00	Refuse	2.9
6911	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/15/2018 06:30	11/15/2018 02:00	Refuse	2.89
6915	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/16/2018 06:30	11/16/2018 02:00	Refuse	1.91

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6919	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/19/2018 06:30	11/20/2018 02:00	Refuse	6.26
6924	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/20/2018 06:30	11/20/2018 02:00	Refuse	2.79
6929	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/21/2018 06:30	11/21/2018 02:00	Refuse	1.95
6930	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/23/2018 06:30	11/23/2018 02:00	Refuse	2.77
6934	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/26/2018 06:30	11/26/2018 02:00	Refuse	5.75
6937	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/27/2018 06:30	11/27/2018 02:00	Refuse	2.92
6940	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/28/2018 06:30	11/28/2018 02:00	Refuse	2.13
6941	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/29/2018 06:30	11/29/2018 02:00	Refuse	2.75
6944	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	11/30/2018 06:30	11/30/2018 02:00	Refuse	2.03
6954	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/3/2018 06:30	12/3/2018 02:00	Refuse	6.15
6959	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/4/2018 06:30	12/5/2018 02:00	Refuse	3.85
6961	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/5/2018 06:30	12/5/2018 02:00	Refuse	10.6
6963	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/6/2018 06:00	12/6/2018 02:00	Refuse	2.39
6964	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/7/2018 06:30	12/7/2018 02:00	Refuse	3.31
6968	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/10/2018 06:30	12/10/2018 02:00	Refuse	5.12
6976	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/11/2018 06:30	12/11/2018 02:00	Refuse	3.32
6977	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/11/2018 06:30	12/11/2018 02:00	Refuse	2.72
6980	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/12/2018 06:30	12/12/2018 02:00	Refuse	2.05
6984	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/13/2018 06:30	12/13/2018 02:00	Refuse	2.02
6987	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/13/2018 07:30	12/13/2018 07:42	Refuse	
6989	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/14/2018 06:30	12/14/2018 02:00	Refuse	2.8
6995	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/17/2018 06:30	12/17/2018 02:00	Refuse	3.18
6999	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/18/2018 06:30	12/18/2018 02:00	Refuse	3.6
7000	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/18/2018 08:35	12/18/2018 08:40	Refuse	
7001	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/18/2018 09:02	12/18/2018 09:06	Refuse	
7004	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/19/2018 06:30	12/19/2018 02:00	Refuse	2.81
7009	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/20/2018 06:30	12/20/2018 02:00	Refuse	2.76
7012	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/21/2018 06:30	12/21/2018 02:00	Refuse	2.25
7015	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/22/2018 06:00	12/22/2018 09:30	Refuse	2.66
7016	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/23/2018 06:00	12/23/2018 09:30	Refuse	1.9
7021	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/24/2018 06:30	12/24/2018 02:00	Refuse	2.76
7024	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/26/2018 06:30	12/26/2018 02:00	Refuse	2.86
7031	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/27/2018 06:30	12/27/2018 02:00	Refuse	2.21
7032	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/28/2018 06:30	12/28/2018 02:00	Refuse	2.21
7033	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/30/2018 06:30	12/30/2018 10:00	Refuse	3.33

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
7034	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/29/2018 06:30	12/29/2018 10:00	Refuse	2.19
7038	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	12/31/2018 06:30	12/31/2018 02:00	Refuse	2.39
4924	Bulk Waste Disposal	3	CLOSED		01/2/2018 06:18	01/2/2018 06:21	Scrap Metals	
4932	Bulk Waste Disposal	3	CLOSED		01/4/2018 09:34	01/4/2018 09:40	Scrap Metals	
5520	Bulk Waste Disposal	3	CLOSED		01/10/2018 06:30	01/10/2018 08:30	Scrap Metals	2.9
5541	Bulk Waste Disposal	3	CLOSED		01/17/2018 07:31	01/17/2018 07:40	Scrap Metals	
5543	Bulk Waste Disposal	3	CLOSED		01/18/2018 09:44	01/18/2018 09:47	Scrap Metals	
5545	Bulk Waste Disposal	3	CLOSED		01/18/2018 08:50	01/18/2018 08:53	Scrap Metals	
5546	Bulk Waste Disposal	3	CLOSED		01/18/2018 11:52	01/19/2018 11:57	Scrap Metals	
5548	Bulk Waste Disposal	3	CLOSED		01/19/2018 06:18	01/19/2018 06:20	Scrap Metals	
5549	Bulk Waste Disposal	3	CLOSED		01/19/2018 07:08	01/19/2018 07:12	Scrap Metals	
5551	Bulk Waste Disposal	3	CLOSED		01/22/2018 08:30	01/22/2018 08:32	Scrap Metals	
5552	Bulk Waste Disposal	3	CLOSED		01/23/2018 07:21	01/23/2018 07:23	Scrap Metals	
5595	Bulk Waste Disposal	3	CLOSED		01/26/2018 06:30	01/26/2018 08:09	Scrap Metals	3.98
5600	Bulk Waste Disposal	3	CLOSED		01/29/2018 06:48	01/29/2018 06:54	Scrap Metals	
5700	Bulk Waste Disposal	3	CLOSED		01/30/2018 12:30	01/30/2018 12:40	Scrap Metals	
5701	Bulk Waste Disposal	3	CLOSED		01/30/2018 12:25	01/30/2018 12:30	Scrap Metals	
5729	Bulk Waste Disposal	3	CLOSED		02/2/2018 08:18	02/2/2018 08:24	Scrap Metals	
5737	Bulk Waste Disposal	3	CLOSED		02/5/2018 06:50	02/5/2018 06:53	Scrap Metals	
5743	Bulk Waste Disposal	3	CLOSED		02/6/2018 12:00	02/6/2018 12:05	Scrap Metals	
5753	Bulk Waste Disposal	3	CLOSED		02/9/2018 06:50	02/10/2018 07:20	Scrap Metals	
5754	Bulk Waste Disposal	3	CLOSED		02/10/2018 02:00	02/10/2018 06:00	Scrap Metals	
5800	Bulk Waste Disposal	3	CLOSED		02/12/2018 06:30	02/12/2018 09:00	Scrap Metals	2.3
5809	Bulk Waste Disposal	3	CLOSED		02/14/2018 12:00	02/14/2018 12:10	Scrap Metals	
5819	Bulk Waste Disposal	3	CLOSED		02/16/2018 07:43	02/16/2018 07:46	Scrap Metals	
5825	Bulk Waste Disposal	3	CLOSED		02/21/2018 06:52	02/21/2018 06:58	Scrap Metals	
5826	Bulk Waste Disposal	3	CLOSED		02/21/2018 07:20	02/22/2018 07:29	Scrap Metals	
5827	Bulk Waste Disposal	3	CLOSED		02/21/2018 06:12	02/21/2018 06:19	Scrap Metals	
5828	Bulk Waste Disposal	3	CLOSED		02/21/2018 11:50	02/22/2018 12:30	Scrap Metals	
5830	Bulk Waste Disposal	3	CLOSED		02/22/2018 06:53	02/22/2018 06:57	Scrap Metals	
5837	Bulk Waste Disposal	3	CLOSED	McLean, Robert	02/23/2018 07:00	02/23/2018 08:00	Scrap Metals	
5843	Bulk Waste Disposal	3	CLOSED		02/26/2018 07:04	02/26/2018 07:10	Scrap Metals	
5844	Bulk Waste Disposal	3	CLOSED		02/26/2018 08:00	02/26/2018 08:06	Scrap Metals	
5850	Bulk Waste Disposal	3	CLOSED		02/27/2018 08:57	02/27/2018 09:03	Scrap Metals	
5851	Bulk Waste Disposal	3	CLOSED		02/27/2018 06:49	02/27/2018 06:50	Scrap Metals	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
5856	Bulk Waste Disposal	3	CLOSED		02/28/2018 07:01	02/28/2018 07:04	Scrap Metals	
5857	Bulk Waste Disposal	3	CLOSED		03/28/2018 06:57	03/28/2018 07:00	Scrap Metals	
5858	Bulk Waste Disposal	3	CLOSED		02/28/2018 07:23	03/2/2018 07:30	Scrap Metals	
5859	Bulk Waste Disposal	3	CLOSED		02/28/2018 06:17	02/28/2018 06:19	Scrap Metals	
5860	Bulk Waste Disposal	3	CLOSED		03/1/2018 07:18	03/1/2018 07:22	Scrap Metals	
5866	Bulk Waste Disposal	3	CLOSED		03/6/2018 06:59	03/6/2018 07:01	Scrap Metals	
5867	Bulk Waste Disposal	3	CLOSED		03/5/2018 06:52	03/5/2018 06:58	Scrap Metals	
5886	Bulk Waste Disposal	3	CLOSED		03/7/2018 07:16	03/7/2018 07:19	Scrap Metals	
5894	Bulk Waste Disposal	3	CLOSED	Gomes, Gregory	03/8/2018 09:30	03/8/2018 09:50	Scrap Metals	
5943	Bulk Waste Disposal	3	CLOSED		03/14/2018 07:31	03/15/2018 07:36	Scrap Metals	
5944	Bulk Waste Disposal	3	CLOSED		03/13/2018 07:40	03/13/2018 07:42	Scrap Metals	
5945	Bulk Waste Disposal	3	CLOSED		03/13/2018 06:51	03/13/2018 06:53	Scrap Metals	
5946	Bulk Waste Disposal	3	CLOSED		03/13/2018 08:57	03/13/2018 09:05	Scrap Metals	
5951	Bulk Waste Disposal	3	CLOSED		03/16/2018 09:12	03/16/2018 09:16	Scrap Metals	
5971	Bulk Waste Disposal	3	CLOSED		03/22/2018 06:53	03/22/2018 06:57	Scrap Metals	
5972	Bulk Waste Disposal	3	CLOSED		03/22/2018 06:49	03/23/2018 06:52	Scrap Metals	
5973	Bulk Waste Disposal	3	CLOSED		03/22/2018 07:31	03/22/2018 07:36	Scrap Metals	
5974	Bulk Waste Disposal	3	CLOSED		03/22/2018 12:00	03/22/2018 12:02	Scrap Metals	
5975	Bulk Waste Disposal	3	CLOSED		03/22/2018 12:03	03/22/2018 12:05	Scrap Metals	
5985	Bulk Waste Disposal	3	CLOSED		03/27/2018 06:43	03/27/2018 06:45	Scrap Metals	
5986	Bulk Waste Disposal	3	CLOSED		03/27/2018 06:47	03/30/2018 06:50	Scrap Metals	
5988	Bulk Waste Disposal	3	CLOSED		03/27/2018 08:50	03/27/2018 08:52	Scrap Metals	
5989	Bulk Waste Disposal	3	CLOSED		03/28/2018 06:58	03/28/2018 07:36	Scrap Metals	
5990	Bulk Waste Disposal	3	CLOSED		03/28/2018 07:22	03/28/2018 07:46	Scrap Metals	
5991	Bulk Waste Disposal	3	CLOSED		03/28/2018 07:23	03/28/2018 07:25	Scrap Metals	
5992	Bulk Waste Disposal	3	CLOSED		03/28/2018 07:51	03/28/2018 07:54	Scrap Metals	
6004	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/2/2018 12:45	04/2/2018 01:00	Scrap Metals	
6008	Bulk Waste Disposal	3	CLOSED		04/3/2018 08:40	04/3/2018 08:46	Scrap Metals	
6009	Bulk Waste Disposal	3	CLOSED		04/3/2018 06:42	04/3/2018 06:48	Scrap Metals	
6014	Bulk Waste Disposal	3	CLOSED		04/4/2018 06:30	04/4/2018 02:00	Scrap Metals	2.28
6016	Bulk Waste Disposal	3	CLOSED		04/4/2018 11:50	04/4/2018 12:00	Scrap Metals	
6035	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/10/2018 06:50	04/10/2018 06:55	Scrap Metals	
6036	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/10/2018 06:55	04/10/2018 07:00	Scrap Metals	
6038	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/11/2018 11:45	04/11/2018 12:00	Scrap Metals	
6039	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/11/2018 07:11	04/11/2018 07:15	Scrap Metals	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6040	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/11/2018 08:12	04/11/2018 08:13	Scrap Metals	
6049	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/16/2018 07:22	04/16/2018 07:30	Scrap Metals	
6059	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/18/2018 11:50	04/18/2018 12:15	Scrap Metals	
6060	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/19/2018 07:24	04/19/2018 07:27	Scrap Metals	
6061	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/19/2018 06:51	04/19/2018 06:54	Scrap Metals	
6065	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/20/2018 07:18	04/20/2018 07:26	Scrap Metals	
6072	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/23/2018 11:54	04/23/2018 11:55	Scrap Metals	
6078	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/25/2018 07:55	04/25/2018 08:00	Scrap Metals	
6079	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/25/2018 12:00	04/25/2018 12:05	Scrap Metals	
6082	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/27/2018 06:52	04/27/2018 06:53	Scrap Metals	
6083	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/27/2018 07:16	04/27/2018 07:22	Scrap Metals	
6087	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/26/2018 06:30	04/26/2018 08:00	Scrap Metals	
6090	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/30/2018 06:49	04/30/2018 06:53	Scrap Metals	
6091	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/30/2018 07:12	04/30/2018 07:20	Scrap Metals	
6092	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/1/2018 08:50	05/1/2018 08:55	Scrap Metals	
6100	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/2/2018 07:40	05/3/2018 07:50	Scrap Metals	
6101	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/2/2018 06:45	05/3/2018 07:10	Scrap Metals	
6102	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/2/2018 01:05	05/2/2018 01:25	Scrap Metals	
6109	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/4/2018 07:20	05/4/2018 07:23	Scrap Metals	
6115	Bulk Waste Disposal	3	CLOSED	Bautista, Frederick	05/7/2018 08:06	05/7/2018 08:09	Scrap Metals	
6118	Bulk Waste Disposal	3	CLOSED	Bautista, Frederick	05/8/2018 07:07	05/8/2018 07:10	Scrap Metals	
6120	Bulk Waste Disposal	3	CLOSED	Bautista, Frederick	05/8/2018 06:30	05/8/2018 02:00	Scrap Metals	
6126	Bulk Waste Disposal	3	CLOSED	Bautista, Frederick	05/11/2018 07:01	05/11/2018 07:04	Scrap Metals	
6136	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/15/2018 06:53	05/15/2018 06:56	Scrap Metals	
6145	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/16/2018 06:53	05/16/2018 06:55	Scrap Metals	
6146	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/16/2018 07:23	05/17/2018 07:29	Scrap Metals	
6153	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/21/2018 06:55	05/21/2018 06:58	Scrap Metals	
6154	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/21/2018 06:59	05/21/2018 07:03	Scrap Metals	
6155	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/21/2018 07:12	05/21/2018 07:18	Scrap Metals	
6186	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/25/2018 06:52	05/25/2018 06:54	Scrap Metals	
6194	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/29/2018 06:52	05/29/2018 06:56	Scrap Metals	
6195	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/29/2018 06:57	05/29/2018 06:59	Scrap Metals	
6216	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/31/2018 06:51	05/31/2018 06:53	Scrap Metals	
6217	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/31/2018 06:54	05/31/2018 06:55	Scrap Metals	
6218	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/31/2018 07:02	05/31/2018 07:05	Scrap Metals	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6219	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/1/2018 06:30	06/1/2018 09:30	Scrap Metals	
6221	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/1/2018 09:00	06/1/2018 09:30	Scrap Metals	
6222	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/1/2018 07:32	06/1/2018 07:38	Scrap Metals	
6229	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/4/2018 07:16	06/4/2018 07:17	Scrap Metals	
6230	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/4/2018 08:16	06/4/2018 08:37	Scrap Metals	
6231	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/5/2018 07:00	06/5/2018 07:10	Scrap Metals	
6233	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/5/2018 06:57	06/5/2018 07:02	Scrap Metals	
6236	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/7/2018 06:51	06/7/2018 06:53	Scrap Metals	
6238	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/7/2018 07:26	06/7/2018 07:29	Scrap Metals	
6239	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/7/2018 09:02	06/7/2018 09:04	Scrap Metals	
6247	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/8/2018 07:30	06/8/2018 07:35	Scrap Metals	
6253	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/12/2018 06:56	06/12/2018 07:02	Scrap Metals	
6255	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/12/2018 07:43	06/12/2018 08:01	Scrap Metals	
6257	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/13/2018 09:40	06/13/2018 09:43	Scrap Metals	
6258	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/13/2018 08:31	06/13/2018 08:37	Scrap Metals	
6268	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/19/2018 06:43	06/19/2018 06:47	Scrap Metals	
6269	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/19/2018 07:01	06/19/2018 07:04	Scrap Metals	
6279	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/22/2018 06:50	06/22/2018 06:52	Scrap Metals	
6291	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/28/2018 07:24	06/28/2018 07:27	Scrap Metals	
6319	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/10/2018 07:41	07/10/2018 07:45	Scrap Metals	
6326	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/13/2018 06:30	07/13/2018 11:00	Scrap Metals	5.33
6328	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/13/2018 11:39	07/13/2018 12:01	Scrap Metals	
6339	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/18/2018 06:57	07/18/2018 07:02	Scrap Metals	
6340	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/18/2018 07:23	07/18/2018 07:26	Scrap Metals	
6343	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/19/2018 07:37	07/19/2018 07:39	Scrap Metals	
6345	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/20/2018 07:05	07/20/2018 07:07	Scrap Metals	
6350	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/23/2018 07:03	07/23/2018 07:07	Scrap Metals	
6351	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/23/2018 06:58	07/23/2018 07:02	Scrap Metals	
6352	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/23/2018 07:21	07/23/2018 07:30	Scrap Metals	
6375	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/25/2018 07:01	07/25/2018 07:06	Scrap Metals	
6376	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/25/2018 07:29	07/25/2018 07:34	Scrap Metals	
6428	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/27/2018 06:53	07/27/2018 06:56	Scrap Metals	
6429	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/27/2018 06:48	07/27/2018 06:52	Scrap Metals	
6443	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/30/2018 07:08	07/30/2018 07:12	Scrap Metals	
6444	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/30/2018 07:13	07/30/2018 07:17	Scrap Metals	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6468	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/31/2018 07:17	08/31/2018 07:28	Scrap Metals	
6512	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/2/2018 07:02	08/2/2018 07:07	Scrap Metals	
6513	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/2/2018 06:47	08/2/2018 06:54	Scrap Metals	
6516	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/3/2018 06:35	08/3/2018 06:40	Scrap Metals	
6528	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/6/2018 06:53	08/6/2018 06:57	Scrap Metals	
6529	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/6/2018 07:23	08/6/2018 07:28	Scrap Metals	
6532	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/7/2018 06:59	08/7/2018 07:02	Scrap Metals	
6557	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/8/2018 07:01	08/8/2018 07:05	Scrap Metals	
6580	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/13/2018 06:30	08/14/2018 09:30	Scrap Metals	3.24
6583	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/13/2018 07:26	08/13/2018 07:29	Scrap Metals	
6584	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/13/2018 07:50	08/13/2018 08:03	Scrap Metals	
6597	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/20/2018 06:37	08/20/2018 06:40	Scrap Metals	
6598	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/20/2018 06:56	08/20/2018 07:05	Scrap Metals	
6652	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/27/2018 07:02	08/27/2018 07:06	Scrap Metals	
6653	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/27/2018 07:41	08/27/2018 07:44	Scrap Metals	
6663	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/30/2018 08:03	08/30/2018 08:09	Scrap Metals	
6664	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/30/2018 08:24	08/30/2018 08:29	Scrap Metals	
6668	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/4/2018 12:00	09/4/2018 12:20	Scrap Metals	
6674	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/5/2018 07:06	09/5/2018 07:13	Scrap Metals	
6675	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/5/2018 06:59	09/5/2018 07:04	Scrap Metals	
6676	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/5/2018 07:23	09/6/2018 07:31	Scrap Metals	
6677	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/5/2018 09:44	09/5/2018 09:45	Scrap Metals	
6684	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/6/2018 06:37	09/6/2018 06:38	Scrap Metals	
6699	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/11/2018 06:30	09/11/2018 08:30	Scrap Metals	2.79
6712	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/18/2018 08:00	09/18/2018 09:00	Scrap Metals	
6725	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/21/2018 07:50	09/21/2018 07:52	Scrap Metals	
6740	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/25/2018 08:58	09/25/2018 09:01	Scrap Metals	
6741	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/25/2018 10:00	09/25/2018 10:10	Scrap Metals	
6762	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/26/2018 11:45	09/27/2018 11:50	Scrap Metals	
6767	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/28/2018 12:15	09/28/2018 12:20	Scrap Metals	
6773	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/1/2018 12:00	10/2/2018 12:10	Scrap Metals	
6777	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/2/2018 12:00	10/2/2018 12:15	Scrap Metals	
6778	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/2/2018 07:15	10/3/2018 07:35	Scrap Metals	
6792	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/4/2018 07:40	10/4/2018 07:50	Scrap Metals	
6793	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/4/2018 07:55	10/4/2018 08:10	Scrap Metals	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6802	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/8/2018 06:45	10/8/2018 06:50	Scrap Metals	
6803	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/8/2018 09:13	10/8/2018 09:25	Scrap Metals	
6816	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/11/2018 09:15	10/11/2018 09:30	Scrap Metals	
6820	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/12/2018 09:23	10/12/2018 09:25	Scrap Metals	
6826	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/15/2018 07:45	10/15/2018 07:50	Scrap Metals	
6827	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/15/2018 09:50	10/15/2018 09:55	Scrap Metals	
6833	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/17/2018 08:45	10/17/2018 08:55	Scrap Metals	
6841	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/18/2018 06:30	10/18/2018 08:00	Scrap Metals	3.66
6842	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/18/2018 09:25	10/18/2018 09:38	Scrap Metals	
6845	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/19/2018 07:15	10/19/2018 07:30	Scrap Metals	
6862	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/29/2018 07:20	10/29/2018 07:41	Scrap Metals	
6863	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/29/2018 07:45	10/29/2018 07:55	Scrap Metals	
6871	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/31/2018 08:02	10/31/2018 08:07	Scrap Metals	
6873	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/1/2018 11:40	11/1/2018 11:45	Scrap Metals	
6874	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/1/2018 07:20	11/1/2018 07:30	Scrap Metals	
6883	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/7/2018 11:40	11/7/2018 11:53	Scrap Metals	
6884	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/7/2018 12:05	11/7/2018 12:15	Scrap Metals	
6900	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/9/2018 07:10	11/9/2018 07:15	Scrap Metals	
6901	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/9/2018 07:20	11/9/2018 07:25	Scrap Metals	
6920	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/19/2018 07:08	11/19/2018 07:12	Scrap Metals	
6921	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/19/2018 08:00	11/19/2018 08:05	Scrap Metals	
6925	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/20/2018 07:04	11/20/2018 07:05	Scrap Metals	
6931	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/23/2018 06:20	11/23/2018 07:30	Scrap Metals	
6935	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/26/2018 11:30	11/26/2018 11:35	Scrap Metals	
6936	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/26/2018 11:45	11/26/2018 11:50	Scrap Metals	
6943	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/29/2018 09:25	11/29/2018 09:30	Scrap Metals	
6946	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/30/2018 08:21	11/30/2018 08:25	Scrap Metals	
6956	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/3/2018 08:01	12/3/2018 08:05	Scrap Metals	
6965	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/7/2018 07:01	12/7/2018 07:09	Scrap Metals	
6969	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/10/2018 07:45	12/10/2018 07:55	Scrap Metals	
6970	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/10/2018 08:00	12/10/2018 08:10	Scrap Metals	
6971	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/10/2018 08:25	12/10/2018 08:45	Scrap Metals	
6981	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/12/2018 11:50	12/12/2018 12:00	Scrap Metals	
6985	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/13/2018 07:59	12/13/2018 08:08	Scrap Metals	
6988	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/14/2018 07:40	12/14/2018 07:52	Scrap Metals	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6997	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/17/2018 07:14	12/17/2018 07:25	Scrap Metals	
6998	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/17/2018 07:40	12/17/2018 07:51	Scrap Metals	
7010	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/21/2018 06:55	12/21/2018 06:58	Scrap Metals	
7011	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/21/2018 07:26	12/21/2018 07:35	Scrap Metals	
7025	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/26/2018 07:36	12/26/2018 07:42	Scrap Metals	
7036	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/28/2018 06:41	12/28/2018 06:54	Scrap Metals	
7037	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/28/2018 07:45	12/28/2018 07:54	Scrap Metals	
7039	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/31/2018 07:35	12/31/2018 07:45	Scrap Metals	
5529	Sweep - Weekly	3	CLOSED	Gomes, Gregory	01/12/2018 08:00	01/12/2018 01:00	Sweeper Waste	
5555	Sweep - Weekly	3	CLOSED	Gomes, Gregory	01/22/2018 08:30	01/26/2018 02:00	Sweeper Waste	
5556	Sweep - Weekly	3	CLOSED	McLean, Robert	01/19/2018 06:36	01/19/2018 02:00	Sweeper Waste	
5601	Sweep - Weekly	3	CLOSED	McLean, Robert	01/29/2018 06:30	02/2/2018 02:00	Sweeper Waste	
5709	Bulk Waste Disposal	3	CLOSED		02/1/2018 07:30	02/1/2018 08:00	Sweeper Waste	14.6
5727	Sweep - Weekly	3	CLOSED	McLean, Robert	02/2/2018 07:00	02/2/2018 02:00	Sweeper Waste	
5746	Sweep - Weekly	3	CLOSED		02/5/2018 06:30	02/9/2018 02:00	Sweeper Waste	
5747	Sweep - Weekly	3	CLOSED		02/5/2018 06:30	02/9/2018 02:00	Sweeper Waste	
5755	Sweep - Weekly	3	CLOSED		02/12/2018 06:30	02/16/2018 02:00	Sweeper Waste	
5756	Sweep - Weekly	3	CLOSED		02/12/2018 06:30	02/15/2018 02:00	Sweeper Waste	
5821	Sweep - Weekly	3	CLOSED		02/20/2018 06:30	02/23/2018 02:00	Sweeper Waste	
5822	Sweep - Weekly	3	CLOSED		02/20/2018 06:30	02/23/2018 02:00	Sweeper Waste	
5838	Sweep - Weekly	3	CLOSED		02/26/2018 06:30	03/2/2018 02:00	Sweeper Waste	
5839	Sweep - Weekly	3	CLOSED		02/26/2018 06:30	03/2/2018 02:00	Sweeper Waste	
5846	Bulk Waste Disposal	3	CLOSED		02/27/2018 06:30	02/27/2018 02:00	Sweeper Waste	15.39
5862	Sweep - Weekly	3	CLOSED	McLean, Robert	03/5/2018 06:30	03/9/2018 02:00	Sweeper Waste	
5863	Sweep - Weekly	3	CLOSED		03/5/2018 09:30	03/9/2018 02:00	Sweeper Waste	
5929	Sweep - Weekly	3	CLOSED		03/12/2018 06:30	03/16/2018 02:00	Sweeper Waste	
5930	Sweep - Weekly	3	CLOSED	McLean, Robert	03/12/2018 06:30	03/16/2018 02:00	Sweeper Waste	
5954	Sweep - Weekly	3	CLOSED		03/19/2018 06:30	03/23/2018 02:00	Sweeper Waste	
5955	Sweep - Weekly	3	CLOSED		03/19/2018 06:30	03/23/2018 02:00	Sweeper Waste	
5964	Bulk Waste Disposal	3	CLOSED		03/19/2018 06:30	03/19/2018 02:00	Sweeper Waste	14.59
5993	Sweep - Weekly	3	CLOSED	McLean, Robert	04/2/2018 06:30	04/6/2018 02:00	Sweeper Waste	
5994	Sweep - Weekly	3	CLOSED	McLean, Robert	04/2/2018 06:36	04/4/2018 02:00	Sweeper Waste	
6000	Sweep - Weekly	3	CLOSED		03/27/2018 06:30	03/29/2018 02:00	Sweeper Waste	
6001	Sweep - Weekly	3	CLOSED		03/27/2018 06:31	03/28/2018 02:00	Sweeper Waste	
6015	Bulk Waste Disposal	3	CLOSED		04/4/2018 06:30	04/5/2018 02:00	Sweeper Waste	17.88

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6044	Sweep - Weekly	3	CLOSED	McLean, Robert	04/9/2018 06:30	04/13/2018 12:00	Sweeper Waste	
6047	Sweep - Weekly	3	CLOSED	McLean, Robert	04/16/2018 06:30	04/20/2018 02:00	Sweeper Waste	
6063	Bulk Waste Disposal	3	CLOSED	McLean, Robert	04/20/2018 06:30	04/20/2018 02:00	Sweeper Waste	10.86
6084	Sweep - Weekly	3	CLOSED	McLean, Robert	04/30/2018 06:30	05/4/2018 02:00	Sweeper Waste	
6110	Sweep - Weekly	3	CLOSED	McLean, Robert	05/7/2018 06:30	05/11/2018 02:00	Sweeper Waste	
6133	Sweep - Weekly	3	CLOSED	McLean, Robert	05/14/2018 06:30	05/18/2018 02:00	Sweeper Waste	
6134	Sweep - Weekly	3	CLOSED	McLean, Robert	05/15/2018 06:30	05/24/2018 12:00	Sweeper Waste	
6138	Bulk Waste Disposal	3	CLOSED	McLean, Robert	05/15/2018 06:30	05/15/2018 02:00	Sweeper Waste	16.07
6156	Sweep - Weekly	3	CLOSED	McLean, Robert	05/21/2018 06:30	05/25/2018 02:00	Sweeper Waste	
6157	Sweep - Weekly	3	CLOSED	McLean, Robert	05/22/2018 06:30	05/24/2018 12:00	Sweeper Waste	
6188	Sweep - Weekly	3	CLOSED	McLean, Robert	05/29/2018 06:30	06/1/2018 02:00	Sweeper Waste	
6189	Sweep - Weekly	3	CLOSED	McLean, Robert	05/29/2018 06:30	05/31/2018 02:00	Sweeper Waste	
6224	Sweep - Weekly	3	CLOSED	McLean, Robert	06/4/2018 06:30	06/8/2018 02:00	Sweeper Waste	
6225	Sweep - Weekly	3	CLOSED	McLean, Robert	06/5/2018 06:30	06/7/2018 02:00	Sweeper Waste	
6227	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/4/2018 06:30	06/4/2018 09:30	Sweeper Waste	12.34
6248	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/12/2018 06:30	06/12/2018 08:37	Sweeper Waste	4.31
6251	Sweep - Weekly	3	CLOSED	McLean, Robert	06/12/2018 06:30	06/15/2018 02:00	Sweeper Waste	
6252	Sweep - Weekly	3	CLOSED	McLean, Robert	06/12/2018 06:30	06/14/2018 02:00	Sweeper Waste	
6262	Sweep - Weekly	3	CLOSED	McLean, Robert	06/18/2018 06:30	06/22/2018 02:00	Sweeper Waste	
6263	Bulk Waste Disposal	3	CLOSED	McLean, Robert	06/18/2018 06:29	06/18/2018 08:30	Sweeper Waste	8.33
6265	Sweep - Weekly	3	CANCEL	McLean, Robert	06/19/2018 06:30	06/21/2018 02:00	Sweeper Waste	
6281	Sweep - Weekly	3	CLOSED	McLean, Robert	06/25/2018 06:30	06/29/2018 02:00	Sweeper Waste	
6286	Sweep - Weekly	3	CLOSED	McLean, Robert	06/26/2018 06:30	06/28/2018 02:00	Sweeper Waste	
6295	Sweep - Weekly	3	CLOSED	McLean, Robert	07/2/2018 06:30	07/6/2018 02:00	Sweeper Waste	
6299	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	07/2/2018 06:30	07/2/2018 08:30	Sweeper Waste	11.59
6304	Sweep - Weekly	3	CLOSED	McLean, Robert	07/3/2018 06:30	07/3/2018 02:00	Sweeper Waste	
6308	Sweep - Weekly	3	CLOSED	McLean, Robert	07/9/2018 06:30	07/13/2018 02:00	Sweeper Waste	
6318	Sweep - Weekly	3	CLOSED	McLean, Robert	07/10/2018 06:30	07/10/2018 02:00	Sweeper Waste	
6329	Sweep - Weekly	3	CLOSED	McLean, Robert	07/16/2018 06:30	07/20/2018 02:00	Sweeper Waste	
6330	Sweep - Weekly	3	CLOSED	McLean, Robert	07/17/2018 06:30	07/19/2018 02:00	Sweeper Waste	
6347	Sweep - Weekly	3	CLOSED	McLean, Robert	07/23/2018 06:30	07/27/2018 02:00	Sweeper Waste	
6348	Sweep - Weekly	3	CLOSED	McLean, Robert	07/26/2018 06:30	07/26/2018 02:00	Sweeper Waste	
6356	Bulk Waste Disposal	3	CLOSED	McLean, Robert	07/24/2018 06:30	07/24/2018 08:30	Sweeper Waste	14.42
6424	Sweep - Weekly	3	CLOSED	McLean, Robert	07/30/2018 06:30	08/3/2018 02:00	Sweeper Waste	
6425	Sweep - Weekly	3	CLOSED	McLean, Robert	07/31/2018 06:30	08/2/2018 02:00	Sweeper Waste	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6568	Bulk Waste Disposal	3	CLOSED	McLean, Robert	08/10/2018 06:30	08/10/2018 02:00	Sweeper Waste	9.92
6678	Sweep - Weekly	3	CLOSED	McLean, Robert	09/4/2018 06:30	09/7/2018 02:00	Sweeper Waste	
6679	Sweep - Weekly	3	CLOSED	McLean, Robert	08/27/2018 06:30	08/31/2018 12:00	Sweeper Waste	
6680	Sweep - Weekly	3	CLOSED	McLean, Robert	08/20/2018 12:00	08/22/2018 12:00	Sweeper Waste	
6681	Sweep - Weekly	3	CLOSED	McLean, Robert	09/6/2018 06:30	09/6/2018 02:00	Sweeper Waste	
6685	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/6/2018 06:30	09/6/2018 08:00	Sweeper Waste	11.84
6688	Sweep - Weekly	3	CLOSED	McLean, Robert	09/10/2018 06:30	09/14/2018 02:00	Sweeper Waste	
6701	Sweep - Weekly	3	CLOSED	McLean, Robert	09/11/2018 06:30	09/13/2018 02:00	Sweeper Waste	
6708	Sweep - Weekly	3	CLOSED	McLean, Robert	09/17/2018 06:30	09/21/2018 02:00	Sweeper Waste	
6728	Bulk Waste Disposal	3	CLOSED	McLean, Robert	09/24/2018 06:30	09/24/2018 08:30	Sweeper Waste	12.92
6729	Sweep - Weekly	3	CLOSED	McLean, Robert	09/24/2018 06:30	09/28/2018 02:00	Sweeper Waste	
6731	Sweep - Weekly	3	CLOSED	Gomes, Gregory	09/25/2018 08:36	09/27/2018 02:00	Sweeper Waste	
6768	Sweep - Weekly	3	CLOSED	McLean, Robert	10/1/2018 06:30	10/5/2018 02:00	Sweeper Waste	
6772	Bulk Waste Disposal	3	CLOSED	Gomes, Gregory	10/1/2018 06:30	10/1/2018 10:30	Sweeper Waste	14.97
6795	Sweep - Weekly	3	CLOSED	McLean, Robert	10/5/2018 06:30	10/5/2018 02:00	Sweeper Waste	
6797	Sweep - Weekly	3	CLOSED	McLean, Robert	10/8/2018 06:30	10/12/2018 02:00	Sweeper Waste	
6801	Sweep - Weekly	3	CLOSED	McLean, Robert	10/9/2018 06:30	10/9/2018 02:00	Sweeper Waste	
6812	Sweep Waste Disposal	3	CLOSED	McLean, Robert	10/10/2018 06:30	10/10/2018 08:30	Sweeper Waste	18.65
6821	Sweep - Weekly	3	CLOSED	McLean, Robert	10/15/2018 06:30	10/19/2018 02:00	Sweeper Waste	
6829	Bulk Waste Disposal	3	CLOSED	McLean, Robert	10/16/2018 06:30	10/16/2018 08:00	Sweeper Waste	11.24
6848	Sweep - Weekly	3	CLOSED	McLean, Robert	10/22/2018 06:30	10/26/2018 02:00	Sweeper Waste	
6858	Sweep - Weekly	3	CLOSED	McLean, Robert	10/29/2018 06:30	11/2/2018 02:00	Sweeper Waste	
6865	Refuse Collect Ad Hoc	3	CLOSED	McLean, Robert	10/29/2018 06:30	10/29/2018 02:00	Sweeper Waste	8.59
6867	Sweep - Weekly	3	CLOSED	McLean, Robert	10/30/2018 08:00	11/1/2018 02:00	Sweeper Waste	
6880	Bulk Waste Disposal	3	CLOSED	McLean, Robert	11/7/2018 06:30	11/7/2018 10:30	Sweeper Waste	3.42
6886	Sweep - Weekly	3	CLOSED	McLean, Robert	11/5/2018 06:30	11/9/2018 02:00	Sweeper Waste	
6888	Sweep - Weekly	3	CLOSED	McLean, Robert	11/8/2018 11:00	11/8/2018 02:00	Sweeper Waste	
6905	Sweep - Weekly	3	CLOSED	McLean, Robert	11/13/2018 06:30	11/16/2018 02:00	Sweeper Waste	
6914	Sweep - Weekly	3	CLOSED	McLean, Robert	11/15/2018 06:30	11/15/2018 02:00	Sweeper Waste	
6948	Sweep - Weekly	3	CLOSED	McLean, Robert	11/30/2018 06:30	12/3/2018 02:36	Sweeper Waste	
6949	Sweep - Weekly	3	CLOSED	McLean, Robert	12/3/2018 06:30	12/7/2018 02:00	Sweeper Waste	
6960	Sweep - Weekly	3	CLOSED	McLean, Robert	12/4/2018 06:30	12/6/2018 02:00	Sweeper Waste	
6973	Sweep - Weekly	3	CLOSED	McLean, Robert	12/10/2018 06:00	12/14/2018 02:30	Sweeper Waste	
6974	Sweep - Weekly	3	CLOSED	McLean, Robert	12/11/2018 06:30	12/13/2018 02:30	Sweeper Waste	
6992	Sweep - Weekly	3	CLOSED	McLean, Robert	12/17/2018 06:30	12/21/2018 02:00	Sweeper Waste	

Work Order Id	Description	Priority	Status	Submit To	Actual Start	Actual Finish	Waste Type 1	Waste Amount 1 (Tons)
6993	Sweep - Weekly	3	CLOSED	McLean, Robert	12/18/2018 06:30	12/20/2018 02:00	Sweeper Waste	
7013	Bulk Waste Disposal	3	CLOSED	McLean, Robert	12/21/2018 06:30	12/21/2018 02:00	Sweeper Waste	13.38
7018	Sweep - Weekly	3	CLOSED	McLean, Robert	12/24/2018 06:30	12/28/2018 02:00	Sweeper Waste	
7019	Sweep - Weekly	3	CLOSED	McLean, Robert	12/24/2018 06:30	12/27/2018 02:00	Sweeper Waste	
7030	Sweep Waste Disposal	3	CLOSED	McLean, Robert	12/28/2018 06:30	12/28/2018 09:00	Sweeper Waste	14.22

Total Green Waste (tons)	**17.58**
Total Recycled Metal (tons)	**3.77**
Total Refuse (tons)	**801.98**
Total Scrap Metal (tons)	**26.48**
Total Sweeper Waste (tons)	**259.53**

Attachment 19

Photographic Documentation

Department of Transportation, Harbors Division
2018 Photographic Documentation

Photo 1 Description: Annual tenant training sessions hosted on 8/30/2018 and 9/20/2018.	**Photo 2 Description**: Annual Protect Our Waters Conference.
Photo 3 Description: Harbors booth at the Protect Our Waters Conference with educational handouts.	**Photo 4 Description:** Volunteer event with Leahi Soccer Club 2002. Hosted by Hawaiian Cement.

Department of Transportation, Harbors Division
2018 Photographic Documentation

Photo 5 Description: Outfall Reconnaissance Inspection with EnviroServices & Training Center, LLC.	**Photo 6 Description**: Tenant Inspections conducted for all Honolulu Harbor and Kalaeloa Harbor tenants.
	Intentionally Left Blank.
Photo 7 Description: Stenciling by all drain inlets prevents illicit discharges. These are maintained by DOT-Harbors personnel.	

Attachment 20

PEAR 2 Draft and Final Reports for Honolulu Harbor and Kalaeloa Barbers Point Harbor

DRAFT Program Element Audit Report (PEAR) No. 2

Construction Site Runoff Control
Part 1 of 2

State Project No. OSC-15-01

January 2018

Prepared by

Kennedy/Jenks Consultants

Prepared for

State of Hawaii
Department of Transportation
Office of Environmental Compliance
869 Punchbowl Street
Honolulu, Hawaii 96813

K/J Project No. 1696025*00

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B6 Permit-Specific Information – Highways Oahu District
C Revised Audit Work Plan, November 2016

List of Acronyms

AWP	Audit Work Plan
BAT	Best Available Technology
BCT	Best Conventional Pollutant Control Technology
BMP	best management practice
CD	Consent Decree
CESSWI	Certified Erosion, Sediment & Stormwater Inspector
CISEC	Certified Inspector of Sediment and Erosion Control
CPESC	Certified Professional in Erosion and Sediment Control
CPSWQ	Certified Professional in Stormwater Quality
DOH	State of Hawaii Department of Health
EPA	United States Environmental Protection Agency
ERP	Enforcement Response Plan
HDOT	State of Hawaii Department of Transportation
I/C	Industrial Commercial Activities/Tenant
IDDE	Illicit Discharge Detection and Elimination
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
PEAR	Program Element Audit Report
PM	Project Manager
SWMPP	Stormwater Management Program Plan
SWPPP	Stormwater Pollution Prevention Plan

Section 1: Introduction

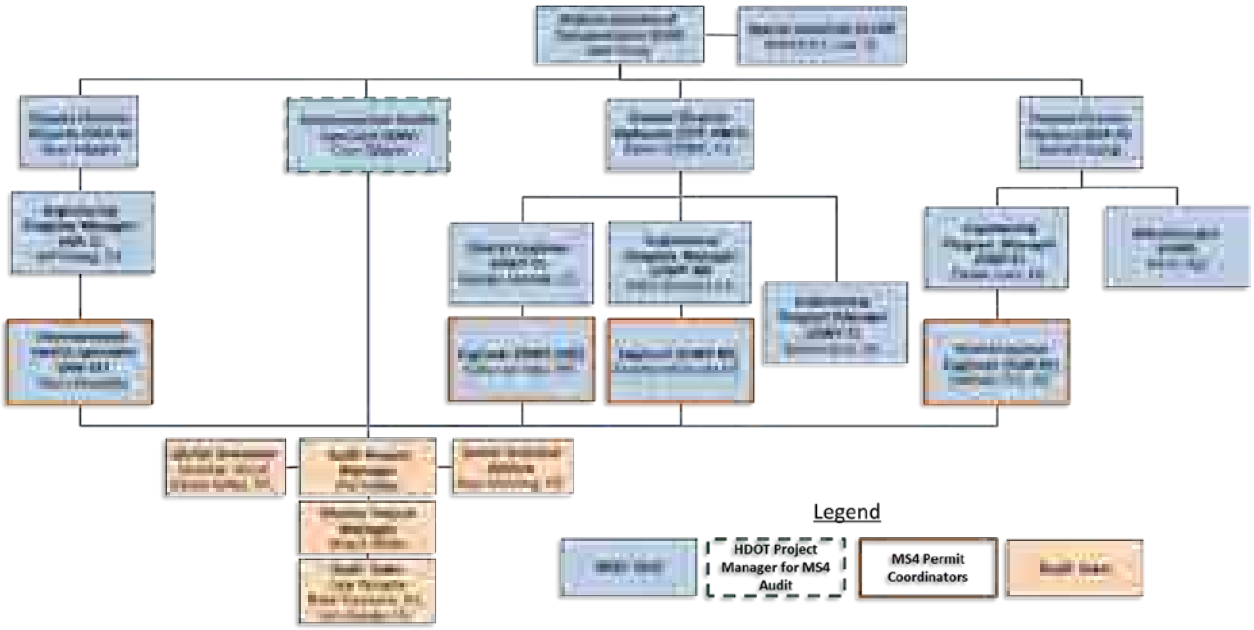
Under Paragraph 10.d of the Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC) entered on 5 November 2014 (CD) with the United States Environmental Protection Agency (EPA) and the State of Hawaii Department of Health (DOH), the State of Hawaii Department of Transportation (HDOT) was required to perform compliance audits of Municipal Separate Storm Sewer System (MS4) permits issued to HDOT's Airports, Highways, and Harbors Divisions (referred to herein as the singular "MS4 Permit Audit"). The ongoing MS4 Permit Audit is being conducted in accordance with an Audit Work Plan (AWP) approved by EPA and DOH on 31 October 2016 and provided as Appendix C of this report. The MS4 Permit Audit consists of individual audits of six program elements:

1. Post-Construction Runoff Control / Permanent Best Management Practices (BMPs)
2. Construction Site Runoff Control
3. Public Outreach / Public Involvement
4. Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
5. Pollution Prevention / Good Housekeeping Program
6. Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

This Program Element Audit Report (PEAR) 2 documents procedures and findings of the Construction Site Runoff Control audit.

Figure 1-1 provides an updated organizational chart defining the HDOT staff (presented in blue) and Audit Team (Kennedy/Jenks Consultants staff, presented in tan) involved in the MS4 Permit Audit.

Figure 1-1 Organizational Chart



Section 2: Methods (CD Appendix A Section D.7.a.)

As required in CD Appendix A Section D.7.a., this section includes a specific statement of the procedures followed, HDOT sites and activities visited, and materials reviewed during the MS4 Permit Audit. Additional details on specific dates can be found in Appendix A. Additional permit-specific details can be found in Appendices B1 through B6. The Audit Team reviewed the individual program element for the six permitted MS4 programs concurrently, developing a PEAR that represents the culmination of the auditing efforts across the three HDOT Divisions. The MS4 Permit Audit included three phases (Pre-Audit, On-Site Evaluation, and Reporting), detailed in the following sections.

2.1 Pre-Audit

2.1.1 Notice of Audit

The Audit Team began by providing a Notice of Audit to the MS4 Permit Coordinators via email. The Audit Team requested that the MS4 Permit Coordinators review two key documents.

First, the Audit Team created a table of Governing Regulations applicable to PEAR 2, which included sections of the Federal regulations, HDOT's MS4 permits, and the CD. This table was used by the Audit Team in conjunction with the guiding questions in Appendix B of the AWP to informally track the results from the evaluation. The MS4 Permit Coordinators provided comment on this table.

Second, the Audit Team developed a draft list of documents to be reviewed to generate the Records Request. The Audit Team asked the MS4 Permit Coordinators to confirm that the Audit Team had identified the most updated and suitable documents. The Audit Team finalized this list of documents based on feedback from the MS4 Permit Coordinators. This list is provided in Section 1 of Appendices B1 through B6.

2.1.2 Records Request

The Audit Team reviewed the key documents and identified those sections relevant to PEAR 2 (provided in Section 2 of Appendices B1 through B6). Based on this review, the Audit Team developed a Records Request that was shared with the MS4 Permit Coordinators.

2.1.3 Records Review

The MS4 Permit Coordinators responded to the Records Request and the Audit Team completed an initial review of the records received. The Audit Team next sent Requests for Clarification. The Audit Team also conducted in-person meetings with MS4 Permit Coordinators during this timeframe. MS4 Permit Coordinators provided additional information and records in response to this second request. The Audit Team then completed their review of records received.

2.2 On-Site Evaluation

2.2.1 Pre-On-Site Evaluation Conference Call

The Audit Team and HDOT Project Manager (PM) contacted the MS4 Permit Coordinators to confirm schedules, address questions and security concerns, confirm personnel safety equipment needed, and organize training and orientation briefings that were anticipated to be required.

2.2.2 On-Site Evaluation

During the On-Site Evaluation, the Audit Team visited several active construction sites at Harbors Division, Airports Division, and Highways Oahu District locations on Oahu and Maui. Additional details on specific sites visited during the On-Site Evaluations and associated photographs can be found in Sections 3 and 4, respectively, of Appendices B1 through B6.

2.2.3 Post-On-Site Evaluation Review Period

Following the On-Site Evaluations, the Audit Team reviewed the findings of the Pre-Audits and On-Site Evaluations and addressed final evaluation-related tasks that were noted. This review period completed the evaluation of the program element, as referenced in CD Appendix A, Section B.5.

2.3 Reporting

2.3.1 Draft PEAR

Pursuant to the CD, the Audit Team prepared a draft PEAR 2 and transmitted it to the HDOT PM, who distributed copies of the draft PEAR to the appropriate MS4 Permit Coordinators. The MS4 Permit Coordinators reviewed the draft PEAR and distributed the report to key personnel for their review (at the discretion of the MS4 Permit Coordinators). The MS4 Permit Coordinators submitted to the HDOT PM a consolidated written request for clarification and corrections to the draft PEAR for their respective permit. The HDOT PM then submitted the consolidated requests and corrections to the Audit PM.

2.3.2 Final PEAR

The Audit Team made appropriate changes to the draft PEAR and submitted the final PEAR.

Section 3: Key Findings (CD Appendix A Section D.7.b. – e.)

As required in CD Appendix A Section D.7.b. – e., this section includes details on the key findings of the MS4 Permit Audit for PEAR 2.

Compliance with several program components could not be determined, as discussed below.

Best Available Technology Currently Available (BAT) / Best Conventional Pollutant Control Technology (BCT) Discharge Requirement

HI S000005 Part D.1.d.(2)(i) and HI S000001 Part D.1.d.(3)(i) state the following:

[…prior to approval of the construction plans and specifications … (Permittee) shall review (various documents)… to verify that meets the following requirements:] Implementation of measures to ensure that the discharge of pollutants from the site will be reduced to the appropriate discharge limitations subject to the Best Available Technology currently available (BAT)/ Best Conventional Pollutant Control Technology (BCT) discharge requirement, consistent with the CWA and other respective federal and state requirements for such facilities and will not cause or contribute to an exceedance of water quality standards.

The Audit Team has concluded that this permit language requires further consultation between HDOT and DOH to clarify what is expected of HDOT as a permittee. As such, compliance with this permit requirement could not be determined.

Expression of Stormwater Management Program Plan "Goals"

The Kahului Airport Stormwater Management Program Plan (SWMPP) establishes several "goals" intended to be met by 31 December 2018. These goals include completing plan review prior to initiating work on 90 percent of construction projects and conducting all required inspections. Because the stated deadline has not yet been reached, compliance with these permit requirements could not be determined.

Lack of Active Construction Sites

At both Honolulu Harbor and Highways Maui District, the MS4 Permit Coordinators communicated that there were no active construction sites as of the date of the On-Site Evaluation. For this reason, compliance with several permit and SWMPP commitments for these two permittees could not be determined.

Enforcement Response Plan (ERP) Under Development

As of December 2017, the Harbors Division ERP was in the process of being finalized and was not fully operational within the Division. Therefore, it was difficult for the Audit Team to fully assess compliance with enforcement-related permit requirements and SWMPP commitments for Harbors Division.

Aside from the limitations discussed above and unless otherwise noted otherwise in this report, the Audit Team found HDOT's permittees to be in compliance with their permit obligations.

3.1 Identification of Potential Violations and Deficiencies (CD Appendix A Section D.7.c.)

As required in CD Appendix A Section D.7.c., this section includes an identification of Potential Violations and Deficiencies and recommendations for improvement.

3.1.1 Potential Violations

A Potential Violation is defined in the AWP as an area where the evaluation found the permittee not in compliance with a specific SWMPP commitment, the CD, and/or permit and regulations. The Audit Team identified one (1) Potential Violation related to Airports Division. More details on this Potential Violation and associated Corrective Actions proposed by HDOT are provided in Section 5 of Appendix B1. Section 6.3 of the AWP further discusses HDOT's response to this Potential Violation, as required by CD Appendix A Section E.1.

3.1.2 Deficiencies

A Deficiency is defined in the AWP as an item which, if not corrected, may lead to Potential Violations. The Audit Team identified a total of five (5) Deficiencies; three (3) Deficiencies were related to Airports Division, and two (2) Deficiencies were related to Harbors Division. More details on the Deficiencies and associated Corrective Actions proposed by HDOT are provided in Section 6 of Appendices B1 through B6. For each Deficiency, the Audit Team's recommendations for improvement are also provided. Section 6.4 of the AWP further discusses HDOT's response to these Deficiencies, as required by CD Appendix A Section E.2.

3.2 Best Practices and Opportunities (CD Appendix A Section D.7.d.)

As required in CD Appendix A Section D.7.d., this section includes an identification of best practices and opportunities for information/technology transfer to be applied across the Divisions.

During the MS4 Permit Audit, the Audit Team noted several areas where best practices and technologies may be considered across the Divisions. Findings include the following five (5) items:

1. HDOT may consider utilizing a single construction BMP manual to provide guidance on the installation and maintenance of construction BMPs. At present, Harbors Division has adopted City and County of Honolulu's BMP Manual, while Airports Division and Highways Oahu District have developed their own customized manuals. While the Audit Team acknowledges that each Division oversees different types of construction projects, a single comprehensive manual could lead to more streamlined training, inspection, and compliance throughout HDOT. Contractors working with different Divisions may find it easier to reference a single manual instead of three different manuals. HDOT may also find it easier to maintain and update a single manual as changes occur to federal, state, and local BMP standards and technology.

2. HDOT may consider utilizing a single construction Stormwater Pollution Prevention Plan (SWPPP) template. This approach would help ensure that all projects overseen by HDOT are held to a minimum standard of disclosure, and may help simplify the approvals process for contractors.

3. HDOT should continue using the valuable data tracked in their respective construction stormwater databases to analyze trends and areas for improvement. For example, Highways Oahu District undertakes an annual review of inspection data to assess what kinds of deficiencies were common in the preceding year. That information is then used to revise their annual training materials. Additional steps could involve identifying those contractors who are consistently deficient so that HDOT can provide them with additional training and oversight. The Audit Team is aware that the City and County of Honolulu is performing this kind of tracking and analysis; HDOT may consider reaching out to City and County of Honolulu staff to explore areas of collaboration and information sharing.

4. Harbors Division, Airports Division, and Highways Maui District may consider reviewing Highways Oahu District's treatment of the inspection process within their asset management system software (Maximo). The Audit Team was impressed by Maximo's ability to dynamically add and track site-specific BMPs. For example, if a contractor submitted a revised SWPPP indicating that they have installed additional BMPs, Highways Oahu District could add those BMPs to the database of site-specific inspection questions. Since the inspection questions are stored within the database, the questions are automatically added to the next inspection form, which prompts that inspector to check that particular BMP. The list of BMPs is not constrained by a physical paper form, which allows Highways Oahu District to be very specific in their referencing (i.e., inspecting Stockpiles 1, 2, and 3 individually, instead of a single line item: "Stockpiles"). This leads to a very effective and granular tracking of compliance at a given site.

5. The Audit Team found the use of mobile devices such as tablets to be effective as they allow inspectors to connect to each Divisions' asset management system in real time. Inspectors can quickly pull up past inspection findings and photos, simplifying their pre-inspection preparations and making their time on-site more effective. The Audit Team anticipates that the use of mobile devices will become even more useful as the asset management systems themselves evolve.

3.3 Implementation (CD Appendix A Section D.7.e)

As required in CD Appendix A Section D.7.e., this section includes an analysis of the practices implemented for each Division's program elements and a determination as to whether identified best practices can be universally implemented across all three Divisions. If best practices cannot be universally implemented, this section describes the identified impediments. Findings include the following two (2) items:

1. HDOT should consider consolidating required training of HDOT staff, consultants, and contractors related to construction. The Audit Team found similar training requirements in the various permits. A common HDOT training session could reduce department-wide costs and lead to greater consistency.

2. The Audit Team has concluded that the greatest impediment to implementing the recommendations in Section 3.2 is that the permittees are held to differing standards based on their permits. For example, Highways Oahu District's individual permit is much more prescriptive and demanding than Harbors Division's Small MS4 General Permit. However, the Audit Team has concluded there are certain elements common to each permittee's construction site runoff control programs which may be able to be standardized throughout HDOT; these are summarized in Section 3.2.

3.4 Retrospective Analysis (CD Appendix A Section D.7.b.)

As required in CD Appendix A Section D.7.b., this section includes a retrospective analysis of activities that maybe outmoded, ineffective, insufficient, or excessively burdensome, and recommendations to modify, streamline, or expand them in accordance with what has been learned. Findings include the following six (6) items:

1. HDOT should consider requiring that construction stormwater inspectors be certified in one or more of the following programs: Certified Inspector of Sediment and Erosion Control (CISEC), Certified Professional in Erosion and Sediment Control (CPESC), Certified Erosion, Sediment & Stormwater Inspector (CESSWI), and/or Certified Professional in Stormwater Quality (CPSWQ)[1]. This would help HDOT maintain a consistent level of expertise amongst its many inspectors.

2. HDOT should consider establishing a Department-wide policy prohibit ground disturbing activity before the initial BMP inspection. This requirement is already included in the individual permits for Daniel K. Inouye International Airport and Highways Oahu District, as well as in the Harbors Division's CD. However, Kahului Airport and Highways Maui District do not have this requirement. Such a Department-wide policy would set a clear expectation that all contractors working under HDOT's purview must install BMPs in advance of ground disturbance.

3. HDOT should consider proposing a single 3rd party inspection frequency for the entire Department. At present, Daniel K. Inouye International Airport and Highways Oahu District individual permits call for monthly 3rd party inspections, with the ability to reduce that frequency to quarterly following satisfactory inspection results. Harbors Division's CD calls for bi-weekly inspections in the wet season and bimonthly inspections in the dry season. Kahului Airport and Highways Maui District permits do not specify an inspection frequency. Implementing a Department-wide policy may help increase consistency amongst the permittees and ensure a minimum level of HDOT oversight. The Audit Team acknowledges that coordination with DOH may be required to achieve this proposed change.

4. Airports Division's and Highways Oahu District's individual permits both require that HDOT review construction plans prior to approval to verify that they meet the requirements of HAR Chapter 11-55 Appendix C (Hawaii's National Pollutant Discharge

[1] CISEC certification is offered by CISEC, Inc. (https://www.cisecinc.org/). CPESC, CESSWI, and CPSWQ certifications are offered by EnviroCert International, Inc. (http://www.envirocertintl.org/).

Elimination System [NPDES] construction general permit). Airports Division's, Harbors Division's, and Highways Maui District's Small MS4 General Permits do not specifically address this requirement.

The Audit Team observed that the permittees used a variety of checklists to address this requirement. However, it was unclear whether the permittees simply check that the projects have been *granted* an Appendix C permit, or whether the permittees review project plans such as the SWPPP to assess whether these plans meet the requirements of Appendix C. While not all permittees are required to do so, the Audit Team concluded that the latter would be a useful exercise for permittees, and would help identify those areas where projects may be lacking in important details (such as site stabilization, discussed further in Deficiency #5).

5. The Audit Team observed that in some situations, construction stormwater inspectors followed the lead of the contractor through the construction site during the inspection instead of leading the inspection themselves. While the Audit Team acknowledges that contractors must advise the inspector regarding on-site health and safety concerns, the inspector should have ultimate authority to lead the inspection and investigate those areas they deem necessary.

6. The Audit Team reviewed Airports Division Review Comments forms where responses and closed comments were not completed. HI S000005 Part D.1.d.(2)(iv) states that "[a] system shall be implemented to ensure all comments, identified during the review process has been properly addressed." Airports Division has already implemented associated corrective actions in response to PEAR 1 Deficiency #14.

3.5 Positive Program Elements

HDOT staff were helpful and cooperative in responding to requests for information, scheduling and coordinating the On-Site Evaluation, etc. HDOT staff were receptive to MS4 Permit Audit findings shared to date and interested in improving their MS4 programs. Findings include the following ten (10) items:

1. Though not mandated by their permits, Airports Division and Harbors Division have developed program requirements for projects that disturb less than 1 acre. They require that project proponents fill out a notification form describing their approach to erosion and sediment control.

2. Highways Oahu District maintains a publicly-available online map of current and future construction projects.

3. Airports Division and Harbors Division both set up booths at Highways Oahu District's Annual Protect Our Waters Conference. This shows increased collaboration amongst the various HDOT stormwater programs.

4. Highways Oahu District's ERP Table 2-1 is an effective presentation of the timeframes required for contractors to address specific instances of non-compliance.

5. Highways Oahu District's construction stormwater inspection form allows for a high level of specificity regarding the exact location of particular BMPs (such as reference to mileposts).

6. Highways Oahu District's asset management system (Maximo) prompts inspectors to specify a date when deficiency follow-up is expected from a contractor. This allows program staff to easily generate a list of those deficiencies which are still outstanding, and take appropriate follow-up action.

7. Several of the construction sites visited during the MS4 Permit Audit utilized "live" BMP plans which were updated daily or weekly. For example, at the Daniel K. Inouye International Airport's CONRAC project, the contractor used a large magnetic white board in a highly trafficked area. The board had magnetic BMPs that could be moved around based on the construction activities that day. The Audit Team commends this approach, as it leads to high-visibility and frequently-updated BMP plans.

8. The Audit Team observed that HDOT inspectors communicate well with contractors during the inspections. We found examples of inspectors using the inspection time as an opportunity to educate contractors. For example, during an inspection, Airports Division's MS4 Permit Coordinator effectively fielded questions from contractor staff regarding overall stormwater regulations and compliance.

9. The Audit Team understands that Airports Division will soon be exercising the option afforded in their permit to reduce inspection frequency at sites with few deficiencies. This may allow Airports Division to focus their inspection and enforcement resources towards projects that are in greater need for oversight.

10. Airports Division has been receiving additional resources and consulting support for its program, which the Audit Team believes will help address several of the issues identified in PEAR 1 and PEAR 2.

Appendix A

Project Milestones and Deadlines

Appendix A: PEAR 2 Project Milestones and Deadlines

Appendix A of the Consent Decree (CD) defines various project milestones and deadlines, described for ease of reference below:

Table 2-1 CD Appendix A Deadlines

Program Element	Evaluation Complete: [a]	Draft PEAR to HDOT: [b]	HDOT Review of Draft PEAR: [c]	Final PEAR to HDOT: [d]
PEAR 2: Construction Runoff Control	9 Months (270 Days)[e] After AWPC[f] 10 December 2017	315 Days After AWPC 24 January 2018	345 Days After AWPC 23 February 2018	390 Days After AWPC 9 April 2018

Notes:

(a) "Evaluation" as referenced in CD Appendix A Section B.5. is defined to represent the conclusion of the Post-On-Site Evaluation Review Period.
(b) Pursuant to CD Appendix A Section D.2., Kennedy/Jenks Consultants completed a draft audit report and transmitted it to State of Hawaii Department of Transportation (HDOT) within 45 days of completing the audit of this program element [defined as the conclusion of "evaluation", as discussed in Note (a)].
(c) Pursuant to CD Appendix A Section D.3., HDOT reviewed the draft PEAR to correct any factual inaccuracies within 30 days of receipt.
(d) Pursuant to CD Appendix A Section D.4., Kennedy/Jenks Consultants completed a final PEAR within 120 days of completing the audit of the program element [defined as the conclusion of "evaluation", as discussed in Note (a)].
(e) "Months" are based on 30-day month.
(f) AWPC = Audit Work Plan Commencement (15 March 2017)

Milestone	Date Completed
Notice of Audit	21 September 2017
Records Request	28 September 2017
Response to Records Request	27 October 2017
Completion of Records Review	9 November 2017
Attendance at HDOT Protect Our Water Conference (Construction Program Training)	15 November 2017
Pre-On-Site Evaluation Conference Call	16 November 2017 and 20 November 2017
On-Site Evaluation	27 November 2017 to 4 December 2017
End of Post-On-Site Evaluation Review Period	8 December 2017
Draft Potential Violations to HDOT PM	22 January 2018
Notice of Corrective Action to EPA/DOH	5 February 2018
Draft PEAR to HDOT PM	22 January 2018
MS4 Permit Coordinator Comments to HDOT PM	16 February 2018
HDOT PM Comments to Audit Team	20 February 2018
Final PEAR to HDOT PM	12 March 2018

Notes:

PM = project manager
TBD = to be determined

Appendix B1

Permit-Specific Information – Kahului Airport

Appendix B1: Permit-Specific Information – Kahului Airport

1. Key Documents

Permit / Document	1. Kahului Airport Small MS4 Permit HI 14KE349
2016 Annual Report	20170127.Contents of CD for Compliance Submission of Reports and Documents-HI14KE349.PDF
Construction Activities BMP Manual	Page 47 of OGG-Construction-and-Post-Construction-SW-Management-Plan-v2.0-Final-201709.pdf
Construction Site Inventory	Current Projects under construction: AM1032-13 OGG ConRAC AM1049-14 Wash Rack
DOH Comments on 2016 Annual Report	None received.
Enforcement Response Plan	Pages 23 and 24 of OGG-Construction-and-Post-Construction-SW-Management-Plan-v2.0-Final-201709.pdf
Organizational charts	Page 7 of OGG-Construction-and-Post-Construction-SW-Management-Plan-v2.0-Final-201709.pdf
Permit	OGG-MS4-permit-20140721.14KE349.FNL_.14.pdf
Construction Plan Design Review	App-C-Design-Review-Checklist_20140317.pdf 20171009.Construction-Plan-Design-Review-SOP-V1-7-2017 DOTA_SOP_ConstructionPlanReview.pdf
Previous Audit Findings	Not applicable to this permit
SWMPP	OGG-SWMPP_20141023.pdf
Website	http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/ogg-storm-water-program/

Permit / Document	1. Kahului Airport Small MS4 Permit HI 14KE349
Training and Education Materials	• 2017 Construction Inspector Training Quiz • DOTA Construction Training Slides.pdf • 2017 Construction Handout.pdf • Construction Program Information Sheet.pdf • OGG Storm Water Training Invitation Letter v1 (1).pdf • SW Training 2017_web version 2017_ with script.pdf • PPT Library Construction Documents Review Form.pdf • PPT Library HNL NPDES Permit Design and Construction Requirements.pdf • PPT Library Airports Division Specification Guideline Fed.pdf • PPT Library PM Process Pre-Con Meeting Minutes.pdf • PPT Library Procedure for notification of cont soil.pdf • PPT Library Procedure for notification of cont soil.pdf • PPT Library Tenant Improvement Approval Forms.pdf • 2017 Construction Inspector Training Survey.pdf • DOT Airports Construction Training_v5_20151021.pdf • DOTA_SOP_ConstructionPlanReview.pdf • 20160926.Transmittal and Contents of CD for Compliance Submission of Other-Updated Training-HIS000005.pdf • 20160909.Compliance Submission of Other-Updated Training-HIS000005.pdf

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
Construction and Post- Construction Storm Water Management Plan (September 2017) *(5.-OGG-Construction-and-Post-Construction-SW-Management-Plan-v2.0-Final-201709.pdf)*	Sections 1-6 Appendix A (Construction Process Flow Chart) Appendix B (Form for Projects < 1 Acre) Appendix C (Design Review Checklist) Appendix E (Construction Inspection Checklist)
2016 Annual Compliance Report - Stormwater Management Program *(20170127.Contents of CD for Compliance Submission of Reports and Documents-HI14KE349.PDF)*	Part I (page 1) Part II (page 7) Part III (pages 15- 17) Part V (pages 20, 22,23, 25) Attachment 1 (Photo Documentation) Attachment 9 (Construction Plan Review Log) Attachment 9 (Construction Inspection and Enforcement Log)
Kahului Airport Storm Water Management Program Plan (October 2014) (*OGG-SWMPP_20141023.pdf*)	In entirety
HDOT- Airports Standard Operating Procedures- Construction Plan Design and Review (*DOTA_SOP_ConstructionPlanReview.pdf)*	In entirety
Construction Activities BMP Manual *(Page 47 of Construction-and-Post-Construction-SW-Management-Plan-v2.0-Final-201709.pdf)*	In entirety
Permit *(OGG-MS4-permit-20140721.14KE349.FNL_.14.pdf)*	In entirety
Design Review Checklist *(App-C-Design-Review-Checklist_20140317.pdf)*	In entirety
Construction Plan Design Review Standard Operating Procedure *(20171009.Construction-Plan-Design-Review-SOP-V1-7-2017)*	In entirety
Website *(http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/ogg-storm-water-program/)*	In entirety
Training and Education Materials *(2017 Construction Inspector Training Quiz.pdf)*	In entirety

3. On-Site Evaluation

27 November 2017

On 27 November 2017, the Audit Team held a kickoff meeting at Kahului Airport with Airports Division staff and consultants. Photographs taken during the On-Site Evaluation can be found in Section 4.

Construction Site 1.1 Consolidated Rental Car (CONRAC) Facility

Next, the Audit Team walked to the CONRAC facility and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Airports Division staff and consultants as they conducted an inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

Construction Site 1.2 Wash Rack

This site was not under active construction on the day of the on-site evaluation, and was not yet ready for final inspection. Therefore, it was removed from the scope of the On-Site Evaluation.

4. On-Site Evaluation Photos

Photographs are provided on the subsequent pages below.

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.1
Records Review and Safety Meeting

Construction Site 1.1 Photo 1.1.2
Records Review and Safety Meeting

Construction Site 1.1 Photo 1.1.3
Records Review and Safety Meeting

Construction Site 1.1 Photo 1.1.4
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 1.1 Photo 1.1.5
Material Stockpiles

Construction Site 1.1 Photo 1.1.6
Material Stockpiles

Construction Site 1.1 Photo 1.1.7
Material Stockpiles

Construction Site 1.1 Photo 1.1.8
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

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Construction Site 1.1 Photo 1.1.9
Material Stockpiles

Construction Site 1.1 Photo 1.1.10
Material Stockpiles

Construction Site 1.1 Photo 1.1.11
Material Stockpiles

Construction Site 1.1 Photo 1.1.12
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 1.1 Photo 1.1.13
Construction Site

Construction Site 1.1 Photo 1.1.14
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.15
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.16
Vehicle Tire Wash Rack

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 1.1 Photo 1.1.17
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.18
Construction Staging Area

Construction Site 1.1 Photo 1.1.19
Material Stockpiles

Construction Site 1.1 Photo 1.1.20
Construction Staging Area

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.21
Material Stockpiles

Construction Site 1.1 Photo 1.1.22
Material Stockpiles

Construction Site 1.1 Photo 1.1.23
Construction Site Vehicle Access

Construction Site 1.1 Photo 1.1.24
Construction Site Vehicle Access

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.25
Construction Site Vehicle Access

Construction Site 1.1 Photo 1.1.26
Construction Site Vehicle Access

Construction Site 1.1 Photo 1.1.27
Material Stockpiles

Construction Site 1.1 Photo 1.1.28
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

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Construction Site 1.1 Photo 1.1.29
Material Stockpiles

Construction Site 1.1 Photo 1.1.30
Material Stockpiles

Construction Site 1.1 Photo 1.1.31
Construction Site Vehicle Access

Construction Site 1.1 Photo 1.1.32
Construction Site Vehicle Access

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

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Construction Site 1.1 Photo 1.1.33
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.34
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.35
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.36
Vehicle Tire Wash Rack

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 1.1 Photo 1.1.37
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.38
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.39
Material Waste Bins

Construction Site 1.1 Photo 1.1.40
Material Waste Bins

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 1.1 Photo 1.1.41
Material Waste Bins

Construction Site 1.1 Photo 1.1.42
Material Waste Bins

Construction Site 1.1 Photo 1.1.43
Material Waste Bins

Construction Site 1.1 Photo 1.1.44
Vehicle Tire Wash Rack

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 1.1 Photo 1.1.45
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.46
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.47
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.48
Material Waste Bins

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 1.1 Photo 1.1.49
Material Waste Bins

Construction Site 1.1 Photo 1.1.50
Material Waste Bins

Construction Site 1.1 Photo 1.1.51
Material Waste Bins

Construction Site 1.1 Photo 1.1.52
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 1.1 Photo 1.1.53
Erosion Control Berms

Construction Site 1.1 Photo 1.1.54
Erosion Control Berms

Construction Site 1.1 Photo 1.1.55
Erosion Control Berms

Construction Site 1.1 Photo 1.1.56
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 1.1 Photo 1.1.57
Erosion Control Berms

Construction Site 1.1 Photo 1.1.58
Erosion Control Berms

Construction Site 1.1 Photo 1.1.59
Erosion Control Berms

Construction Site 1.1 Photo 1.1.60
Concrete Washout Bins

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.61
Concrete Washout Bins

Construction Site 1.1 Photo 1.1.62
Concrete Washout Bins

Construction Site 1.1 Photo 1.1.63
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.64
Vehicle Tire Wash Rack

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.65
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.66
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.67
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.68
Concrete Washout Bins

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.69
Erosion Control Berms

Construction Site 1.1 Photo 1.1.70
Erosion Control Berms

Construction Site 1.1 Photo 1.1.71
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.72
Concrete Washout Bins

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.73
Concrete Washout Bins

Construction Site 1.1 Photo 1.1.74
Material Stockpiles

Construction Site 1.1 Photo 1.1.75
Exposed Soil

Construction Site 1.1 Photo 1.1.76
Exposed Soil

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.77
Exposed Soil

Construction Site 1.1 Photo 1.1.78
Exposed Soil

Construction Site 1.1 Photo 1.1.79
Exposed Soil

Construction Site 1.1 Photo 1.1.80
Exposed Soil

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.81
Exposed Soil

Construction Site 1.1 Photo 1.1.82
Exposed Soil

Construction Site 1.1 Photo 1.1.83
Exposed Soil

Construction Site 1.1 Photo 1.1.84
Exposed Soil

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.85
Erosion Control Berms

Construction Site 1.1 Photo 1.1.86
Material Stockpiles

Construction Site 1.1 Photo 1.1.87
Erosion Control Berms

Construction Site 1.1 Photo 1.1.88
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.89
Material Stockpiles

Construction Site 1.1 Photo 1.1.90
Construction Site

Construction Site 1.1 Photo 1.1.91
Material Stockpiles

Construction Site 1.1 Photo 1.1.92
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.93
Material Stockpiles

Construction Site 1.1 Photo 1.1.94
Material Stockpiles

Construction Site 1.1 Photo 1.1.95
Material Storage Area

Construction Site 1.1 Photo 1.1.96
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.97
Erosion Control Berms

Construction Site 1.1 Photo 1.1.98
Erosion Control Berms

Construction Site 1.1 Photo 1.1.99
Erosion Control Berms

Construction Site 1.1 Photo 1.1.100
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.101
Site Inspection

Construction Site 1.1 Photo 1.1.102
Material Storage Area

Construction Site 1.1 Photo 1.1.103
Leaking Equipment

Construction Site 1.1 Photo 1.1.104
Leaking Equipment

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.105
Erosion Control Berms

Construction Site 1.1 Photo 1.1.106
Erosion Control Berms

Construction Site 1.1 Photo 1.1.107
Exposed Sediment

Construction Site 1.1 Photo 1.1.108
Exposed Sediment

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.109
Material Storage Area

Construction Site 1.1 Photo 1.1.110
Construction Site

Construction Site 1.1 Photo 1.1.111
Construction Site

Construction Site 1.1 Photo 1.1.112
Dust Control Fence

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.113
Erosion Control Berms

Construction Site 1.1 Photo 1.1.114
Material Storage Area

Construction Site 1.1 Photo 1.1.115
Material Storage Area

Construction Site 1.1 Photo 1.1.116
Material Storage Area

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.117
Material Storage Area

Construction Site 1.1 Photo 1.1.118
Construction Site

Construction Site 1.1 Photo 1.1.119
Pedestrian Accessway

Construction Site 1.1 Photo 1.1.120
Drain Inlet Protection

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.121
Site Inspection

Construction Site 1.1 Photo 1.1.122
Erosion Control Berms

Construction Site 1.1 Photo 1.1.123
Material Stockpiles

Construction Site 1.1 Photo 1.1.124
Construction Employee Restroom

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.125
Storm Drain Manhole

Construction Site 1.1 Photo 1.1.126
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.127
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.128
Drain Inlet Protection

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.129
Pedestrian Accessway

Construction Site 1.1 Photo 1.1.130
Pedestrian Accessway

Construction Site 1.1 Photo 1.1.131
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.132
Concrete Material Waste Bin

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.133
Concrete Material Waste Bin

Construction Site 1.1 Photo 1.1.134
Dust Control

Construction Site 1.1 Photo 1.1.135
Material Stockpiles

Construction Site 1.1 Photo 1.1.136
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.137
Material Storage Area

Construction Site 1.1 Photo 1.1.138
Construction Employee Restroom

Construction Site 1.1 Photo 1.1.139
Material Stockpiles

Construction Site 1.1 Photo 1.1.140
Material Storage Area

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.141
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.142
Concrete Washout Bin

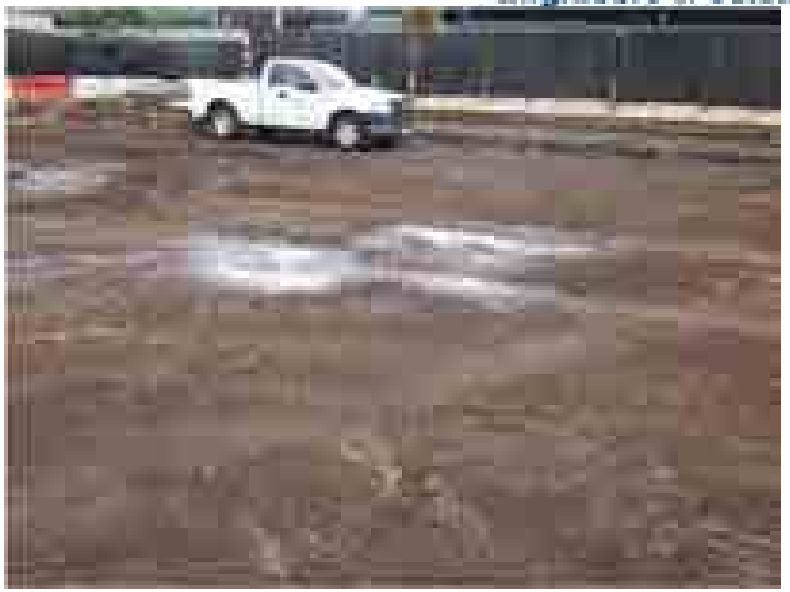
Construction Site 1.1 Photo 1.1.143
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.144
Concrete Washout Bin

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.145
Concrete Washout Bin



Construction Site 1.1 Photo 1.1.146
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.147
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.148
Concrete Washout Bin

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.149
Corner of Construction Site

Construction Site 1.1 Photo 1.1.150
Corner of Construction Site

Construction Site 1.1 Photo 1.1.151
Corner of Construction Site

Construction Site 1.1 Photo 1.1.152
Concrete Washout Bin

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.153
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.154
Erosion Control Berms

Construction Site 1.1 Photo 1.1.155
Erosion Control Berms

Construction Site 1.1 Photo 1.1.156
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.157
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.158
Chemicals Stored on Construction Vehicle

Construction Site 1.1 Photo 1.1.159
Exposed Sediment

Construction Site 1.1 Photo 1.1.160
Material Storage Area

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.161
Construction Site

Construction Site 1.1 Photo 1.1.162
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.163
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.164
Drain Inlet

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.165
Drain Inlet

Construction Site 1.1 Photo 1.1.166
Material Storage Area

Construction Site 1.1 Photo 1.1.167
Soil Stabilization

Construction Site 1.1 Photo 1.1.168
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.169
Soil Stabilization

Construction Site 1.1 Photo 1.1.170
Soil Stabilization

Construction Site 1.1 Photo 1.1.171
Soil Stabilization

Construction Site 1.1 Photo 1.1.172
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.173
Soil Stabilization

Construction Site 1.1 Photo 1.1.174
Soil Stabilization

Construction Site 1.1 Photo 1.1.175
Material Storage Area and Dust Control Fence

Construction Site 1.1 Photo 1.1.176
Chemical Spill

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.177
Chemical Spill

Construction Site 1.1 Photo 1.1.178
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.179
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.180
Drain Inlet Protection

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.181
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.182
Soil Stabilization

Construction Site 1.1 Photo 1.1.183
Soil Stabilization

Construction Site 1.1 Photo 1.1.184
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.185
Soil Stabilization

Construction Site 1.1 Photo 1.1.186
Soil Stabilization

Construction Site 1.1 Photo 1.1.187
Soil Stabilization

Construction Site 1.1 Photo 1.1.188
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.189
Soil Stabilization

Construction Site 1.1 Photo 1.1.190
Soil Stabilization

Construction Site 1.1 Photo 1.1.191
Soil Stabilization

Construction Site 1.1 Photo 1.1.192
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.193
Soil Stabilization

Construction Site 1.1 Photo 1.1.194
Soil Stabilization

Construction Site 1.1 Photo 1.1.195
Soil Stabilization

Construction Site 1.1 Photo 1.1.196
Construction Ingress/Egress Location

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.197
Construction Ingress/Egress Location

Construction Site 1.1 Photo 1.1.198
Construction Ingress/Egress Location

Construction Site 1.1 Photo 1.1.199
Construction Ingress/Egress Location

Construction Site 1.1 Photo 1.1.200
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.201
Soil Stabilization

Construction Site 1.1 Photo 1.1.202
Soil Stabilization

Construction Site 1.1 Photo 1.1.203
Construction Site

Construction Site 1.1 Photo 1.1.204
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

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Construction Site 1.1 Photo 1.1.205
Soil Stabilization

Construction Site 1.1 Photo 1.1.206
Underground Storage Tanks

Construction Site 1.1 Photo 1.1.207
Material Stockpiles

Construction Site 1.1 Photo 1.1.208
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.209
Material Stockpiles

Construction Site 1.1 Photo 1.1.210
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.211
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.212
Drain Inlet Protection

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.213
Underground Storage Tanks

Construction Site 1.1 Photo 1.1.214
Material Stockpiles

Construction Site 1.1 Photo 1.1.215
Underground Storage Tanks

Construction Site 1.1 Photo 1.1.216
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.217
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.218
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.219
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.220
Material Stockpiles and Drain Inlet Protection

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.221
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.222
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.223
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.224
Material Stockpiles and Drain Inlet Protection

5. Potential Violations

Potential Violation Tracking #1 applies to this permit. Please see pages B1-7 through B1-10.

Draft Notice of Potential Violation

Potential Violation Tracking #: 1

Determination of Potential Violation Date: 1/20/18

Potential Violation Notification Date: 1/22/18

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

The Audit Team's Records Review found that third party site inspectors may not be consistently elevating observations to the level of a deficiency, as defined in Airports Division's Construction & Post-Construction Stormwater Management Plan (September 2017, hereinafter referred to as the "Plan"). For example, the 12/28/16 inspection of the Kahului Airport washrack project identified that the project's silt fence needed to be maintained, and that nearly half of the silt fence needed to be reinstalled properly. This finding fits the definition of either a minor or major deficiency (Sections 4.3.1 and 4.3.2 of the Plan, respectively). However, the finding was not noted in the 12/28/16 inspection form as a deficiency of any kind and consequently, the contractor was not notified that the issued should be resolved in the timeframe defined in the Plan. The Audit Team has found this to be potentially in violation of the applicable regulatory references listed below.

Description of Attachments (if applicable): Airports Division's 12/28/16 inspection of the Kahului Airport washrack project.

Applicable Regulatory References

NPDES Permit No.: n/a

SWMPP: "Construction Inspections: Conduct construction inspections as described in the Construction Site Runoff Control Plan".

Sections 4.3.1 and 4.3.2 of Construction and Post-Construction Storm Water Management Plan (September 2017):

"Minor [deficiencies] include, but are not limited to, the following examples: Linear barriers and/or perimeter controls are installed as required by the BMP Plan, but require minor maintenance. For example, a silt fence which is not anchored properly throughout the entire length…"

"Major deficiencies include, but are not limited to, the following examples: Linear barriers and/or perimeter controls in areas tributary to a water body or drain inlet that are installed as required by the BMP plan, but are not functional, such as silt fences that are not anchored properly."

Hawaii Administrative Rules (HAR): HAR 11-55 Appendix K Part 6.(a)(4)(F) "Procedures for site inspection and enforcement of control measures;"

Code of Federal Regulations (CFR): 40 CFR 122.34(b)(4)(i)(F) "At a minimum, the permit must require the permittee to develop and implement: (F) Procedures for site inspection and enforcement of control measures."

Construction Inspection Checklist

Project Name: Installation of Washrack at Kahului Airport	
Date: 12/28/16	Start / End Time: 10:30 am - 11:15 am
Project No.: AM1049-14	NPDES Permit # (if any):
Name of Inspector's Firm: EnviroServices and Training Center, LLC	
Name of Inspector: Daniel Amato	Phone Number: 808-664-1926
On-site Representative: Patty Shelton	
Weather Conditions: Partly Cloudy	
Type of Inspection (check one): ☒ Initial ☐ Weekly ☐ Monthly ☐ Final ☐ Follow-up ☐ Other:	

Inspection Items		***Yes***	***No***	***N/A***	***Comments***
1.	Are previously noted deficiencies corrected?	☐	☐	☒	This is the initial inspection
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☐	☐	☒	No MS4 changes will be made
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☐	☐	☒	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☒	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☐	☐	☒	This is the initial inspection
6.	Are spill kits available on-site and spills promptly removed?	☐	☒	☐	None on site while work was stopped.
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☒	☐	☐	
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☒	☐	Silt fence is in need of maintenance (photos 7 & 8).
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☒	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☒	☐	☐	
11.	Is the construction exit preventing sediment from being tracked into the street?	☒	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☐	☒	No dumpsters on site.
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☐	☐	☒	No washout required.
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☐	☐	☒	No materials stored onsite.
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☐	☒	☐	A fuel leak / stain was observed on the ground below a backhoe (photo 6) .
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☐	☐	☒	
17.	Was herbicide, pesticide, or fertilizer used at the site since the previous inspection?	☐	☐	☒	This is the initial inspection
17b.	If so, keep the usage log on-site and in the comments section of this form record date, quantity used, location, and BMPs used (refer to SWMPP Section E).	☐	☐	☒	This is the initial inspection

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.	Filter Socks	☒	☐	☒	☐	
2.	Silt Fence	☒	☐	☐	☒	Nearly half of the silt fence needs to be reinstalled properly (photos 7 & 8)
3.	Drain Inlet Protection	☒	☐	☒	☐	
4.	Stabilized Construction Entrance	☒	☐	☒	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
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		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	

Additional Comments:

*Use additional paper if the number of BMPs exceeds the space allotted.

Description of Potential Non-Compliance:

Minor Deficiencies:

1) Fuel leak/ spill detected below heavy machinery (backhoe). Heavy machinery should be stored with drip pans or other BMPs designed to contain leaks. Preventative maintenance should be taken to ensure equipment on site is not leaky. It is also recommended that a spill kit is kept onboard the equipment if possible. This must be corrected as soon as possible, but no later than **10 calendar days following the inspection**.

NOTE: Per OGG's Small MS4 Permit, HIS000412 and SWMP Section C.
Critical Deficiencies. Must be corrected by the **close of business on the day of the inspection**. Defined as those that pose an immediate threat for discharge of pollutants to a storm drain or receiving water. Examples include: non-storm water discharge, absence of perimeter controls, spills that have not been cleaned near a drain or waterway.

Major Deficiencies. Must be corrected as soon as possible, but no later than **5 calendar days following the inspection**. Defined as those that pose a significant threat for discharge of pollutants to a storm drain or receiving water. Examples include: lack of NPDES permit (if required), lack of BMP plan, perimeter BMPs are not functional, dewatering without BMPs, tracking more than 50' from ingress/egress.

Minor Deficiencies. Must be corrected by date specified by inspector. Defined as those that do not pose a threat for the discharge of pollutants; however still violate regulations or procedures.

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the OGG Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☒ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: Daniel Amato

Signature: _____ Date: 12/29/16

INSPECTION PHOTOGRAPHS

Photo 1 Description: View of project site with backhoe and washrack; view looking NW.

Photo 2 Description: View of stabilized construction entrance; view looking SW.

Photo 3 Description: Inlet # 7176 with filter sock as inlet protection; view looking SE.

Photo 4 Description: View of graded washrack; view looking NW.

INSPECTION PHOTOGRAPHS

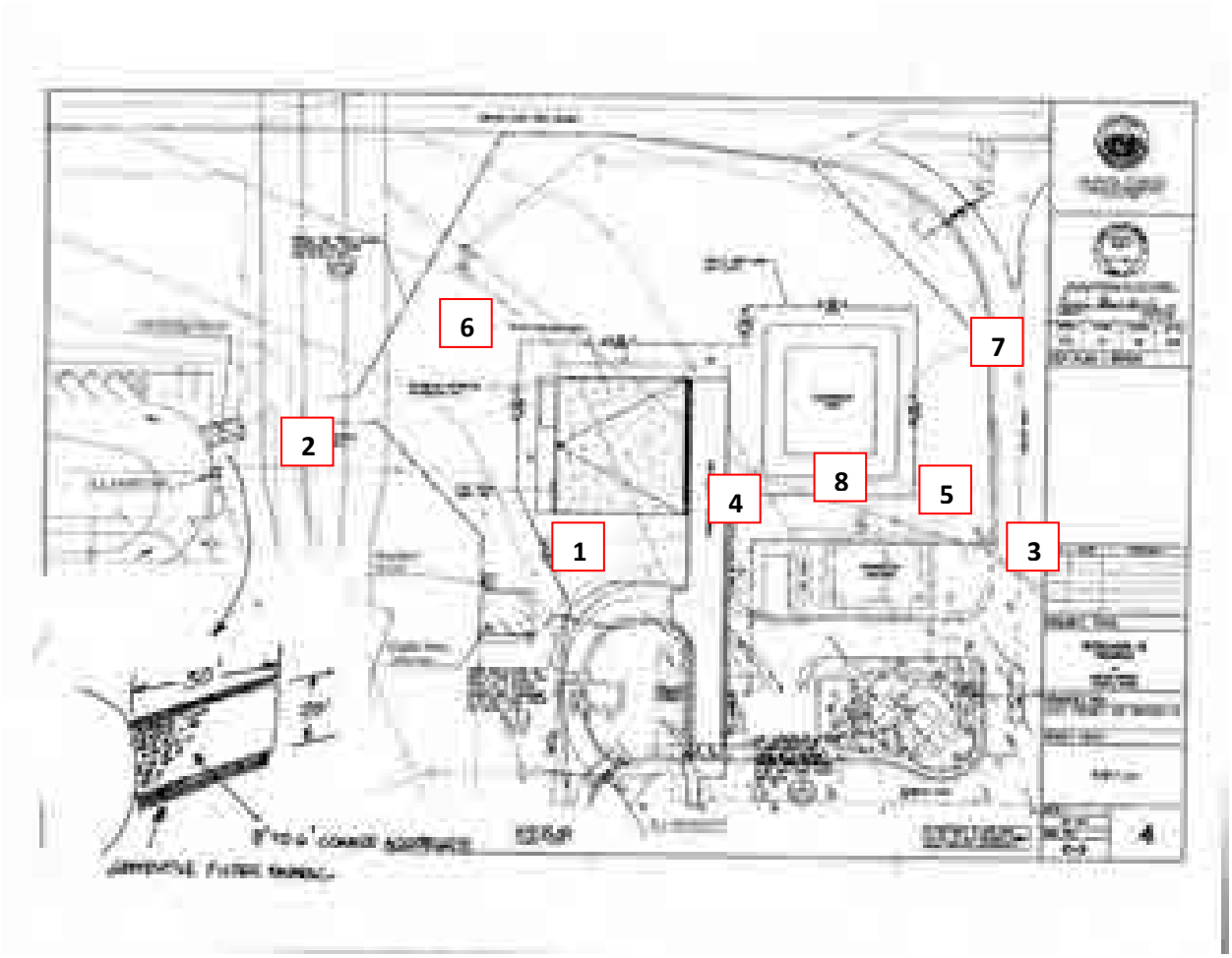
Photo 5 Description: View of graded evaporation pond; view looking NW.

Photo 6 Description: Suspected fuel spill/leak below backhoe; view looking S.

Photo 7 Description: Silt fence is no longer installed properly; view looking NE

Photo 8 Description: Northeastern section of silt fence has large tears and needs to be replaced; view looking NE.

Photo Location Map



Construction Site BMP Inspection: AM1000-14 Installation of Wastebrack at Kahului Airport.
Date: 12/28/16

Name	Organization/Position	Phone	Email
Patty Shelton	RLB- Proj. Mngr.	315-6555	patty.shelton@[illegible].com
Daniel Amato	ETC / Env. Scientist	664 1926	damato@gotoetc.com

Result of HDOT PM Review:

- ☐ Confirmed Potential Violation
  - o Email Notice of Corrective Action sent to EPA/DOH on:
    (Due Within 14 Calendar Days of Potential Violation Notification Date)
- ☐ Re-categorized as Deficiency (see rationale below)
  - o Email Notice sent to EPA/DOH on: _____
- ☐ Summarily Dismissed (see rationale below)
  - o Email Notice sent to EPA/DOH on: _____

Rationale for Re-Categorization or Summary Dismissal:

6. Deficiencies

Deficiency Tracking #1 applies to this permit. Please see pages B1-12 through B1-14.

Draft Notice of Deficiency

Deficiency Tracking #: 1
Related Permit(s): Kahului Airport

Deficiency Narrative Description:

During the On-Site Evaluation of the OGG CONRAC site on 27 November 2017, the Audit Team identified an item of concern which was not noted on HDOT's inspection report prepared after the inspection. The SWPPP states that "equipment and vehicles will be properly maintained to mitigate leaks." The Audit Team found a piece of construction equipment that appeared to be leaking hydraulic fluid onto the ground. There appeared to be no efforts to clean up the fluid spill. The Audit Team expected that the HDOT inspector would note this on the inspection form. However, the inspection report notes "Yes" in response to the question "Are spill kits available on-site and spills promptly removed?"

Recommendations for Improvement:

Airports Division should consider additional training of inspection staff related to this item of concern.

Description of Attachments (if applicable): Photos 1 shows the item of concern. Also attached is the HDOT inspection report from 27 November 2017.

Applicable Regulatory References

NPDES Permit No.: n/a

SWMPP: n/a

Hawaii Administrative Rules (HAR): HAR 11-55 Appendix K Part 6.(a)(4)(F) "Procedures for site inspection and enforcement of control measures;"

Code of Federal Regulations (CFR): 40 CFR 122.34(b)(4)(i)(F) "At a minimum, the permit must require the permittee to develop and implement: (F) Procedures for site inspection and enforcement of control measures."

Photo #1. Construction equipment that appeared to be leaking hydraulic fluid onto the ground.

CONSTRUCTION INSPECTION CHECKLIST

Project Name: Roadway Improvements & Consolidated Car Rental (ConRAC)	
Date: 11/27/17	Start / End Time: 8:30 am - 12:30 am
Project No.: AM1032-13	NPDES Permit # (if any): HI S000412
Name of Inspector's Firm: EnviroServices & Training Center, LLC	
Name of Inspector: V. Tummala, S. Paquette, D. Nakao, C. Iannaccio, & K. Kea	Phone Number: 808-839-7222
On-site Representative: James Johnson, Jon Archambeau, Jeremy De Garcia	
Weather Conditions: Overcast/Rainy	
Type of Inspection (check one): ☐ Initial ☐ Weekly ☒ Monthly ☐ Final ☐ Follow-up ☐ Other:	

Inspection Items		***Yes***	***No***	***N/A***	***Comments***
1.	Are previously noted deficiencies corrected?	☒	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☒	☐	☐	Approval through checkbox and signature on SWPPP
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☒	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☒	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☒	☐	☐	This project has an Individual NPDES Permit for construction activities.
6.	Are spill kits available on-site and spills promptly removed?	☒	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☐	☒	☐	Slopes adjacent to the two inlets across the ConRAC Building. See deficiencies below.
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☒	☐	See deficiencies below.
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☒	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☐	☒	☐	See deficiencies below.
11.	Is the construction exit preventing sediment from being tracked into the street?	☒	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☒	☐	See deficiencies below.
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☐	☒	☐	See deficiencies below.
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☐	☒	☐	See deficiencies below.
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☐	☒	☐	See deficiencies below.
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☐	☒	☐	See deficiencies below.

CONSTRUCTION INSPECTION CHECKLIST

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.	Dust Fence	☒	☐	☐	☒	See deficiencies below.
2.	Barricades	☒	☐	☒	☐	
3.	Drain Inlet Protection	☒	☐	☐	☒	See deficiencies below.
4.	Filter Socks	☒	☐	☐	☒	See deficiencies below.
5.	Detention Basin	☒	☐	☐	☒	See notes below for the detention basin associated with the tire wash.
6.	Controlled Entrance/Exit	☒	☐	☒	☐	
7.	Spill Kits	☒	☐	☒	☐	
8.	Cover/temporary stabilization for stockpiles	☒	☐	☐	☒	See deficiencies below.
9.	Temporary stabilization for slopes	☒	☐	☐	☒	See deficiencies below.
10.		☐	☐	☐	☐	
11.		☐	☐	☐	☐	
12.		☐	☐	☐	☐	
13.		☐	☐	☐	☐	
14.		☐	☐	☐	☐	
15.		☐	☐	☐	☐	

Additional Comments:

- Observed the detention basin at the concrete washout near the Keolani Place controlled entrance/exit with a foot and half of freeboard (see photo 59). Recommend monitoring the volume of the basin to prevent overflows.
- Observed two buckets and a cone stored over a storm drain inlet near the ARFF Tank (see photo 60). The buckets were removed during the inspection. Moreover, this is a new inlet with no connection to the MS4 and therefore, not deemed a deficiency.
- Observed a new drain inlet with tears in the filter fabric protection located near the ARFF Tank. However, this is a new inlet with no connection to the MS4 and therefore, not deemed a deficiency.

*Use additional paper if the number of BMPs exceeds the space allotted.

CONSTRUCTION INSPECTION CHECKLIST

Description of Potential Non-Compliance:

No.	Description	Photo No.	Deficiency Type	Follow-up Date
1.	Observed damaged storm drain inlet with a gap between the inlet frame and the grate posing an immediate threat for the discharge of pollutants to MS4, located within the Tram Area.	**Photo 3**	**Critical**	**11/27/17**
2.	Observed fabric of the storm drain inlet protection torn posing an immediate threat for the discharge of pollutants to MS4, located within the Tram Area.	**Photo 4**	**Critical**	**11/27/17**
3.	Observed the following that pose a significant threat for the discharge of pollutants to the storm drain inlet located near concrete washout containment area at the entrance: a) Storage of metal material on top of the inlet b) Portable concrete washout collecting storm water located adjacent to the curb opening c) Sediment stockpiles within close proximity of the inlet	Photos 5-8	Major	12/1/17
4.	Observed hand washing station discharge directed to gravel instead of the sanitary sewer, located outside of the Ice Room. While no discharge was observed during the inspection, the following evidence indicated potential for non-storm water discharge: gravel beneath the hand wash area appeared wet, observed lather/suds on the station, area included soap and several brushes.	Photos 9-10	Major	12/1/17
5.	Observed an unlabeled container with possible pesticide/hazardous material stored without proper BMP measures near the Keolani Place controlled entrance/exit. Please refer to language in the SSBMP Plan Section 2.3a.	Photos 11-12	Major	12/1/17 Corrected On-site
6.	Observed metal rebar and other miscellaneous metal items stored without proper BMP measures within the following locations:			
	a) Near the Keolani Place controlled entrance/exit	Photos 13-14, 33	Minor	12/7/17
	b) Near the Tram work area	Photos 15 & 52	Minor	12/7/17
	c) Near the ConRAC Building work area	Photo 16	Minor	12/7/17
7.	Observed concrete washout bins approximately 90% and 100% filled near the Keolani Place controlled entrance/exit, these are located within secondary containment. DOT Airports Division Construction Activities BMP Field Manual, C.29 Concrete Waste Management states that when a concrete washout when it reaches 75% capacity, it shall be cleaned or a new washout shall be constructed.	Photo 17	Minor	12/7/17
8.	Observed concrete washout spills at the following locations that need cleanup:			
	a) Within the containment of the concrete washout area near the Keolani Place controlled entrance/exit	Photo 18	Minor	12/7/17
	b) Near the ConRAC Building work area, also observed concrete mix spill from the bucket at this area	Photo 19	Minor	12/7/17
	c) Near the Tram work area	Photo 20	Minor	12/7/17
9.	Observed approximately 95% filled portable concrete washout bin near the ARFF tank outside ConRAC building. DOT Airports Division Construction Activities BMP Field Manual, C.29 Concrete Waste Management states that when a concrete washout when it reaches 75% capacity, it shall be cleaned or a new washout shall be constructed.	Photo 21	Minor	12/7/17
10.	Observed concrete material storage inside the ConRAC Building work area without proper BMP measures.	Photo 22	Minor	12/7/17
11.	Observed storage of saw cutting slurry at two locations: at the ARFF tank and the ConRAC Building work area.	Photos 23-24	Minor	12/7/17

CONSTRUCTION INSPECTION CHECKLIST

12.	Observed several miscellaneous liquid containers without proper BMP measures at the following locations:			
	a) Two 55-gallon drums containing diesel and 5-gallon container of unknown liquids located near the Keolani Place controlled entrance/exit	Photo 25	Minor	12/7/17
	b) Concrete sprayer stored near the Keolani Place controlled entrance/exit	Photo 26	Minor	12/7/17
	c) Concrete compound sprayer and 5-gallon container containing liquid with sheen stored near the Tram Area	Photo 27	Minor	12/7/17
	d) 5-gallon hydraulic oil container stored near the Tram Area	Photo 28	Minor	12/7/17
	e) Unknown containers stored without proper BMP measures at ConRAC Building	Photo 29	Minor	12/7/17
13.	Observed several stockpiles without proper BMP measures at the following locations:			
	a) A stockpile containing sediment and green waste stored without proper BMP measures located near the Keolani Place controlled entrance/exit	Photo 30	Minor	12/7/17
	b) Only partial stabilization of the sediment stockpile near the Keolani Place controlled entrance/exit	Photo 31	Minor	12/7/17
	c) Stockpile containing sediment and rock stored without proper BMP measures near the Keolani Place controlled entrance/exit	Photo 32	Minor	12/7/17
	d) Only partial stabilization of the sediment stockpiles near the Keolani Place controlled entrance/exit (has metal storage)	Photo 33	Minor	12/7/17
	e) Sediment stockpiles without proper BMP measures along the fence near the Keolani Place controlled entrance/exit	Photo 34	Minor	12/7/17
	f) Stockpile containing sediment and rock stored without proper BMP measures near the Tram Area	Photo 35	Minor	12/7/17
	Please refer to language in the SSBMP Plan Section 3.2. Additionally, DOT Airports Division Construction Activities BMP Field Manual, C.25 Protection of Stockpiles requires provision of BMPs at the toe of the stockpiles and provision of cover, grass or other stabilization measures. While several active stockpiles were observed on-site during the inspection and were not found to be deficient, all stockpiles containing sediment susceptible to erosion (by water and wind) shall be protected using proper BMP measures in accordance with the Construction Activities BMP Field Manual.			
14.	Observed unstabilized steep slopes of the stockpiles surrounding the new inlets located across from the ARFF Tank. Please refer to language in the SSBMP Plan Section 2.3a.	Photos 36-37	Minor	12/7/17
15.	Observed several areas where the compost filter sock was torn with exposed mulch at the following locations:			
	a) Discarded compost filter sock without proper BMP measures located near the Aalele Street construction entrance/exit, needs to be disposed	Photo 38	Minor	12/7/17
	b) Broken compost filter socks located near the Tram Area	Photos 39-40	Minor	12/7/17
	c) Broken compost filter sock encompassing storm drain inlets located near the Tram Area	Photos 41-42	Minor	12/7/17
16.	Observed several areas where the compost filter sock was not installed in accordance with the detail provided in Attachment A12 Erosion Control Details. All compost filter socks shall have an overlap of minimum 6 inches and be staked (spacing detail based on slope). Some of these areas are (not a comprehensive list):			
	a) No overlap of the compost filter sock at two spots located near the Tram Area, these were corrected on-site	Photos 43-44 & Photos 47-48	Minor	12/7/17 Corrected On-site
	b) No overlap of the compost filter sock located near the Tram Area	Photos 45-46	Minor	12/7/17
	c) No overlap of the compost filter sock surrounding a stockpile located at the staging area at the end of the Tram Area	Photo 49	Minor	12/7/17
17.	Observed two unsecured portable toilets at the Tram Area.	Photos 50-51	Minor	12/7/17
18.	Observed several areas where the dust fence was not installed properly.	Photos 14, 33 & 53	Minor	12/7/17

CONSTRUCTION INSPECTION CHECKLIST

19.	Observed miscellaneous trash and debris at several areas throughout the site: a) A metal can at the staging area at the end of the Tram Area, this was corrected on-site b) Miscellaneous trash located near the ConRAC Building c) Miscellaneous trash located near the Tram Area d) Miscellaneous metal debris and trash located near the Tram Area	 Photo 54 Photo 55 Photo 56 Photo 57	 Minor Minor Minor Minor	 12/7/17 Corrected on-site 12/7/17 12/7/17 12/7/17
20.	Live BMP Plan does not reflect the on-site conditions as follows: a) Stockpiles BMP measures were not indicated on the Live BMP Plan. b) Newly installed drain inlets/catch basins and associated BMPs were not indicated on the Live BMP Plan at three locations: i. One inlet near Keolani Place controlled entrance/exit ii. Three inlets in the vicinity of ConRAC Building and ARFF Tank iii. One inlet by the Tram Area c) The second tower crane spill kit was not indicated on the Live BMP Plan d) Portable concrete washouts were not indicated on the Live BMP Plan *SSBMP Plan referred above dated 11-20-2017 (However, the date on the first page was wrong) *Live BMP Plan referred above dated 11-24-2017	N/A	Minor	12/7/17

NOTE: Descriptions of deficiency types may be found in the *Construction and Post-Construction Storm Water Management Plan*, Section 4.3

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☒ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: Vijaya Tummala

Signature: _____ Date: 11/30/2017

INSPECTION PHOTOGRAPHS

Photo 1 Description: View of project site; view looking S.

Photo 2 Description: View of project site; view looking SE.

Photo 3 Description: Damaged storm drain inlet, observed a gap between the inlet frame and the grate as shown; located within the Tram Area near the crosswalk.

Photo 4 Description: Fabric of the storm drain inlet protection torn; located within the Tram Area.

INSPECTION PHOTOGRAPHS

Photo 5 Description: View of metal material stored above the curb inlet located near Keolani Place controlled entrance/exit; view looking W.

Photo 6 Description: View of portable concrete washout bin and sediment stockpiles within close proximity of protected curb inlet; view looking NW.

Photo 7 Description: View of portable concrete washout bin and additional sediment stockpiles within close proximity of protected curb inlet; view looking S.

Photo 8 Description: Storm water mingling with trash inside the portable concrete washout bin.

INSPECTION PHOTOGRAPHS

Photo 9 Description: Potential non-storm water discharge from hand washing station located outside of the Ice Room; view looking N.

Photo 10 Description: Lather/suds at the hand washing station located outside of the Ice Room; view looking N.

Photo 11 Description: Unlabeled container with possible pesticide/hazardous material stored without proper BMP measures near the Keolani Place controlled entrance/exit.

Photo 12 Description: View of the unlabeled container removed and placed in secondary containment.

INSPECTION PHOTOGRAPHS

Photo 13 Description: Metal material stored without proper BMP measures located near the Keolani Place entrance/exit; view looking NE.

Photo 14 Description: Metal material stored without proper BMP measures located near the Keolani Place entrance/exit; view looking N. Dust fence not overlapped.

Photo 15 Description: Metal material stored without proper BMP measures located near the Tram Area; view looking E.

Photo 16 Description: Metal material stored without proper BMP measures located near the ConRAC Building work area; view looking N.

INSPECTION PHOTOGRAPHS

Photo 17 Description: Concrete washout bins approximately 90% and 100% filled near the Keolani Place controlled entrance/exit, located within secondary containment; view looking N.

Photo 18 Description: Concrete spill located near the concrete washout area within secondary containment; view looking N.

Photo 19 Description: Concrete mix spill and concrete washout spill(s) located near the ConRAC Building work area.

Photo 20 Description: Concrete washout spill located near the Tram Area; view looking S.

INSPECTION PHOTOGRAPHS

Photo 21 Description: Portable concrete washout bin approximately 95% filled near the ARFF tank; view looking SW.

Photo 22 Description: Concrete stockpile inside the ConRAC Building.

Photo 23 Description: Slurry storage without proper BMP measures near the ARFF tank; view looking N.

Photo 24 Description: Slurry storage without proper BMP measures inside the ConRAC Building.

INSPECTION PHOTOGRAPHS

Photo 25 Description: Two 55-gallon drums and a 5-gallon container of unknown liquids stored without proper BMP measures near the Keolani Place controlled entrance/exit.

Photo 26 Description: Concrete sprayer stored without proper BMP measures near the Keolani Place controlled entrance/exit.

Photo 27 Description: Concrete sprayer and 5-gallon container containing liquid with sheen stored without proper BMP measures near the Tram Area.

Photo 28 Description: 5-gallon hydraulic oil container stored without proper BMP measures near the Tram Area. This deficiency was **addressed on-site.**

INSPECTION PHOTOGRAPHS

Photo 29 Description: Unknown containers stored without proper BMP measures at ConRAC Building.

Photo 30 Description: Stockpile containing sediment and green waste stored without proper BMP measures near the Keolani Place controlled entrance/exit; view looking S.

Photo 31 Description: Partial stabilization of the sediment stockpile near the Keolani Place controlled entrance/exit; view looking E.

Photo 32 Description: Stockpile containing sediment and rock stored without proper BMP measures near the Keolani Place controlled entrance/exit; view looking NE.

INSPECTION PHOTOGRAPHS

Photo 33 Description: Partial stabilization of the sediment stockpiles near the Keolani Place controlled entrance/exit; view looking NE. Notice the metal stockpile stored without proper BMPs and dust fence overlap issues.

Photo 34 Description: Sediment stockpiles without proper BMP measures along the fence near the Keolani Place controlled entrance/exit; view looking S.

Photo 35 Description: Stockpile containing sediment and rock stored without proper BMP measures near the Tram Area; view looking NE.

Photo 36 Description: Unstabilized steep slopes of the stockpiles surrounding the new inlets located across from the ARFF Tank.

INSPECTION PHOTOGRAPHS

Photo 37 Description: Unstabilized steep slopes of the stockpiles surrounding the new inlets located across from the ARFF Tank.

Photo 38 Description: Discarded compost filter sock without proper BMP measures located near the Aalele Street construction entrance/exit, needs to be disposed.

Photo 39 Description: Broken compost filter sock located near the Tram Area.

Photo 40 Description: Broken compost filter sock located near the Tram Area.

INSPECTION PHOTOGRAPHS

Photo 41 Description: Broken compost filter sock encompassing a storm drain inlet located near the Tram Area.

Photo 42 Description: Broken compost filter sock encompassing a storm drain inlet located near the Tram Area.

Photo 43 Description: No overlap of the compost filter sock located near the Tram Area.

Photo 44 Description: Overlap of the compost filter sock located near the Tram Area, **corrected on-site**.

INSPECTION PHOTOGRAPHS

Photo 45 Description: No overlap of the compost filter sock located near the Tram Area.

Photo 46 Description: No overlap of the compost filter sock located near the Tram Area.

Photo 47 Description: No overlap of the compost filter sock located near the Tram Area.

Photo 48 Description: Overlap of the compost filter sock located near the Tram Area, **corrected on-site**.

INSPECTION PHOTOGRAPHS

Photo 49 Description: No overlap of the compost filter sock surrounding a stockpile located at the staging area at the end of the Tram Area.

Photo 50 Description: Unsecured portable toilets located at the Tram Area.

Photo 51 Description: Unsecured portable toilets located at the Tram Area.

Photo 52 Description: Metal material stored without proper BMP measures located near the Tram Area.

INSPECTION PHOTOGRAPHS

Photo 53 Description: No overlap of the dust fence located east of the concrete washout.

Photo 54 Description: Miscellaneous metal can at the staging area at the end of the Tram Area, **corrected on-site.**

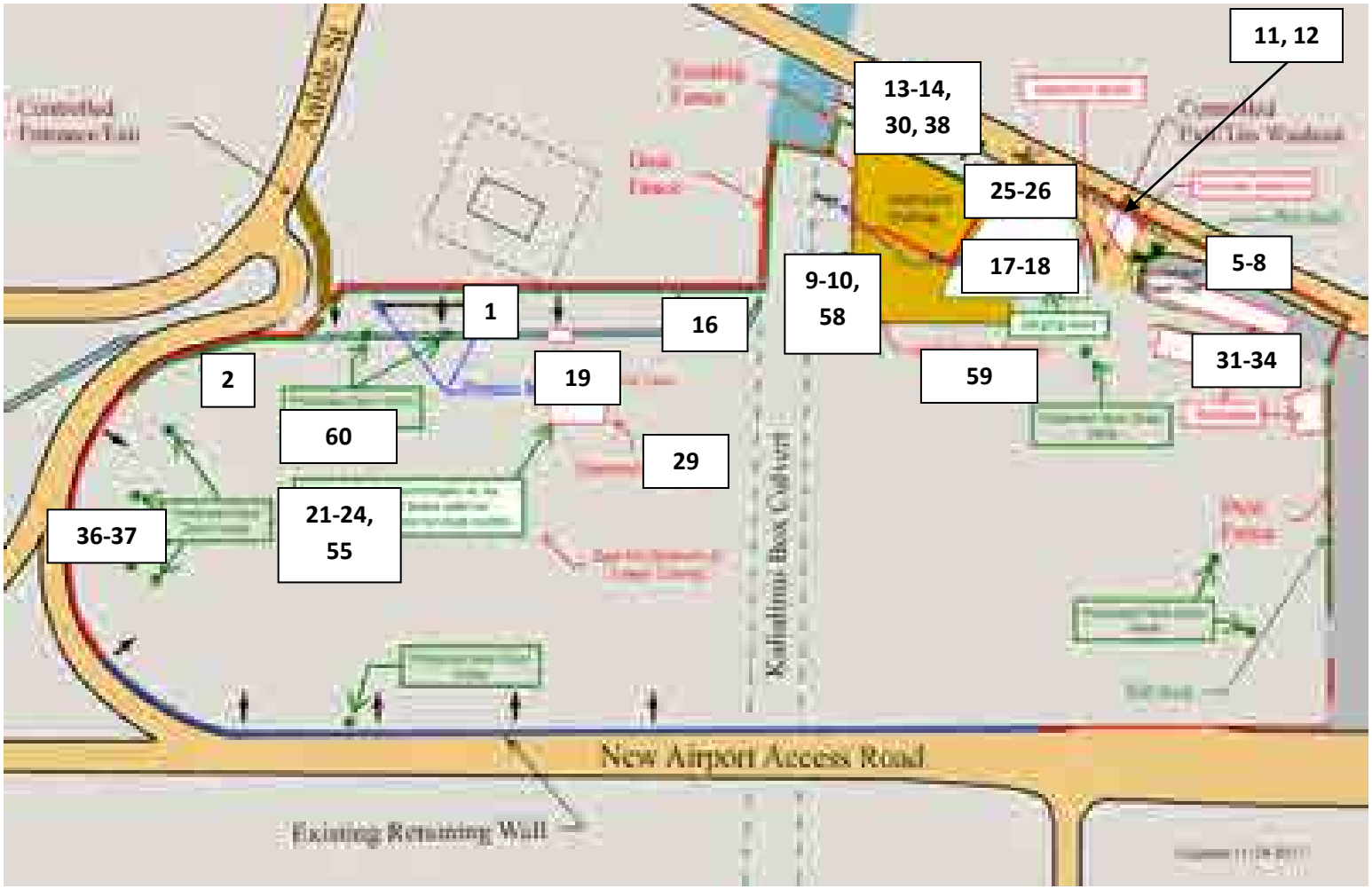
Photo 55 Description: Miscellaneous trash located outside the ConRAC Building.

Photo 56 Description: Miscellaneous trash located near the Tram Area.

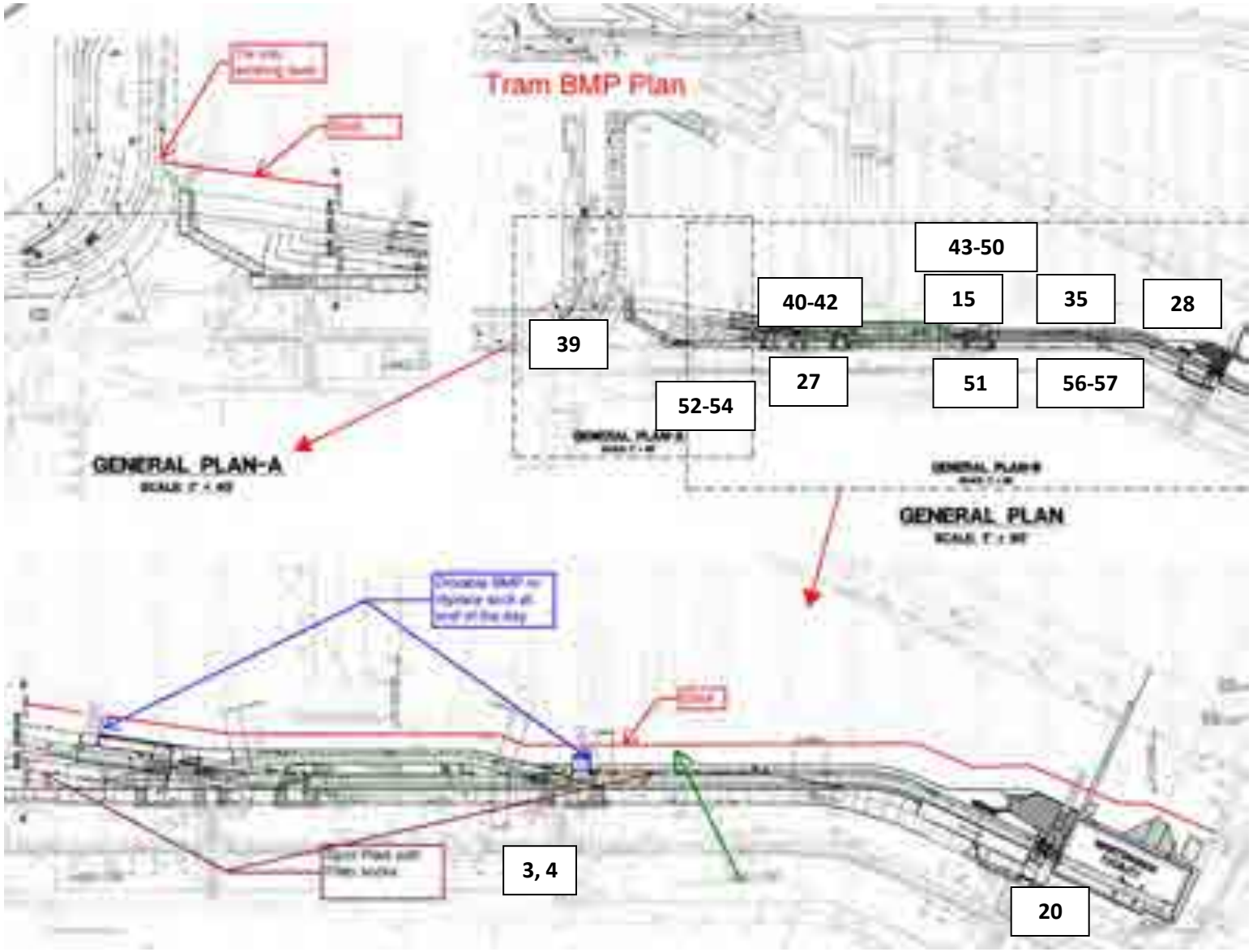
INSPECTION PHOTOGRAPHS

Photo 57 Description: Miscellaneous metal debris and trash located near the Tram Area.	**Photo 58 Description:** Spill kit on-site.
Photo 59 Description: Detention basin at the concrete washout near the Keolani Place controlled entrance/exit with 1.5 feet freeboard.	**Photo 60 Description:** Two buckets and a cone stored on top of the storm drain inlet near the ARFF Tank. This is a new inlet with no connections to the MS4 and the buckets were removed and therefore, not deemed a deficiency.

Photo Location Map



CONSTRUCTION INSPECTION CHECKLIST



enviro SERVICES & TRAINING CENTER, LLC

Construction Site BMP Inspection: AM1002-13 OGG CoolRAC Facility
Date: 11/27/17

Name	Initial	Organization/Position	Phone	Email
Chris Takano	CT	State DOT – Airport		Chris.Takano@hawaii.gov
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Dwight Nakao	DN	State DOT – Airport	(808) 872-3420	Dwight.t.nakao@hawaii.gov
Vijaya Tammala	VT	EnviroServices& Training Center, LLC / Inspector	(808) 839-7222	vtammala@gotoetc.com
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Jon Archambeau	JA	HDCC	(808) 318-7453	Jarchambeau@hdcc.com
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Jeremy de Gracia	JG	HDCC	(808) 856-0589	jdegracia@hdcc.com
Jill Uyeda	JU	HDCC	(808)6300340	juyeda@hdcc.com
Johnnie Clark	JC	HDCC	808 870 4461	JCLARK@hdcc.com

Appendix B2

Permit-Specific Information – Daniel K. Inouye International Airport

Appendix B2: Permit-Specific Information – Daniel K. Inouye International Airport

1. Key Documents

Permit / Document	2. Honolulu International Airport Individual Permit HI S000005
2016 Annual Report	20160909.Contents of CD for Compliance Submission of Reports and Documents-HIS000005.pdf
2017 Annual Report	20170901.Transmittal-Certification for Reports and Documents-HI S000005.pdf
Construction Activities BMP Manual	Attachment C7 of HNL SWMPP Section C_Draft 20170927_Final. pdf
Construction Site Inventory	See Wiki Wiki Newsletter for all construction projects at HNL
DOH Comments on 2016 Annual Report	None received.
DOH Comments on 2017 Annual Report	None received.
Enforcement Response Plan	Section 5 of HNL SWMPP (June 2015).pdf
Organizational charts	Page 12 of 198 SWMPP Introduction.pdf
Permit	HNL MS4 Permit.pdf
Permitting Authority Correspondence with Permittee Regarding Construction Programs	20140314.Final Permit Response to Comments - HI S000005 - 03025PRM.14b.pdf
Plan Review	a. Design-Review-Checklist-Greater-Than_One-Acre.pdf b. Design-Review-Checklist-Less-Than_One-Acre.pdf c. Construction-Inspection-SOP-Final.pdf d. Construction-Inspection-Checklist-Version-7.0.pdf e. Construction-Plan-Review-Comment-Sheet-20140318-blank.pdf f. 20171009.Construction-Plan-Design-Review-SOP-V1-7-2017.pdf
SWMPP	HNL SWMPP (June 2015).pdf

Permit / Document	2. Honolulu International Airport Individual Permit HI S000005
Training and Education Materials	• 2017 Construction Inspector Training Quiz • DOTA Construction Training Slides.pdf • 2017 Construction Handout.pdf • Construction Program Information Sheet.pdf • OGG Storm Water Training Invatation Letter v1 (1).pdf • SW Training 2017_web version 2017_ with script.pdf • PPT Library Construction Documents Review Form.pdf • PPT Library HNL NPDES Permit Design and Construction Requirements.pdf • PPT Library Airports Division Specification Guideline Fed.pdf • PPT Library PM Process Pre-Con Meeting Minutes.pdf • PPT Library Procedure for notification of cont soil.pdf • PPT Library Procedure for notification of cont soil.pdf • PPT Library Tenant Improvement Approval Forms.pdf • 2017 Construction Inspector Training Survey.pdf • DOT Airports Construction Training_v5_20151021.pdf • DOTA_SOP_ConstructionPlanReview.pdf • 20160926.Transmittal and Contents of CD for Compliance Submission of Other-Updated Training-HIS000005.pdf • 20160909.Compliance Submission of Other-Updated Training-HIS000005.pdf
Websites	a. http://hidot.hawaii.gov/airports/doingbusiness/engineering/environmental/constructionsiterunoffcontrolprogram/ b. http://hidot.hawaii.gov/airports/doingbusiness/engineering/environmental/hnlstormwaterprogram/

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
2016 Annual Report *(20160909.Contents of CD for Compliance Submission of Reports and Documents-HIS000005.pdf)*	Section 2.0 Section 3.4 Section 4.0 Section 5.1 Section 5.2 Section 5.4 Attachment 4 (Training Summary) Attachment 10 (Active Construction Inventory) Attachment 11 (Construction Plan Review) Attachment 12 (Construction Site Inspections)
2017 Annual Report *(20170901.Transmittal-Certification for Reports and Documents-HI S000005.pdf)*	Sections 2.0-4.0 Section 3.4 Sections 5.1-5.2 Section 5.4
Construction BMP Field Manual *(HNL SWMPP Section C_Draft 20170927_Final. pdf)*	Attachment C7
Construction Site Inventory *(Wiki Wiki Newsletter)*	In entirety
Enforcement Response Plan *(HNL SWMPP (June 2015).pdf)*	Section 5.0
Organizational Chart *(Page 12 of 198 SWMPP Introduction.pdf)*	In entirety
Permit *(HNL MS4 Permit.pdf)*	Section D.1.d.
Permitting Authority Correspondence with Permittee Regarding Construction Programs *(20140314.Final Permit Response to Comments - HI S000005 - 03025PRM.14b.pdf)*	Section 2 Section 7
Standard Operating Procedures, Construction Inspections (February 2013) (*Construction-Inspection-SOP-Final.pdf*)	Section 3.0 Section 4.0
Plan Review Comment sheet *(Construction-Plan-Review-Comment-Sheet-20140318-blank.pdf)*	In entirety
Design Review Checklist >1 acre *(Design-Review-Checklist-Greater-Than_One-Acre.pdf)*	In entirety

Appendix B2: Permit-Specific Information – Daniel K. Inouye International Airport

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
Design Review Checklist <1 acre *(Design-Review-Checklist-Less-Than_One-Acre.pdf)*	In entirety
Construction Inspection Checklist *(Construction-Inspection-Checklist-Version-7.0.pdf)*	In entirety
Storm Water Management Program Plan, Honolulu International Airport (June 2015) (*HNL SWMPP (June 2015).pdf*)	SWMPP Section C, in entirety
Construction Plan Design Review Standard Operating Procedures *(20171009.Construction-Plan-Design-Review-SOP-V1-7-2017.pdf)*	In entirety
Website *(http://hidot.hawaii.gov/airports/doingbusiness engineering/environmental/ constructionsiterunoffcontrolprogram/)*	In entirety
(http://hidot.hawaii.gov/airports/doingbusiness/ engineering/environmental/ hnlstormwaterprogram/)	In entirety
Training and Education *(2017 Construction Inspector Training Quiz.pdf)*	In entirety

3. On-Site Evaluation

28 November 2017

On 28 November 2017, the Audit Team held a kickoff meeting at Daniel K. Inouye International Airport (HNL) with Airports Division staff and consultants. Photographs taken during the On-Site Evaluation can be found in Section 4 below.

Construction Site 2.1 Mauka Extension Project

Next, the Audit Team drove to the Mauka Extension project and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Airports Division staff and consultants as they conducted an inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

Construction Site 2.2 Consolidated Rental Car (CONRAC) Facility

Finally, the Audit Team drove to the CONRAC facility and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Airports Division staff and consultants as they conducted an inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

4. On-Site Evaluation Photos

Photographs are provided on the subsequent pages below.

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.1
Records Review and Safety Meeting

Construction Site 2.1 Photo 2.1.2
Construction Site Entrance

Construction Site 2.1 Photo 2.1.3
Erosion Control Berm

Construction Site 2.1 Photo 2.1.4
Erosion Control Berm

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.5
Erosion Control Berm

Construction Site 2.1 Photo 2.1.6
Erosion Control Berm

Construction Site 2.1 Photo 2.1.7
Erosion Control Berm

Construction Site 2.1 Photo 2.1.8
Concrete Construction

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.9
Concrete Waste Bin

Construction Site 2.1 Photo 2.1.10
Material Stockpile

Construction Site 2.1 Photo 2.1.11
Erosion Control Berm

Construction Site 2.1 Photo 2.1.12
Erosion Control Berm

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.13
Wash Area

Construction Site 2.1 Photo 2.1.14
Flowing Site Runoff

Construction Site 2.1 Photo 2.1.15
Erosion Control Berm

Construction Site 2.1 Photo 2.1.16
Spill Kit

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.17
Erosion Control Berm

Construction Site 2.1 Photo 2.1.18
Erosion Control Berm

Construction Site 2.1 Photo 2.1.19
Erosion Control Berm

Construction Site 2.1 Photo 2.1.20
Erosion Control Berm

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.21
Erosion Control Berm

Construction Site 2.1 Photo 2.1.22
Material Stockpile

Construction Site 2.1 Photo 2.1.23
Material Stockpile

Construction Site 2.1 Photo 2.1.24
Material Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.25
Material Stockpile

Construction Site 2.1 Photo 2.1.26
Drain Inlet Protection

Construction Site 2.1 Photo 2.1.27
Construction Waste Stockpile

Construction Site 2.1 Photo 2.1.28
Construction Waste Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.29
Material Stockpile

Construction Site 2.1 Photo 2.1.30
Construction Storage Area

Construction Site 2.1 Photo 2.1.31
Construction Waste Bin

Construction Site 2.1 Photo 2.1.32
Construction Storage Area

Construction Site 2.1 Photo 2.1.33
Temporary Construction Restrooms

Construction Site 2.1 Photo 2.1.34
Temporary Construction Restrooms

Construction Site 2.1 Photo 2.1.35
Construction Staging Area (Material Storage Stockpiles)

Construction Site 2.1 Photo 2.1.36
Concrete Washout Bin

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.37
Dust Fence and Erosion Control Berm

Construction Site 2.1 Photo 2.1.38
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.39
Construction Site Entrance

Construction Site 2.1 Photo 2.1.40
Construction Ingress/Egress Location

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.41
Material Stockpile

Construction Site 2.1 Photo 2.1.42
Erosion Control Berm

Construction Site 2.1 Photo 2.1.43
Erosion Control Berm

Construction Site 2.1 Photo 2.1.44
Material Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.45
Material Stockpile

Construction Site 2.1 Photo 2.1.46
Material Stockpile

Construction Site 2.1 Photo 2.1.47
Material Stockpile

Construction Site 2.1 Photo 2.1.48
Construction Ingress/Egress Location

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.49
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.50
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.51
Material Stockpile

Construction Site 2.1 Photo 2.1.52
Material Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.53
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.54
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.55
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.56
Construction Ingress/Egress Location

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.57
Erosion Control Berms

Construction Site 2.1 Photo 2.1.58
Erosion Control Berms

Construction Site 2.1 Photo 2.1.59
Erosion Control Berms

Construction Site 2.1 Photo 2.1.60
Erosion Control Berms

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.61
Erosion Control Berms

Construction Site 2.1 Photo 2.1.62
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.63
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.64
Construction Ingress/Egress Location

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.65
Plugged Drain Inlet

Construction Site 2.1 Photo 2.1.66
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.67
Silt Fence

Construction Site 2.1 Photo 2.1.68
Silt Fence

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.69
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.70
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.71
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.72
Construction Ingress/Egress Location

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.73
Dust Fence and Silt Fence

Construction Site 2.1 Photo 2.1.74
Water Truck Applying Dust Control

Construction Site 2.1 Photo 2.1.75
Water Truck Applying Dust Control

Construction Site 2.1 Photo 2.1.76
Water Truck Applying Dust Control

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.77
Dust Control Fence

Construction Site 2.1 Photo 2.1.78
Dust Control Fence

Construction Site 2.1 Photo 2.1.79
Construction Site Entrance

Construction Site 2.1 Photo 2.1.80
Construction Site Entrance

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.81
Construction Site Entrance

Construction Site 2.1 Photo 2.1.82
Construction Site Entrance

Construction Site 2.1 Photo 2.1.83
Construction Site Entrance

Construction Site 2.1 Photo 2.1.84
Construction Site Entrance

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.85
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.86
Construction Staging Area

Construction Site 2.1 Photo 2.1.87
Erosion Control Berm

Construction Site 2.1 Photo 2.1.88
Drain Inlet

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.89
Erosion Control Berm

Construction Site 2.1 Photo 2.1.90
Erosion Control Berm (Discovered Existing Oil Water Separator)

Construction Site 2.1 Photo 2.1.91
Material Stockpile

Construction Site 2.1 Photo 2.1.92
Material Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.93
Exposed Soil

Construction Site 2.1 Photo 2.1.94
Exposed Soil

Construction Site 2.1 Photo 2.1.95
Exposed Soil

Construction Site 2.1 Photo 2.1.96
Erosion Control Berms and Dust Fence

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.97
Erosion Control Berms and Dust Fence

Construction Site 2.1 Photo 2.1.98
Equipment Storage

Construction Site 2.1 Photo 2.1.99
Exposed Soil

Construction Site 2.1 Photo 2.1.100
Material Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.101
Vehicle Tracking

Construction Site 2.1 Photo 2.1.102
Vehicle Tracking

Construction Site 2.1 Photo 2.1.103
Construction Site Entrance

Construction Site 2.1 Photo 2.1.104
Construction Site Entrance

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.105
Paint Residue

Construction Site 2.1 Photo 2.1.106
Paint Residue

Construction Site 2.1 Photo 2.1.107
Vehicle Tracking

Construction Site 2.1 Photo 2.1.108
Vehicle Tracking

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.109
Vehicle Tracking

Construction Site 2.1 Photo 2.1.110
Vehicle Tracking

Construction Site 2.1 Photo 2.1.111
Site Inspection Debrief

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.1
Construction Site Entrance

Construction Site 2.2 Photo 2.2.2
Records Review and Safety Meeting

Construction Site 2.2 Photo 2.2.3
Drain Inlet

Construction Site 2.2 Photo 2.2.4
Drain Inlet

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.5
Drain Inlet

Construction Site 2.2 Photo 2.2.6
Erosion Control Berms

Construction Site 2.2 Photo 2.2.7
Erosion Control Berms

Construction Site 2.2 Photo 2.2.8
Erosion Control Berms

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.9
Erosion Control Berms

Construction Site 2.2 Photo 2.2.10
Erosion Control Berms

Construction Site 2.2 Photo 2.2.11
Erosion Control Berms

Construction Site 2.2 Photo 2.2.12
Erosion Control Berms

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.13
Erosion Control Berms

Construction Site 2.2 Photo 2.2.14
Erosion Control Berms

Construction Site 2.2 Photo 2.2.15
Erosion Control Berms

Construction Site 2.2 Photo 2.2.16
Erosion Control Berms

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.17
Erosion Control Berms and Drain Inlet Protection

Construction Site 2.2 Photo 2.2.18
Erosion Control Berms and Drain Inlet Protection

Construction Site 2.2 Photo 2.2.19
Drain Inlet Protection

Construction Site 2.2 Photo 2.2.20
Erosion Control Berms and Drain Inlet Protection

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.21
Construction Ingress/Egress Location (Truck Tire Wash Rack)

Construction Site 2.2 Photo 2.2.22
Construction Ingress/Egress Location (Truck Tire Wash Rack)

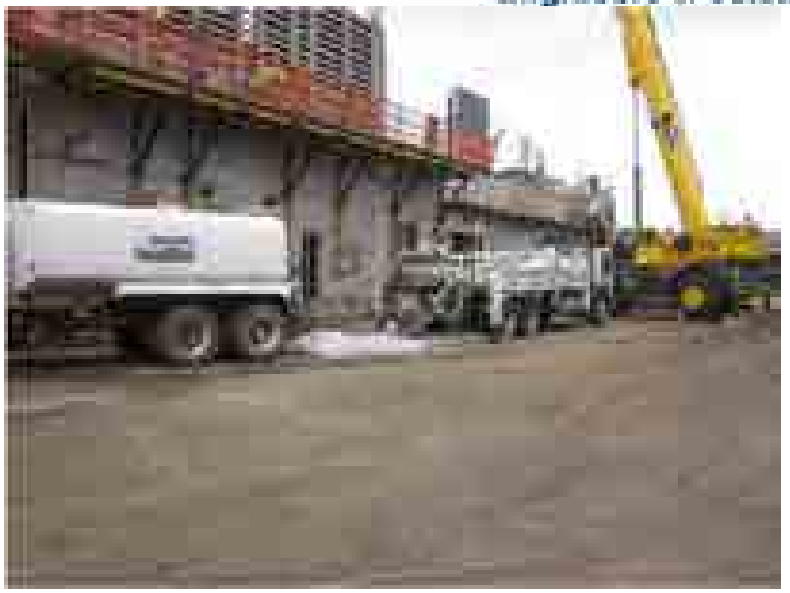
Construction Site 2.2 Photo 2.2.23
Construction Ingress/Egress Location (Truck Tire Wash Rack)

Construction Site 2.2 Photo 2.2.24
Construction Ingress/Egress Location (Truck Tire Wash Rack)

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.25
Construction Ingress/Egress Location (Truck Tire Wash Rack)



Construction Site 2.2 Photo 2.2.26
Concrete Washout

Construction Site 2.2 Photo 2.2.27
Concrete Washout

Construction Site 2.2 Photo 2.2.28
Concrete Washout

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.29
Concrete Washout Bins

Construction Site 2.2 Photo 2.2.30
Concrete Washout Bins

Construction Site 2.2 Photo 2.2.31
Concrete Washout Bins

Construction Site 2.2 Photo 2.2.32
Vehicle Accessway

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.33
Inspection Debrief Meeting

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

Deficiency Tracking #2 and #3 applies to this permit. Please see pages B2-8 through B2-11.

Draft Notice of Deficiency

Deficiency Tracking #: 2
Related Permit(s): Daniel K. Inouye International Airport

Deficiency Narrative Description:

The Audit Team's Records Review found that third party site inspectors may not be consistently elevating observations to the level of a deficiency, as defined in Airports Division's Construction Site Runoff Control Program (September 2017, hereinafter referred to as the "Program"). For example, the 2/7/17 inspection of the Daniel K. Inouye International Airport Mauka Extension project identified that inlet protection on drain 7490 was adequately installed but needs maintenance. In another example, the 4/11/17 inspection of the same project identified that witch's hats in inlets within recently vegetated areas have accumulated sediment and have not been maintained. These findings fit the definition of a minor deficiency (Section 4.4 of the Program). However, the findings were not noted in the 2/7/17 or 4/11/17 inspection forms as deficiencies of any kind; instead they were noted in the "Additional Comments" section on Page 2 of each form. It is unclear whether items listed in the "Additional Comments" section require any formal action from the contractor, or related follow-up by Airports Division.

Recommendations for Improvement:

Airports Division should consider additional training of inspection staff related to this item of concern.

Description of Attachments (if applicable): Airports Divisions' 2/7/17 and 4/11/17 inspections of the Daniel K. Inouye International Airport Mauka Extension project.

Applicable Regulatory References

NPDES Permit No.: HI S000005 Part D.1.d.(3)(ii): The Permittee shall further develop and implement written procedures for appropriate corrective actions and follow-up inspections when deficiencies had been identified at an inspected project.

SWMPP:

Section 4.4 of the Construction Site Runoff Control Program (September 2017)

"Examples [of minor deficiencies] include … BMPs are implemented but require maintenance…"

Hawaii Administrative Rules (HAR): n/a

Code of Federal Regulations (CFR): n/a

Construction Inspection Checklist

Project Name: HNL NDWP IIT Mauka Extension	
Date: 2-7-17	Start / End Time: 10:10 -11:00 am
Project No.: AO1123-30	NPDES Permit # (if any): HIR10F124
Name of Inspector's Firm: EnviroServices and Training Center, LLC	
Name of Inspector: Daniel Amato & Michelle Kwock	Phone Number: 808-664-1926
On-site Representative: Jake Beeney	
Weather Conditions: Sunny	
Type of Inspection (check one): ☐ Initial ☐ Weekly ☒ Monthly ☐ Final ☐ Follow-up ☐ Other:	

	Inspection Items	*Yes*	*No*	*N/A*	*Comments*
1.	Are previously noted deficiencies corrected?	☒	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☒	☐	☐	
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☒	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☒	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☒	☐	☐	
6.	Are spill kits available on-site and spills promptly removed?	☒	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☒	☐	☐	
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☒	☐	Some compost socks were not properly installed (Photo 5)
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☒	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☒	☐	☐	
11.	Is the construction exit preventing sediment from being tracked into the street?	☒	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☒	☐	☐	Dumpster is under cover (Photo 2)
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☒	☐	☐	
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☒	☐	☐	
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☒	☐	☐	
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☒	☐	☐	
17.	Was herbicide, pesticide, or fertilizer used at the site since the previous inspection?	☐	☒	☐	
17b.	If so, keep the usage log on-site and in the comments section of this form record date, quantity used, location, and BMPs used (refer to SWMPP Section E).	☐	☐	☒	

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.	Compost Filter Socks	☒	☐	☐	☒	Compost filter socks were improperly overlapped (Photo 5)
2.	Inlet Protection	☒	☐	☒	☐	Inlet # 836 was properly protected (Photo 16). Inlet protection on drain 7490 was adequately installed but needs maintenance (Photo 13).
3.	Covered Material Storage Area	☒	☐	☒	☐	The ramp over the storage area provides cover for materials, dumpster, and some of the construction work.
4.		☐	☐	☐	☐	
5.		☐	☐	☐	☐	
6.		☐	☐	☐	☐	
7.		☐	☐	☐	☐	
8.		☐	☐	☐	☐	

Additional Comments:

1) Update BMP Plan to reflect the staging area under the ramp (Photos 3 & 7) .

2) Maintain debris accumulation at/in inlet protection.

3) Install inlet protection on new drain inlets (Photo 8-10) when connection to MS4 is live or when pavement reaches inlet grate area (whichever comes first).

*Use additional paper if the number of BMPs exceeds the space allotted.

Description of Potential Non-Compliance:

Minor Deficiencies:

1) Compost socks not properly installed (Photo 5). Please correct within 7 days of inspection date.

2) Update BMP plan to include material storage area (Photo 3) and vehicle parking area. Please correct within 14 days of inspection date.

NOTE: Per HNL's Small MS4 Permit, HIS000005 and SWMP Section C.
Critical Deficiencies. Must be corrected by the **close of business on the day of the inspection**. Defined as those that pose an immediate threat for discharge of pollutants to a storm drain or receiving water. Examples include: non-storm water discharge, absence of perimeter controls, spills that have not been cleaned near a drain or waterway.

Major Deficiencies. Must be corrected as soon as possible, but no later than **5 calendar days following the inspection**. Defined as those that pose a significant threat for discharge of pollutants to a storm drain or receiving water. Examples include: lack of NPDES permit (if required), lack of BMP plan, perimeter BMPs are not functional, dewatering without BMPs, tracking more than 50' from ingress/egress.

Minor Deficiencies. Must be corrected by date specified by inspector. Defined as those that do not pose a threat for the discharge of pollutants; however still violate regulations or procedures.

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the HNL Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☒ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: Daniel Amato

Signature: _____ Date: 2/8/2017

INSPECTION PHOTOGRAPHS

Photo 1 Description: View of project site under ramp; view looking NW.	**Photo 2 Description:** Dumpster placed under cover of ramp; view looking NE.
Photo 3 Description: Storage area under ramp that is not included in BMP plan; view looking NW.	**Photo 4 Description:** Compost filter sock and filter fabric installed on drain inlet; view looking E.

INSPECTION PHOTOGRAPHS

Photo 5 Description: Green compost filter socks are not installed properly with 6" horizontal overlap; view looking SW.

Photo 6 Description: Installation of a new pedestrian path near lei stands; view looking NE.

Photo 7 Description: Safety information posted clearly on bulletin board at project site storage area that is not on BMP plan; view looking N.

Photo 8 Description: A new drain inlet under the ramp; view looking W.

INSPECTION PHOTOGRAPHS

Photo 9 Description: View of another new drain inlet installed below the ramp; view looking S.	**Photo 10 Description:** Partially completed drain inlet under ramp; view looking SE.
Photo 11 Description: Dirt stockpile covered and surrounded by compost socks; view looking N.	**Photo 12 Description:** Ongoing construction work on pedestrian sidewalk at project site behind lei stands; view looking SW.

INSPECTION PHOTOGRAPHS

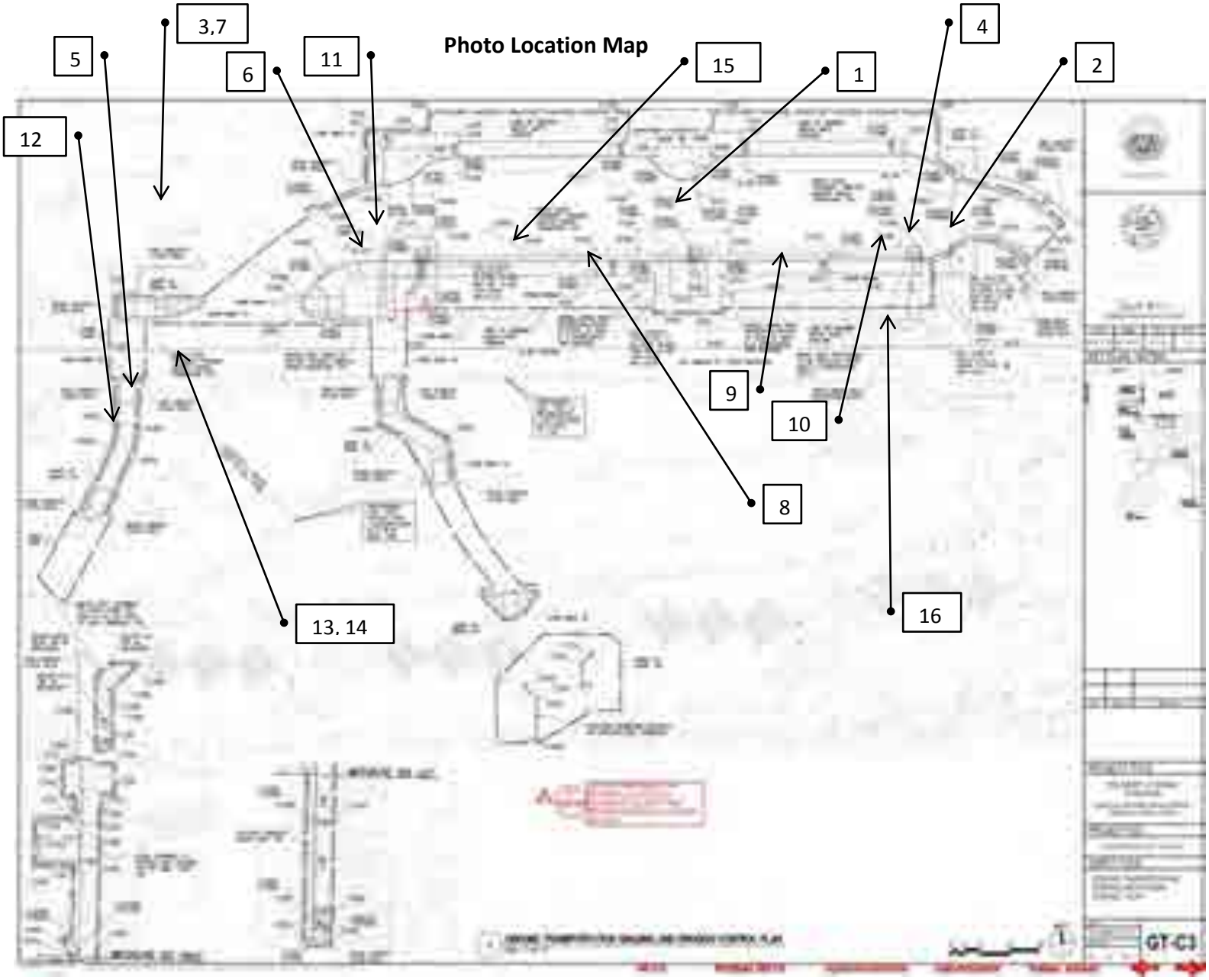
Photo 13 Description: Compost filter sock and witch's hat protect a main drain inlet (# 7420) near the project area at lei stands; view looking E.

Photo 14 Description: Debris accumulation inside witch's hat from photo #13.

Photo 15 Description: Chemical toilets secured to the ground with stakes under ramp; view looking NW.

Photo 16 Description: Curb Inlet # 836 with inlet protection near project site; view looking N.

Photo Location Map



Construction Site BMP Inspection: STATE PROJECT NO: AO1123-30 HNL NDWP BT MAUKA EXTENSION

Date: 2/7/2017

Name	Organization/Position	Phone	Email
Daniel Amato	ETC / 3rd Party Insp	664-1966	damato@gotoetc.com
Michelle Kwock	" "	" "	mkwock@gotoetc.com
Mark Schipper	AECOM / Construction Inspector	321-8801	mark.schipper@aecom.com
Jane Beeney	HPCC DC Mgr	260 5960	jbeeney@hensel/phelp.com

Construction Inspection Checklist

Project Name: HNL NDWP IIT Mauka Extension	
Date: 4-11-17	Start / End Time: 10:00 -11:00 am
Project No.: AO1123-30	NPDES Permit # (if any): HIR10F124
Name of Inspector's Firm: EnviroServices and Training Center, LLC	
Name of Inspector: Daniel Amato	Phone Number: 808-664-1926
On-site Representative: Jake Beeney	
Weather Conditions: Sunny	
Type of Inspection (check one): ☐ Initial ☐ Weekly ☒ Monthly ☐ Final ☐ Follow-up ☐ Other:	

	Inspection Items	*Yes*	*No*	*N/A*	*Comments*
1.	Are previously noted deficiencies corrected?	☒	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☒	☐	☐	
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☒	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☒	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☒	☐	☐	
6.	Are spill kits available on-site and spills promptly removed?	☒	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☒	☐	☐	
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☒	☐	☐	
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☒	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☒	☐	☐	
11.	Is the construction exit preventing sediment from being tracked into the street?	☒	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☐	☒	Dumpster removed
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☐	☐	☒	No washout onsite
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☒	☐	☐	
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☒	☐	☐	
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☒	☐	☐	
17.	Was herbicide, pesticide, or fertilizer used at the site since the previous inspection?	☐	☒	☐	
17b.	If so, keep the usage log on-site and in the comments section of this form record date, quantity used, location, and BMPs used (refer to SWMPP Section E).	☐	☐	☒	

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.	Compost Filter Socks	☒	☐	☒	☐	Reposition filter socks to accommodate soil stabilization/ vegetation if needed (photos 12-15)
2.	Inlet Protection	☒	☐	☐	☒	Witch's hats in inlets within recently vegetated areas have accumulated sediment (photos 4, 7, & 8)
3.	Covered Material Storage Area	☒	☐	☒	☐	The ramp over the storage area provides cover for materials.
4.		☐	☐	☐	☐	
5.		☐	☐	☐	☐	
6.		☐	☐	☐	☐	
7.		☐	☐	☐	☐	
8.		☐	☐	☐	☐	

Additional Comments:

1) Remove the following BMPs immediately in completed project areas as discussed during the inspection:
a) Filter socks along N perimeter of ground transportation lot area (including filter socks at E gate) (photos 5 & 6).
b) Witch's hats in new drain inlets in parking area of transportation lot (make sure to clean debris near inlets) (photo 2).

2) Ensure water flowing from ramp downspout flows to the inlet in the vegetated area rather than running offsite to the road. Maintain inlet protection at this inlet and the inlet at the E gate until soil stabilization is complete (photos 7 & 8).

3) Reinstall filter socks along concrete walkways so that socks line the edges of the curb/walkway to accommodate soil stabilization/vegetation (photos 13-15).

4) Increase vegetation density near inlets in vegetated areas to accelerate stabilization of soil near inlets. Recommended that vines plugs are placed 6" apart up to 2' from inlet (photos 4, 7, & 8).

5) Final inspection will occur in a few weeks after vegetation and installation of safety railing are installed.

*Use additional paper if the number of BMPs exceeds the space allotted.

Description of Potential Non-Compliance:

Minor Deficiencies: Please correct within 7 days of inspection date and send a photo to damato@gotoetc.com.

1) Liquid chemicals in staging area need secondary containment (photo 16).

NOTE: Per HNL's Small MS4 Permit, HIS000005 and SWMP Section C.
Critical Deficiencies. Must be corrected by the **close of business on the day of the inspection**. Defined as those that pose an immediate threat for discharge of pollutants to a storm drain or receiving water. Examples include: non-storm water discharge, absence of perimeter controls, spills that have not been cleaned near a drain or waterway.

Major Deficiencies. Must be corrected as soon as possible, but no later than **5 calendar days following the inspection**. Defined as those that pose a significant threat for discharge of pollutants to a storm drain or receiving water. Examples include: lack of NPDES permit (if required), lack of BMP plan, perimeter BMPs are not functional, dewatering without BMPs, tracking more than 50' from ingress/egress.

Minor Deficiencies. Must be corrected by date specified by inspector. Defined as those that do not pose a threat for the discharge of pollutants; however still violate regulations or procedures.

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the HNL Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☒ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: Daniel Amato

Signature: _____ Date: 4/13/2017

INSPECTION PHOTOGRAPHS

Photo 1 Description: View of ground transportation lot area with new vegetation; view looking E.	**Photo 2 Description:** Witch's hat to be removed in new drain inlet at ground transportation area lot; view looking E.
Photo 3 Description: View of completed project area; view looking NW.	**Photo 4 Description:** Inlet with protection in recently vegetated area near E gate; view looking W.

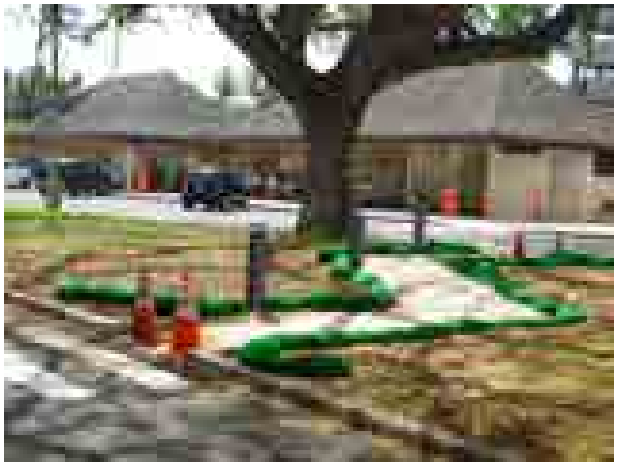
INSPECTION PHOTOGRAPHS

Photo 5 Description: View of E gate. Filter socks should be removed; view looking S.	**Photo 6 Description:** Compost filter socks at N perimeter of ground transportation site. Socks should be removed; view looking N.
Photo 7 Description: Storm water spillway from ramp downspout to gavel and inlet in vegetated area under ramp by W gate; view looking S.	**Photo 8 Description:** Inlet in photo 7 showing sediment accumulation.

INSPECTION PHOTOGRAPHS

Photo 9 Description: Staging area under ramp; view looking N.	**Photo 10 Description:** Curb inlet repair at lei stands complete; view looking NW.
Photo 11 Description: Pedestrian walkway near completion; view looking S.	**Photo 12 Description:** Rear view of new pedestrian walkway awaiting installation of protective railing on roadside; view looking S.

INSPECTION PHOTOGRAPHS

	
Photo 13 Description: Pedestrian path under ramp to ground transportation lot; view looking N.	**Photo 14 Description:** Additional pedestrian foot path in between lei stands and ground transportation lot; view looking S.

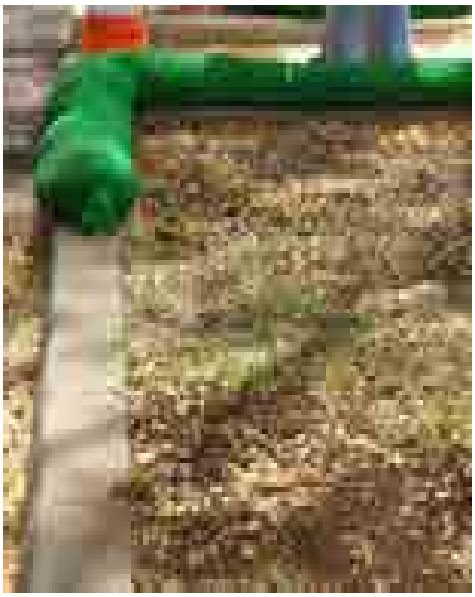
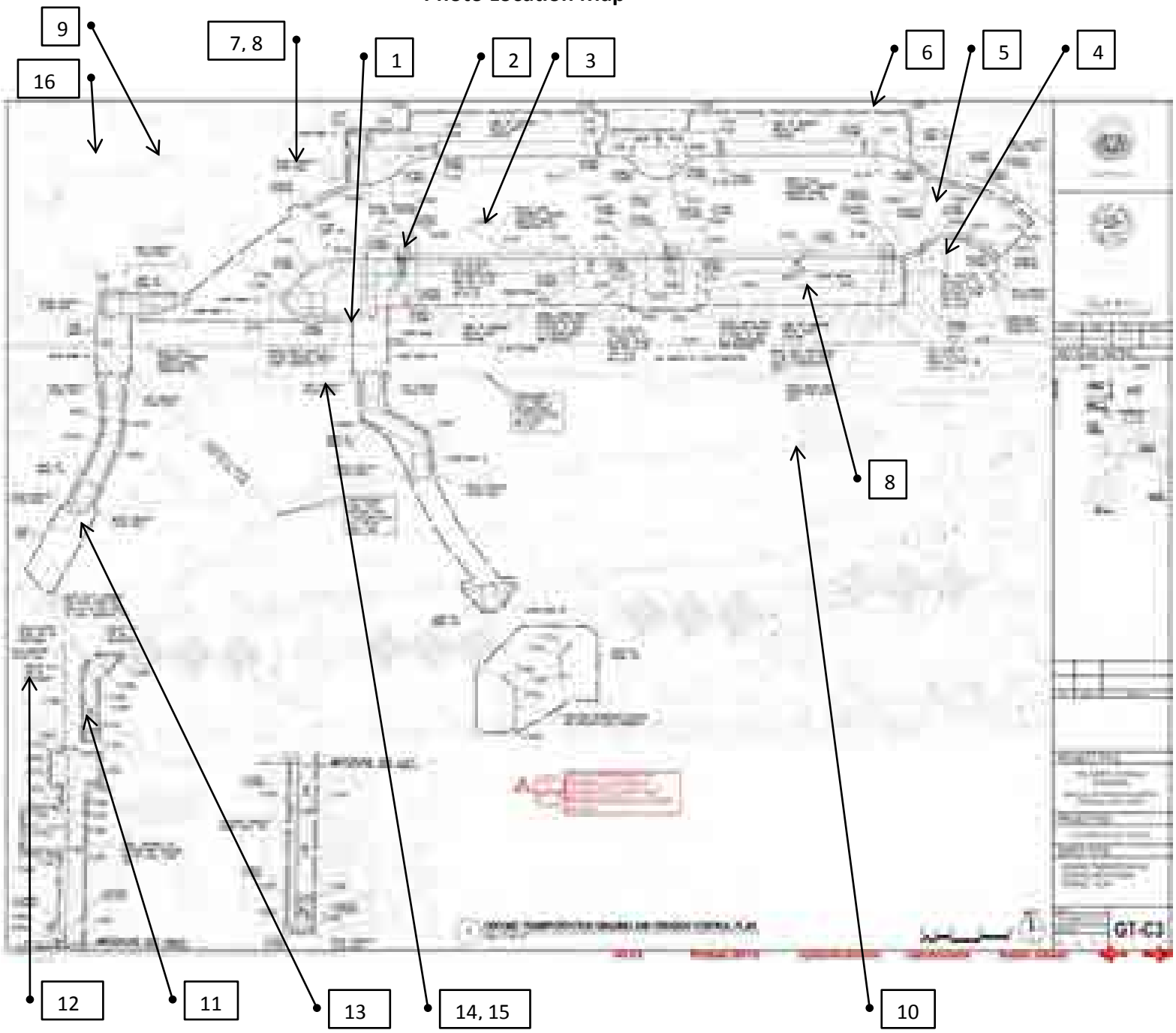



Photo 15 Description: Example of new position of filter socks to accommodate stabilization/vegetation of area next to foot path in photo 14; view looking E.	**Photo 16 Description:** Liquid chemicals at staging area under ramp need proper storage; view looking N.

Photo Location Map



Construction Site BMP Inspection: STATE PROJECT NO: AO1123-30 --HNL NDWP IIT MAUKA EXTENSION
Final Inspection:
Date: 4/11/2017

Name	Organization/Position	Phone	Email
Jake Beeney	Hensel Phelps / QC	260-5960	jbeeney@henselphelps.com
Mark Schipper	AECOM / Inspector	224-8901	[illegible]
Daniel Amato	ETC / Inspector	664-1936	damato@getcetc.com

Draft Notice of Deficiency

Deficiency Tracking #: 3
Related Permit(s): Daniel K. Inouye International Airport

Deficiency Narrative Description:

During the On-Site Evaluation of the two sites on 28 November 2017, the Audit Team identified an item of concern which was not noted on HDOT's inspection report prepared after the inspection.

The SWPPP for the HNL CONRAC site states that the contractor will "us[e] drip pans and absorbents under or around leaky vehicles and equipment." The Audit Team saw evidence of a pool of dark-colored liquid under a construction vehicle. The Audit Team expected that the HDOT inspector would approach this vehicle and further investigate; however, the Audit Team did not observe the HDOT inspector performing an investigation. Furthermore, the inspection report notes "Yes" in response to the question "Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?"

Recommendations for Improvement:

Airports Division should consider additional training of inspection staff related to this item of concern.

Description of Attachments (if applicable): Photograph shows the item of concern. Also attached is the HDOT inspection report from 28 November 2017.

Applicable Regulatory References

NPDES Permit No.: HI S000005 Part D.1.d.(3)(ii): The Permittee shall further develop and implement written procedures for appropriate corrective actions and follow-up inspections when deficiencies had been identified at an inspected project.

SWMPP:

Section 4.4 of the Construction Site Runoff Control Program (September 2017)

Hawaii Administrative Rules (HAR): n/a

Code of Federal Regulations (CFR): n/a

Photo #1. Pool of dark-colored liquid under a construction vehicle which was not investigated by inspectors.

CONSTRUCTION INSPECTION CHECKLIST

Project Name: HNL Consolidated Car Rental Facility (ConRAC)	
Date: 11-28-17	Start / End Time: 10:00 am – 12:00 pm
Project No.: AO1117-06	NPDES Permit # (if any): HI R10E755
Name of Inspector's Firm: EnviroServices & Training Center, LLC	
Name of Inspector: V. Tummala, S. Paquette, C. Iannaccio & K. Kea	Phone Number: 808-839-7222
On-site Representative: James Franks, Jacqui Kuniyuki, Alden Baligad & James Sabado	
Weather Conditions: Sunny	
Type of Inspection (check one): ☐ Initial ☐ Weekly ☒ Monthly ☐ Final ☐ Follow-up ☐ Other:	

	Inspection Items	***Yes***	***No***	***N/A***	***Comments***
1.	Are previously noted deficiencies corrected?	☒	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☒	☐	☐	
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☒	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☒	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☒	☐	☐	
6.	Are spill kits available on-site and spills promptly removed?	☒	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☐	☒	☐	See deficiencies below.
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☒	☐	See deficiencies below.
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☒	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☐	☒	☐	See deficiencies below.
11.	Is the construction exit preventing sediment from being tracked into the street?	☒	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☒	☐	See deficiencies below.
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☒	☐	☐	
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☐	☒	☐	See deficiencies below.
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☒	☐	☐	
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☒	☐	☐	

CONSTRUCTION INSPECTION CHECKLIST

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.	Dust Fence	☒	☐	☐	☒	See deficiencies below.
2.	Construction Barricade	☒	☐	☒	☐	
3.	Filter Socks	☒	☐	☐	☒	See deficiencies below.
4.	Drain Inlet Protection	☒	☐	☐	☒	See deficiencies below.
5.	Catch Basin Protection	☒	☐	☐	☒	See deficiencies below.
6.	Construction Entrance/Exit	☒	☐	☒	☐	
7.	Tire Wash Area	☒	☐	☒	☐	
8.	Concrete Washout	☒	☐	☒	☐	
9.	Spill Kits	☒	☐	☒	☐	
10.		☐	☐	☐	☐	
11.		☐	☐	☐	☐	
12.		☐	☐	☐	☐	
13.		☐	☐	☐	☐	
14.		☐	☐	☐	☐	
15.		☐	☐	☐	☐	

Additional Comments:

- Recommend evaluation of whether the existing inlet protection at the drain inlet 5233 is appropriate for this site.
- Contractor indicated that they plan to use a "BMP Site Plan" located in the Trailer to update their site usage plan since the site operations are dynamic. This plan was reflective of their site conditions.
- Step "a" is the active phase of the project.
- Observed an air compressor on-site. It was noted that the fluids were drained out of this compressor and it was placed within secondary containment and under cover, therefore, not deemed a deficiency (Photo 15).
- Miscellaneous trash was observed on-site. However, the contractor conducts cleaning at the end of each work day, therefore not deemed a deficiency.

*Use additional paper if the number of BMPs exceeds the space allotted.

CONSTRUCTION INSPECTION CHECKLIST

Description of Potential Non-Compliance:

No.	Description	Photo No.	Deficiency Type	Follow-up Date
1.	Observed drain inlet 5233 with a gap between the sand bags securing the edge of the filter fabric protection and the inlet posing a significant threat for the discharge of pollutants to the storm drain inlet. This was corrected on-site. Drain inlet 5233 is located under the H-1 freeway ramp, along the outside perimeter of the site.	Photos 2-4	Major	12/3/17 Corrected On-site
2.	Observed drain inlet 7411 containing rocks and sediment that could potentially damage the inlet protection posing a significant threat for the discharge of pollutants to the storm drain inlet. Drain inlet 7411 is located along the outside perimeter of the site at the northeast corner. This inlet was identified as CB#7411 on the Step "a" Erosion Control Plan. However, it was marked on-site as drain inlet 4711.	Photos 5-6	Major	12/3/17
3.	Observed curb inlet 7537 has debris adjacent to the inlet posing a significant threat for the discharge of pollutants to the storm drain inlet. Curb inlet 7537 is located along the inside perimeter of the site at the northeast corner.	Photos 7-8	Major	12/3/17
4.	Observed several areas where the compost filter sock was torn with exposed mulch at the following locations: a) Near the office trailer entrance b) Along the outside perimeter of the site parallel to Rodgers Blvd c) Along the inside perimeter of the site near the Aolele St. entrance	Photos 9-11	Minor	12/8/17
5.	Observed two locations along the outside perimeter of the site parallel from Rodgers Blvd to the Aolele St. intersection where the compost filter sock was not installed in accordance with the detail provided in Step "a" Erosion Control Details. All compost filter socks shall have an overlap of minimum 6 inches and be staked (spacing and staking detail based on slope).	Photo 12	Minor	12/8/17
6.	Observed no overlap silt fence support located along the inside perimeter of the site at the south end. Please refer to the language in the Part III of the SWPPP. Additionally, DOT Airports Division Construction Activities BMP Field Manual, C.14 Silt Fence requires 6-inch overlap or wrap sections to create a strong bond.	Photo 13	Minor	12/8/17
7.	Observed pipe joint lubricant containers stored on-site without proper BMP measures. These containers are located under the ramp to the H-1 freeway near the tire wash area.	Photo 14	Minor	12/8/17
8.	Observed concrete rubble and sediment stockpile stored on-site without proper BMP measures. Stockpile is located along the inside perimeter of the site at the south end.	Photo 16	Minor	12/8/17
9.	Observed miscellaneous metal material stored on-site without proper BMP measures. Material is located along the inside perimeter of the site at the east end. This was corrected on-site.	Photos 17-18	Minor	12/8/17 Corrected On-site
10.	Observed miscellaneous debris within the active work area.	Photo 19	Minor	12/8/17
11.	Observed unstabilized area with fine sediment surrounding the drain inlet 5217.	Photo 20	Minor	12/8/17
12.	Observed drain inlet 5217 inlet protection contains sediment and one of the rock bags surrounding the inlet is slightly damaged. Drain inlet 5217 is located along the inside perimeter of the site at the northeast corner.	Photos 21-22	Minor	12/8/17

CONSTRUCTION INSPECTION CHECKLIST

13.	Observed one of the rock bags surrounding the drain inlet 5233 is slightly damaged. Drain inlet 5233 is located under the H-1 freeway ramp, along the outside perimeter of the site.	Photo 4	Minor	12/8/17
NOTE: Descriptions of deficiency types may be found in Table 2 of the HNL Storm Water Management Program Plan Section C.4.4				

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☒ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

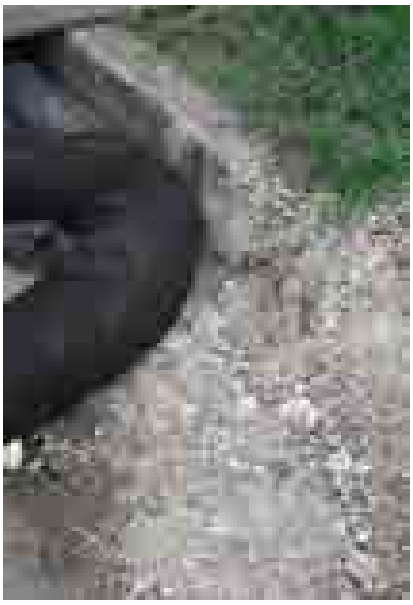
Print Name: Vijaya Tummala

Signature: Date: 12/1/2017

INSPECTION PHOTOGRAPHS

Photo 1 Description: View of ConRAC site from the Aolele St. construction traffic entrance; view looking S.	**Photo 2 Description:** Drain inlet 5233 with gap between sand bags securing the edge of the filter fabric protection and the inlet.
Photo 3 Description: View showing the gap at the drain inlet 5233.	**Photo 4 Description:** Drain inlet 5233 corrected on-site during the inspection by securing the filter fabric protection with the sand bags.

INSPECTION PHOTOGRAPHS

Photo 5 Description: Drain inlet 7411 contains debris that could potentially damage the inlet protection; view looking W.	**Photo 6 Description:** Drain inlet 7411 with rock and sediment buildup within the inlet protection.
	
Photo 7 Description: Curb inlet 7537 with inlet protection; view looking E.	**Photo 8 Description:** Curb inlet 7537 with rubble and aggregate buildup surrounding the inlet protection; view looking E.

INSPECTION PHOTOGRAPHS

Photo 9 Description: Broken compost filter sock with exposed mulch near the office trailer entrance of the site; view looking S.	**Photo 10 Description:** Broken compost filter sock with exposed mulch along the outside perimeter of the site near Rodgers Blvd; view looking E.
Photo 11 Description: Broken compost filter sock with exposed mulch located along the inside perimeter of the site near the Aolele St. construction traffic entrance; view looking N.	**Photo 12 Description:** No overlap of the compost filter socks along the outside perimeter from Rodgers Blvd to the Aoele St. intersection.

INSPECTION PHOTOGRAPHS

Photo 13 Description: No overlap of the silt fence near the south end of the project site; view looking S.	**Photo 14 Description:** Twelve 1-quart pipe joint lubricant containers stored on-site without proper BMP measures; view looking S.
Photo 15 Description: Used air compressor within secondary containment; view looking S.	**Photo 16 Description:** Concrete rubble and sediment stockpile stored on-site without proper BMP measures; view looking W.

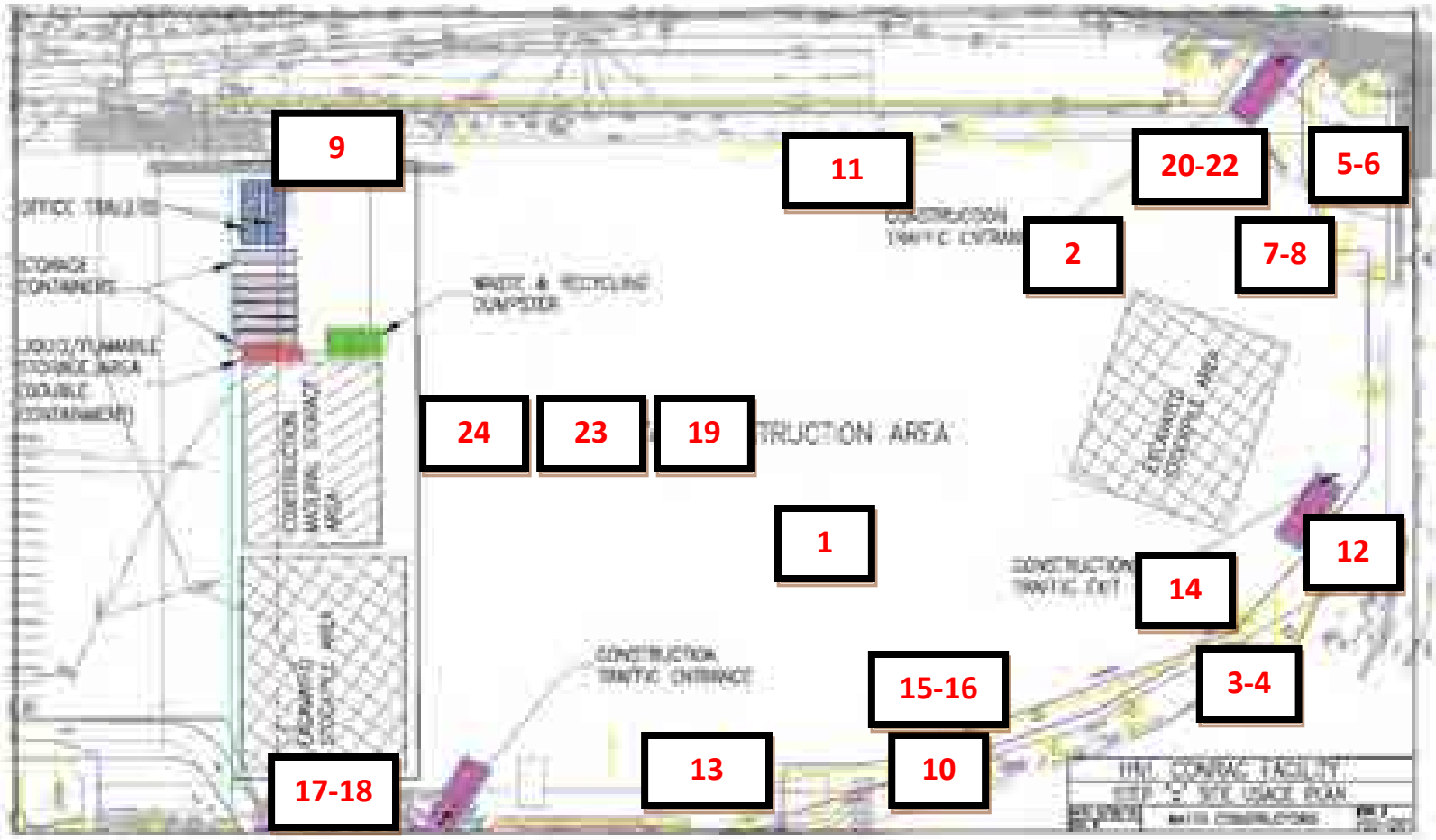
INSPECTION PHOTOGRAPHS

Photo 17 Description: Miscellaneous metal material stored on-site without proper BMP measures; view looking W.	**Photo 18 Description:** Miscellaneous metal material deficiency corrected on-site during the inspection by moving material above ground; view looking W.
Photo 19 Description: Miscellaneous debris (rebar ties) located at the active work area; view looking W. Contractor noted that the site is cleaned daily.	**Photo 20 Description:** Unstabilized area with fine sediment surrounding the drain inlet 5217; view looking E.

INSPECTION PHOTOGRAPHS

Photo 21 Description: Drain inlet 5217 contains sediment and debris within inlet protection. One of the rock bags surrounding the inlet is lightly damaged.	**Photo 22 Description:** Drain inlet 5217 contains debris and sediment within filter fabric protection continued.
Photo 23 Description: Spill kit and flammable storage locker rooms stored on-site; view looking NE.	**Photo 24 Description:** Miscellaneous liquid containers stored on-site with proper BMP measures; view looking W.

Photograph Location Map



enviro SERVICES & TRAINING CENTER LLC

Construction Site BMP Inspection: AOI 120-30 HSL NDWP IIT MAUKA EXTENSION
Date: 11/28/17

Name	Initial	Organization/Position	Phone	Email
Nathan Kanodrigo		State DOT – Airport	(808) 838-8868	Nathan.c.kanodrigo@hawaii.gov
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Robert Lee		State DOT		
Vijaya Tamanala	VT	EnviroServices& Training Center, LLC / Inspector	(808) 839-7222	vtamanala@gotoetc.com
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Kassel Kea	KK	EnviroServices& Training Center, LLC / Inspector	(808) 839-7222	kkea@gotoetc.com
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Miguel Lewis		Hensel Phelps	(808) 722-9031	Mlewis@henselphelps.com
Chris Takeno	CT	State DOT	808 586-2424	Chris.takeno@hawaii.gov
Chad Hogan	CH	Hensel Phelps - Superintendent	(808) 220-0658	chogan@henselphelps.com
Mark Schipper		AECOM / CM Inspector	(808) 224-8901	mark.schipper@aecom.com

Construction Site BMP Inspection: AO1120-30 HAL NDWP IIT MAUKA EXTENSION
Date: 11/28/17

Name	Initial	Organization/Position	Phone	Email
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Chelsea Iannaccio		EnviroServices& Training Center, LLC / Inspector	(808) 838-7222	[illegible]@gotoetc.com
Kamui Kea		EnviroServices& Training Center, LLC / Inspector	(808) 838-7222	[illegible]@gotoetc.com
Phil Potter		Kennedy/Jenks Consultants		
Cale Yamada		Kennedy/Jenks Consultants		
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Mark Kaminiwae		AECOM/Bowers+Kubota	808.474.0767	[illegible]
VALERIE Sasuga		DOT Airports Division	(808)838-8824	valerie.sh.sasuga@hawaii.gov

Appendix B3

Permit-Specific Information – Honolulu Harbor

Appendix B3: Permit-Specific Information – Honolulu Harbor

1. Key Documents

Permit / Document	3. Honolulu Harbor Small MS4 Permit HI 03KB482
2016 Annual Report	20170127.Compliance Submission of Reports and Documents-HI03KB482.pdf
Construction Site Inventory	Inventory of New Development and Redevelopment Projects (Revised 5-1-15).pdf
Construction Activities BMP Manual	Appx D.3.B CCH Construction BMP Manual 2011-11.pdf
Consent Decree	Consent Decree.pdf
DOH Comments on 2016 Annual Report	None received.
Enforcement Response Plan	Final HDOT Harbors SWMP-150325.pdf Enforcement Response Plan from 2015 SWMP.pdf
Memoranda of Understanding or Agreement	MOA- Harbors.pdf
Organizational charts	Page 21 of Final HDOT Harbors SWMP-150325.pdf
Permit	20161202.03KB482.EXT.16.pdf
Permitting Authority Correspondence with Permittee Regarding Construction Programs	HDOT-HarbordsAO.pdf
Plan Review Checklist	a. Construction Site Design Review Checklist.pdf b. Construction Site BMP Inspection Checklist_20150722.pdf
Previous Audit Findings	HDOT Harbors Audit 2009.pdf
SWMPP	Final HDOT Harbors SWMP-150325.pdf
Training and Education Materials	a. Construction Brochure.pdf b. 2016-Tenant-Presentation-Final.pdf c. 2016-SW-Construction-Quiz.pdf d. 11-BMP-Storm-Drain-20140828.pdf e. 07_BMP_BuildingRemodeling_20140828.pdf.
Website	http://hidot.hawaii.gov/harbors/library/storm-water-management/
Other Program Checklists and Forms	a. Construction Process Flow Chart for Harbors Project final.pdf b. Permit for Connection to Harbors.pdf c. Permit to Discharge into Harbors.pdf

Permit / Document	3. Honolulu Harbor Small MS4 Permit HI 03KB482
Other Plans Related to Construction Program	a. Pre-Final SSS OMP 201606022.pdf b. 20160729.Storm Sewer System Operation and Maintenance Program.pdf c. 20170228.Contents of CD for Storm Sewer System Operation and Maintenance Plan Manual-HI03KB482-HI03KB488.pdf d. 2014-Tenant-Inspection-Manual_Final1.pdf e. Harbors SOW - 20150508_final_SD.pdf f. 11-3 Appendix C.pdf

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name *(Original File Name)*	**Sections/Pages Relevant to PEAR 2**
2016 Annual Compliance Report *(20170127.Compliance Submission of Reports and Documents-HI03KB482.pdf)*	Pages: 44,65,173, and 180-204
2015 Stormwater Management Plan (March 2015) (*Final HDOT Harbors SWMP-150325.pdf*)	Section 2.1 Section 2.2 Section 2.4 BMP Table 2-4 Section 3.2.4 Section B, Attachment 1 Section C, in entirety
Memorandum of Understanding Between Department of Transportation, Harbors Division, State of Hawaii and Department of Health, State of Hawaii (April/May 2015) *(MOA-Harbors.pdf)*	No discussion of PEAR 2 topics
Construction Site Inventory *(Inventory of New Development and Redevelopment Projects (Revised 5-1-15).pdf)*	In entirety
Construction Activity BMP Manual *(Appx D.3.B CCH Construction BMP Manual 2011-11.pdf)*	In entirety
Consent Decree *(Consent Decree.pdf)*	Pages: 5-8, 20,22, and 26-30
Enforcement Response Plan *(Final HDOT Harbors SWMP-150325.pdf)*	Section 5 in entirety
(Enforcement Response Plan from 2015 SWMP.pdf)	In entirety
Organizational Charts *(Final HDOT Harbors SWMP-150325.pdf)*	Page 21
Permit (20161202.03KB482.EXT.16.pdf)	No discussion of PEAR 2 topics
Permitting Authority Correspondence with Permittee Regarding Construction Programs *(HDOT-HarbordsAO.pdf)*	Pages 6-13 and 21-24
Plan Review Checklists *(Construction Site Design Review Checklist.pdf)*	In entirety
(Construction Site BMP Inspection Checklist_20150722.pdf)	In entirety
Previous Audit Findings (HDOT Harbors Audit 2009.pdf)	Pages 17 and 22
Training and Education Materials *(Construction Brochure.pdf)*	In entirety
(2016-Tenant-Presentation-Final.pdf)	Pages 6, 50, 55
(2016-SW-Construction-Quiz.pdf)	In entirety
(11-BMP-Storm-Drain-20140828.pdf)(07_BMP_BuildingRemodeling_20140828.pdf)	In entirety
Website *(http://hidot.hawaii.gov/harbors/library/storm-water-management/)*	In entirety

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
Other Program Checklists and Forms *(Construction Process Flow Chart for Harbors Project final.pdf)*	In entirety
(Permit for Connection to Harbors.pdf)	In entirety
(Permit to Discharge into Harbors.pdf)	In entirety
Other Plans Related to Construction Program *(Pre-Final SSS OMP 201606022.pdf)*	Sections 3.2 and 4
(20160729.Storm Sewer System Operation and Maintenance Program.pdf)	Sections 3.2 and 4
(20170228.Contents of CD for Storm Sewer System Operation and Maintenance Plan Manual-HI03KB482-HI03KB488.pdf)	Sections 3.2 and 4
(2014-Tenant-Inspection-Manual_Final1.pdf (Harbors SOW - 20150508_final_SD.pdf)	Sections 3.2 and 4
(11-3 Appendix C.pdf)	Sections 3.2, 3.4, 4, and 4.3

3. On-Site Evaluation

As of the time of the On-Site Audit (late November 2017), there was only one project at Honolulu Harbor which was eligible for review. That project (the New Kapalama Container Yard) had not yet broken ground by date of the On-Site Audit (30 November 2017). Therefore, the Audit Team only reviewed records related to that one project; no field effort could be completed.

4. On-Site Evaluation Photos

See Section 3; no photographs were taken, as no On-Site Audit was performed.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

DRAFT Program Element Audit Report (PEAR) No. 2

Construction Site Runoff Control
Part 2 of 2

State Project No. OSC-15-01

January 2018

Prepared by

Kennedy/Jenks Consultants

Prepared for

State of Hawaii
Department of Transportation
Office of Environmental Compliance
869 Punchbowl Street
Honolulu, Hawaii 96813

K/J Project No. 1696025*00

Appendix B4

Permit-Specific Information – Kalaeloa Barbers Point Harbor

Appendix B4: Permit-Specific Information – Kalaeloa Barbers Point Harbor

1. Key Documents

Permit / Document	4. Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB482
2016 Annual Report	20170127.Compliance Submission of Reports and Documents-HI03KB482.pdf
Construction Site Inventory	Inventory of New Development and Redevelopment Projects (Revised 5-1-15).pdf
Construction Activities BMP Manual	Appx D.3.B CCH Construction BMP Manual 2011-11.pdf
Consent Decree	Consent Decree.pdf
DOH Comments on 2016 Annual Report	None received.
Enforcement Response Plan	Final HDOT Harbors SWMP-150325.pdf Enforcement Response Plan from 2015 SWMP.pdf
Memoranda of Understanding or Agreement	MOA- Harbors.pdf
Organizational charts	Page 21 of Final HDOT Harbors SWMP-150325.pdf
Permit	20161202.03KB488.EXT.16.pdf
Permitting Authority Correspondence with Permittee Regarding Construction Programs	HDOT-HarbordsAO.pdf
Plan Review Checklist	a. Construction Site Design Review Checklist.pdf b. Construction Site BMP Inspection Checklist_20150722.pdf
Previous Audit Findings	HDOT Harbors Audit 2009.pdf
SWMPP	Final HDOT Harbors SWMP-150325.pdf
Training and Education Materials	a. Construction Brochure.pdf b. 2016-Tenant-Presentation-Final.pdf c. 2016-SW-Construction-Quiz.pdf d. 11-BMP-Storm-Drain-20140828.pdf e. 07_BMP_BuildingRemodeling_20140828.pdf.
Website	http://hidot.hawaii.gov/harbors/library/storm-water-management/
Other Program Checklists and Forms	a. Construction Process Flow Chart for Harbors Project final.pdf b. Permit for Connection to Harbors.pdf c. Permit to Discharge into Harbors.pdf

Permit / Document	4. Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB482
Other Plans Related to Construction Program	a. Pre-Final SSS OMP 201606022.pdf b. 20160729.Storm Sewer System Operation and Maintenance Program.pdf c. 20170228.Contents of CD for Storm Sewer System Operation and Maintenance Plan Manual-HI03KB482-HI03KB488.pdf d. 2014-Tenant-Inspection-Manual_Final1.pdf e. Harbors SOW - 20150508_final_SD.pdf f. 11-3 Appendix C.pdf

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
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2015 Stormwater Management Plan (March 2015) (*Final HDOT Harbors SWMP-150325.pdf*)	Section 2.1 Section 2.2 Section 2.4 BMP Table 2-4 Section 3.2.4 Section B, Attachment 1 Section C, in entirety
Memorandum of Understanding Between Department of Transportation, Harbors Division, State of Hawaii and Department of Health, State of Hawaii (April/May 2015) *(MOA- Harbors.pdf)*	No discussion of PEAR 2 topics
Construction Site Inventory *(Inventory of New Development and Redevelopment Projects (Revised 5-1-15).pdf)*	In entirety
Construction Activity BMP Manual *(Appx D.3.B CCH Construction BMP Manual 2011-11.pdf)*	In entirety
Consent Decree *(Consent Decree.pdf)*	Pages: 5-8, 20, 22, and 26-30
Enforcement Response Plan *(Final HDOT Harbors SWMP-150325.pdf)*	Section 5
(Enforcement Response Plan from 2015 SWMP.pdf)	In entirety
Organizational Charts *(Final HDOT Harbors SWMP-150325.pdf)*	Page 21
Permit (20161202.03KB482.EXT.16.pdf)	No discussion of PEAR 2 topics
Permitting Authority Correspondence with Permittee Regarding Construction Programs *(HDOT-HarbordsAO.pdf)*	Pages 6-13 and 21-24
Plan Review Checklists *(Construction Site Design Review Checklist.pdf)*	In entirety
(Construction Site BMP Inspection Checklist_20150722.pdf)	In entirety
Previous Audit Findings *(HDOT Harbors Audit 2009.pdf)*	Pages 17 and 22
Training and Education Materials *(Construction Brochure.pdf)*	In entirety
(2016-Tenant-Presentation-Final.pdf)	Pages 6, 50, 55
(2016-SW-Construction-Quiz.pdf)	In entirety

Appendix B4: Permit-Specific Information – Kalaeloa Barbers Point Harbor

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
(11-BMP-Storm-Drain-20140828.pdf)	In entirety
(07_BMP_BuildingRemodeling_20140828.pdf)	In entirety
Website *(http://hidot.hawaii.gov/harbors/library/storm-water-management/)*	In entirety
Other Program Checklists and Forms *(Construction Process Flow Chart for Harbors Project final.pdf)*	In entirety
(Permit for Connection to Harbors.pdf)	In entirety
(Permit to Discharge into Harbors.pdf)	In entirety
Other Plans Related to Construction Program *(Pre-Final SSS OMP 201606022.pdf)*	Sections 3.2 and 4
(20160729.Storm Sewer System Operation and Maintenance Program.pdf)	Sections 3.2 and 4
(20170228.Contents of CD for Storm Sewer System Operation and Maintenance Plan Manual-HI03KB482-HI03KB488.pdf)	Sections 3.2 and 4
(2014-Tenant-Inspection-Manual_Final1.pdf (Harbors SOW - 20150508_final_SD.pdf)	Sections 3.2 and 4
(11-3 Appendix C.pdf)	Sections 3.2, 3.4, 4, and 4.3

3. On-Site Evaluation

1 December 2017

On 1 December 2017, the Audit Team held a kickoff meeting at Kalaeloa Harbor with Harbors Division staff. Photographs taken during the On-Site Evaluation can be found in Section 4 below.

Construction Site 4.1 Stockpile 2A Removal

The Audit Team drove to the Stockpile 2A Removal project and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Harbors Division staff and consultants as they conducted an inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

4. On-Site Evaluation Photos

Photographs are provided on the subsequent pages below.

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.1
Site Safety Meeting

Construction Site 4.1 Photo 4.1.2
Construction Site Entrance

Construction Site 4.1 Photo 4.1.3
Erosion Control Berms

Construction Site 4.1 Photo 4.1.4
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.5
Erosion Control Berms

Construction Site 4.1 Photo 4.1.6
Erosion Control Berms

Construction Site 4.1 Photo 4.1.7
Construction Site Entrance

Construction Site 4.1 Photo 4.1.8
Construction Site Entrance

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.9
Construction Site Entrance

Construction Site 4.1 Photo 4.1.10
Construction Site Entrance

Construction Site 4.1 Photo 4.1.11
Construction Site Entrance

Construction Site 4.1 Photo 4.1.12
Construction Site Entrance

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.13
Construction Site Entrance

Construction Site 4.1 Photo 4.1.14
Construction Site Entrance

Construction Site 4.1 Photo 4.1.15
Construction Site Entrance

Construction Site 4.1 Photo 4.1.16
Construction Site Entrance

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.17
Construction Site Entrance

Construction Site 4.1 Photo 4.1.18
Construction Site Entrance

Construction Site 4.1 Photo 4.1.19
Construction Site Entrance

Construction Site 4.1 Photo 4.1.20
Erosion Control Berm (West Edge of Site)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.21
Erosion Control Berm (West Edge of Site)

Construction Site 4.1 Photo 4.1.22
Erosion Control Berm (West Edge of Site)

Construction Site 4.1 Photo 4.1.23
Erosion Control Berm (West Edge of Site)

Construction Site 4.1 Photo 4.1.24
Recycled Asphalt Access Ramp

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.25
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.26
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.27
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.28
Rilling Erosion Along Recycled Asphalt Access Ramp

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.29
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.30
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.31
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.32
Erosion Control Berm (West Edge of Site – Looking West)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.33
Exposed Soil

Construction Site 4.1 Photo 4.1.34
Erosion Control Berm (West Edge of Site – Looking North)

Construction Site 4.1 Photo 4.1.35
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.36
Rilling Erosion Along Recycled Asphalt Access Ramp

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.37
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.38
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.39
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.40
South Edge on Top of Material Loading Stockpile

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.41
South Edge on Top of Material Loading Stockpile

Construction Site 4.1 Photo 4.1.42
South Edge on Top of Material Loading Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.43
South Edge on Top of Material Loading Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.44
South Edge on Top of Material Loading Stockpile (Looking South)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.45
South Edge on Top of Material Loading Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.46
South Edge on Top of Material Loading Stockpile (Exposed Soil)

Construction Site 4.1 Photo 4.1.47
South Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.48
Damaged/Broken Excavator

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.49
South Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.50
South Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.51
South Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.52
Damaged/Broken Excavator

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.53
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.54
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.55
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.56
Damaged/Broken Excavator

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.57
Exposed Trash Rag

Construction Site 4.1 Photo 4.1.58
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.59
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.60
Damaged/Broken Excavator (Oily Residue)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.61
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.62
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.63
Exposed Soil

Construction Site 4.1 Photo 4.1.64
Old Stockpile Entrance Ramp (Exposed Soil)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.65
East of Old Stockpile Entrance Ramp

Construction Site 4.1 Photo 4.1.66
Old Stockpile Entrance Ramp

Construction Site 4.1 Photo 4.1.67
Old Stockpile Entrance Ramp

Construction Site 4.1 Photo 4.1.68
Old Stockpile Entrance Ramp

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.69
West of Old Stockpile Entrance Ramp

Construction Site 4.1 Photo 4.1.70
Old Stockpile Entrance Ramp (Looking West)

Construction Site 4.1 Photo 4.1.71
Old Stockpile Entrance Ramp

Construction Site 4.1 Photo 4.1.72
Old Stockpile Entrance Ramp (Exposed Soil)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.73
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.74
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.75
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.76
Old Stockpile Entrance Ramp (Exposed Soil)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.77
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.78
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.79
Excavator Storage

Construction Site 4.1 Photo 4.1.80
East Edge on Top of Material Loading Stockpile (Looking East)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.81
East Edge on Top of Material Loading Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.82
East Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.83
East Edge on Top of Material Loading Stockpile (Looking South)

Construction Site 4.1 Photo 4.1.84
East Edge on Top of Material Loading Stockpile (Looking East)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.85
East Edge on Top of Material Loading Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.86
East Edge on Top of Material Loading Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.87
East Edge on Top of Material Loading Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.88
East Edge on Top of Material Loading Stockpile (Looking East)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.89
Exposed Soil

Construction Site 4.1 Photo 4.1.90
North Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.91
North Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.92
North Edge on Top of Material Loading Stockpile (Looking North)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.93
North Edge on Top of Material Loading Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.94
North Edge on Top of Material Loading Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.95
North Edge on Top of Material Loading Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.96
North Edge on Top of Material Loading Stockpile (Looking South)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.97
North Edge on Top of Material Loading Stockpile (Looking South)

Construction Site 4.1 Photo 4.1.98
North Edge on Top of Material Loading Stockpile (Looking South)

Construction Site 4.1 Photo 4.1.99
North Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.100
North Edge on Top of Material Loading Stockpile (Looking West)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.101
Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.102
Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.103
Recycled Asphalt Access Ramp Looking toward Construction Entrance

Construction Site 4.1 Photo 4.1.104
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.105
Erosion Control Berms

Construction Site 4.1 Photo 4.1.106
Construction Entrance (Looking East)

Construction Site 4.1 Photo 4.1.107
Construction Entrance (Looking East)

Construction Site 4.1 Photo 4.1.108
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.109
Erosion Control Berms

Construction Site 4.1 Photo 4.1.110
Erosion Control Berms

Construction Site 4.1 Photo 4.1.111
Erosion Control Berms

Construction Site 4.1 Photo 4.1.112
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.113
Erosion Control Berms

Construction Site 4.1 Photo 4.1.114
Erosion Control Berms

Construction Site 4.1 Photo 4.1.115
Erosion Control Berms

Construction Site 4.1 Photo 4.1.116
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.117
Erosion Control Berms

Construction Site 4.1 Photo 4.1.118
Erosion Control Berms

Construction Site 4.1 Photo 4.1.119
Erosion Control Berms

Construction Site 4.1 Photo 4.1.120
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.121
Erosion Control Berms

Construction Site 4.1 Photo 4.1.122
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.123
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.124
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.125
Erosion Control Berms

Construction Site 4.1 Photo 4.1.126
Erosion Control Berms

Construction Site 4.1 Photo 4.1.127
Erosion Control Berms

Construction Site 4.1 Photo 4.1.128
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.129
Erosion Control Berms

Construction Site 4.1 Photo 4.1.130
Erosion Control Berms

Construction Site 4.1 Photo 4.1.131
Looking west towards Construction Entrance

Construction Site 4.1 Photo 4.1.132
South Edge of Stockpile

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.133
South Edge of Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.134
South Edge of Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.135
South Edge of Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.136
South Edge of Stockpile (Looking North)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.137
South Edge of Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.138
South Edge of Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.139
Nearby Bay Outfall (Looking South)

Construction Site 4.1 Photo 4.1.140
Nearby Bay Outfall (Looking East)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.141
Nearby Bay Outfall (Looking East)

Construction Site 4.1 Photo 4.1.142
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.143
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.144
Old Stockpile Entrance Ramp (Exposed Soil)

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

Deficiency Tracking #4 and #5 apply to this permit. Please see pages B4-8 through B4-10.

Draft Notice of Deficiency

Deficiency Tracking #: 4
Related Permit(s): Kalaeloa Harbor

Deficiency Narrative Description:

At the Stockpile 2A project, HDOT inspection reports from 3/30/17, 4/13/17, 6/8/17, 7/27/17, 9/28/17, and 10/12/17 note the presence of track-out leading from the stabilized construction entrance onto the adjacent road. The SWPPP states that "all sediment tracked, spilled or dropped onto the adjacent road will be swept up as soon as possible and disposed of properly." The Audit Team understands that while Harbors Division is presently revising their enforcement policy, generally their current policy is that if an inspector finds the same issue more than twice in a row with no resolution, Harbors Division will initiate enforcement against the contractor. This is documented in Section C Part 7.2.2 of Harbors Division's SWMPP: "Habitual warnings at a site may lead to escalation." In this case, six consecutive inspections noted the track-out issue, but Harbors Division took no formal enforcement action.

Recommendations for Improvement:

The Audit Team believes that the forthcoming revision to the Enforcement Response Plan will establish a clearer and more actionable plan for Harbors Division to enforce upon contractors when deficiencies are identified.

Description of Attachments (if applicable): HDOT inspection reports from 3/30/17, 4/13/17, 6/8/17, 7/27/17, 9/28/17, and 10/12/17.

Applicable Regulatory References:

NPDES Permit No.: n/a

SWMPP: Section C Part 7.2 "Non-compliance with the BMP Plan discovered during BMP inspections will be immediately corrected by the contractor…If no corrective actions are taken, the Harbors Inspector has the authority to issue a stop work order, depriving the contractor of the basis to request payment. If necessary, further actions in accordance with the Enforcement Response Plan may be taken."

Section C Part 7.2.2 "Habitual warnings at a site may lead to escalation."

Hawaii Administrative Rules (HAR):

HAR 11-55 Appendix K Part 6.(a)(4) "Develop, implement, and enforce a program to reduce pollutants in storm water runoff entering the permittee's small municipal separate storm sewer system from construction activities disturbing one acre or more, including construction activities less than one acre that are part of a larger common plan of development or sale that would disturb one acre or more…"

HAR 11-55 Appendix K Part 6.(a)(4)(A) “Establishment of rules, ordinances, or other regulatory mechanism, including enforcement procedures and actions, that require erosion and sediment controls,”

HAR 11-55 Appendix K Part 6.(a)(4)(F) “Procedures for site inspection and enforcement of control measures;”

Code of Federal Regulations (CFR):

40 CFR 122.34(b)(4)(i) “The permit must identify the minimum elements and require the development, implementation, and enforcement of a program to reduce pollutants in any storm water runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre.”

40 CFR 122.34(b)(4)(i)(F) “At a minimum, the permit must require the permittee to develop and implement: Procedures for site inspection and enforcement of control measures.”

Construction Site Best Management Practices Inspection Checklist

Date of Inspection: March 30, 2017	**Project Title:** Ho'opili Development Stockpile 2A Removal Plans at Kalaeloa Barbers Point Harbor	
Contractor: Royal Contracting Company, Ltd	**Project Job No.:** N/A	**NGPC No.:** HI R10F194
Inspector: Y. Zhang, C. Chun (Harbors); D. Wiley (D.R.Horton)	**SWPPP Updated and Onsite:** ☐ Yes ☑ No	**Photographs Attached:** ☑ Yes ☐ No
Weather: Sunny		

		N/A	Control Device(s) Yes	Control Device(s) No	Require Maintenance Yes	Require Maintenance No	Description of Any Deficiency	Date Corrective Actions Taken	Notes
	AC: Adequate Containment **ACoC: Adequate Cover or Containment**								
1.	Stabilized Construction Ingress/Egress?	☐	☑	☐	☑	☐	Loose sediment on road		See Note E.
	Vehicular Tracking	☐	☑	☐	☑	☐			See Note E.
2.	Erosion Control Device(s) - Slopes/Exposed Area	☐	☑	☐	☐	☐			Vegatation in place.
	Sediment Control (Silt fence, Perimeter sock)	☐	☑	☐	☐	☑			
	Storm Drain Inlet Protection (Fabric filter, Witch's hat)	☑	☐	☐	☐	☐			
3.	Dust Control/Suppressant - Sawcutting/Demolition	☐	☑	☐	☐	☐			See Note F.
	Concrete Washout Area (AC)	☑	☐	☐	☐	☐			
4.	Vehicle/Equipment Maintenance Area (ACoC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Cleaning Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Fueling Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Storage Area (AC)	☑	☐	☐	☐	☐			
5.	Construction Material Storage Area (ACoC)	☑	☐	☐	☐	☑			
	Stockpiles of Aggregate (ACoC)	☑	☐	☐	☐	☐			Existing stockpile removing.
6.	Flammable/Fuel Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Hazardous Material Storage (ACoC)	☑	☐	☐	☐	☐			
	Waste Storage Area (ACoC)	☑	☐	☐	☐	☐			
7.	Good Housekeeping Practices (Is project generally free of litter, sediment, etc.?)	☐	☑	☐	☑	☐			Ongoing. See Note E
8.	Spill Prevention/Control - Spill Kit	☑	☐	☐	☐	☐			To be evaluated.

Major Site Activities (please check any if applicable):
☐ Demolition ☐ Paving ☑ Excavation ☑ Hauling Materials ☐ Concrete Pouring ☐ Other, please specify:

If any of the item listed below checked "Yes", please provide detailed information under Additional Notes.

A. Is contaminated soil present? ☐ Yes ☑ No

B. Is sediment basin(s) present? ☐ Yes ☑ No

C. Is any illicit discharge present? ☐ Yes ☑ No

D. Dewatering and/or Hydrotesting - Is this project in compliance with these NPDES storm water permitting requirements? ☐ Yes ☐ No ☑ N/A

Verified By (HDOT Project Inspector/Engineer's Signature)

3/31/2017
Date

Construction Site Best Management Practices Inspection Checklist

Permanent Post-Construction BMP Inspection			
Please indicate inspection status here:	☐ Inspection During Construction Phase	☐ Final Inspection after Installation	☐ Other
Permanent post-construction BMPs are installed in accordance with construction plans.		☐ Yes	☐ No ☑ N/A
Notes:			

Additional Notes:

A. Management of Contaminated Soil:

B. Control and Maintenance Related to Sediment Basin(s):

C. Evidence of Discharge of Pollutant(s) to State Receiving Waters:

D. Summary of Dewatering and/or Hydrotesting Activity (please list permit numbers and verify compliance):

E. It appeared that the construction entrance had been repaired. However, loose sediment and track-out leading from the stabilized construction entrance were still observed on road (Photo 1). Please maintain the stabilized construction entrance as necessary to keep up its sediment removal effectiveness. Meanwhile, please sweep the entrance area at the end of each hauling day and ensure that Hanua Street is used for transporting of hauled materials.

F. Spray water when necessary to control fugitive dust.

H. Neither SWPPP nor other inspection records were available for review at the time of inspection. It is required by the NPDES C Permit that a copy of a current SWPPP and other relevent inspection reports be kept on-site or at an easily accessible location, so that it can be made available at the time of an on-site inspection or upon request by the HDOH or EPA.

I. The next round of inspection is scheduled on April 13 at 0930. POC for D. R. Horton is Dan Wiley.

Remarks: This checklist is to be completed before commencement of grading or site-work and then every two weeks from October through March, otherwise, bimonthly. Harbors Division will not allow construction activities to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the site-specific BMPs and pollution prevention devices are implemented correctly and in the appropriate locations.

State of Hawaii
Department of Transportation
Harbors Division

1. Overview of the construction entrance (facing northwest).

2. Loose soil particles and track-out (circled in red) observed on road (facing southeast).

3. Biosocks placed around Stockpile 2A on the north end (facing north).

4. Overview of the area being excavated (facing east).

5. Biosocks placed along the road (facing southeast).

6. Biosocks placed along the road near the south end (facing southeast).

7. View of road onto Hanua Street (facing southeast). GLP Asphalt's facility is to the right.

8. View of the road connecting to Hanua Street (facing southwest). The ground was wet at the time of inspection.

Construction Site Best Management Practices Inspection Checklist

Date of Inspection: April 13, 2017	**Project Title:** Ho'opili Development Stockpile 2A Removal Plans at Kalaeloa Barbers Point Harbor	
Contractor: Royal Contracting Company, Ltd	**Project Job No.:** N/A	**NGPC No.:** HI R10F194
Inspector: Y. Zhang, C. Chun (Harbors); D. Wiley (D.R.Horton)	**SWPPP Updated and Onsite:** ☑ Yes ☐ No	**Photographs Attached:** ☑ Yes ☐ No
Weather: Sunny		

		N/A	Control Device(s) Yes	Control Device(s) No	Require Maintenance Yes	Require Maintenance No	Description of Any Deficiency	Date Corrective Actions Taken	Notes
	AC: Adequate Containment **ACoC:** Adequate Cover or Containment								
1.	Stabilized Construction Ingress/Egress?	☐	☑	☐	☑	☐	Loose sediment and track-out		See Note E.
	Vehicular Tracking	☐	☑	☐	☑	☐			See Note E.
2.	Erosion Control Device(s) - Slopes/Exposed Area	☐	☑	☐	☐	☐			Vegetation in place.
	Sediment Control (Silt fence, Perimeter sock)	☐	☑	☐	☐	☑			
	Storm Drain Inlet Protection (Fabric filter, Witch's hat)	☑	☐	☐	☐	☐			
3.	Dust Control/Suppressant - Sawcutting/Demolition	☐	☑	☐	☐	☐			See Note F.
	Concrete Washout Area (AC)	☑	☐	☐	☐	☐			
4.	Vehicle/Equipment Maintenance Area (ACoC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Cleaning Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Fueling Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Storage Area (AC)	☑	☐	☐	☐	☐			
5.	Construction Material Storage Area (ACoC)	☑	☐	☐	☐	☑			
	Stockpiles of Aggregate (ACoC)	☑	☐	☐	☐	☐			Existing stockpile being removed.
6.	Flammable/Fuel Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Hazardous Material Storage (ACoC)	☑	☐	☐	☐	☐			
	Waste Storage Area (ACoC)	☑	☐	☐	☐	☐			
7.	Good Housekeeping Practices (Is project generally free of litter, sediment, etc.?)	☐	☑	☐	☑	☐			Ongoing. See Note E
8.	Spill Prevention/Control - Spill Kit	☑	☐	☐	☐	☐			To be evaluated.

Major Site Activities (please check any if applicable):
☐ Demolition ☐ Paving ☑ Excavation ☑ Hauling Materials ☐ Concrete Pouring ☐ Other, please specify:

If any of the item listed below checked "Yes", please provide detailed information under Additional Notes.

A. Is contaminated soil present? ☐ Yes ☑ No

B. Is sediment basin(s) present? ☐ Yes ☑ No

C. Is any illicit discharge present? ☐ Yes ☑ No

D. Dewatering and/or Hydrotesting - Is this project in compliance with these NPDES storm water permitting requirements? ☐ Yes ☐ No ☑ N/A

Verified By (HDOT Project Inspector/Engineer's Signature)

4/13/2017
Date

Construction Site Best Management Practices Inspection Checklist

Permanent Post-Construction BMP Inspection			
Please indicate inspection status here:	☐ Inspection During Construction Phase	☐ Final Inspection after Installation	☐ Other
Permanent post-construction BMPs are installed in accordance with construction plans.	☐ Yes	☐ No	☑ N/A
Notes:			

Additional Notes:

A. Management of Contaminated Soil:

B. Control and Maintenance Related to Sediment Basin(s):

C. Evidence of Discharge of Pollutant(s) to State Receiving Waters:

D. Summary of Dewatering and/or Hydrotesting Activity (please list permit numbers and verify compliance):

E. Loose sediment and tire track-out leading from the stabilized construction entrance were observed on road (Photos 1 and 2). Please maintain the stabilized construction entrance as necessary to keep up its sediment removal effectiveness. Meanwhile, please ensure that effected paved road is swept at the end of each hauling day.

F. Water truck was on-site at the time of inspection. Spray water when necessary to control fugitive dust.

H. The next round of inspection is scheduled on June 8 (Thursday) at 1000. POC for D. R. Horton is Dan Wiley.

Remarks: This checklist is to be completed before commencement of grading or site-work and then every two weeks from October through March, otherwise, bimonthly. Harbors Division will not allow construction activities to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the site-specific BMPs and pollution prevention devices are implemented correctly and in the appropriate locations.

State of Hawaii
Department of Transportation
Harbors Division

1. Overview of the construction entrance (facing northwest).

2. Loose soil particles and track-out (circled in red) observed on paved road (facing southeast). Biosocks placed along paved road on the left.

3. Biosocks placed around Stockpile 2A on the north end (facing northwest).

4. Water truck parked west to the Stockpile 2A (facing west).

5. View of the hauling trucks coming onto the site (facing southeast).

6. Dust rising behind the hauling truck driving on the paved road (facing southeast).

7. Snapshot of self-inspection reports from March 13 to April 7.

8. Snapshot of the signature page of the SWPPP kept in Contractor's vehicle.

Construction Site Best Management Practices Inspection Checklist

Date of Inspection: June 8, 2017	**Project Title: Ho'opili Development Stockpile 2A Removal Plans at Kalaeloa Barbers Point Harbor**	
Contractor: Royal Contracting Company, Ltd	**Project Job No.:** N/A	**NGPC No.:** HI R10F194
Inspector: Y. Zhang, C. Chun (Harbors); D. Wiley (D. R. Horton)	**SWPPP Updated and Onsite:** ☐ Yes ☑ No	**Photographs Attached:** ☑ Yes ☐ No
Inspection Type: ☐ Initial ☑ Recurring ☐ Final ☐ Other		
Weather: Sunny with clouds		

AC: Adequate Containment
ACoC: Adequate Cover or Containment

		N/A	Control Device(s) Properly Installed: Yes	Control Device(s) Properly Installed: No	Require Maintenance: Yes	Require Maintenance: No	Description of Any Deficiency	Date Corrective Actions Taken	Notes
1.	Stabilized Construction Ingress/Egress?	☐	☑	☐	☑	☐	Middle section filled with fine soils		See Note E
	Vehicular Tracking	☐	☑	☐	☑	☐	Minor track-outs		See Note E
2.	Erosion Control Device(s) - Slopes/Exposed Area	☐	☑	☐	☐	☑			
	Sediment Control (Silt fence, Perimeter sock)	☐	☑	☐	☐	☑			
	Storm Drain Inlet Protection (Fabric filter, Witch's hat)	☑	☐	☐	☐	☐			
3.	Dust Control/Suppressant - Sawcutting/Demolition	☐	☑	☐	☐	☑			Water truck used regularly
	Concrete Washout Area (AC)	☑	☐	☐	☐	☐			
4.	Vehicle/Equipment Maintenance Area (ACoC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Cleaning Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Fueling Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Storage Area (AC)	☑	☐	☐	☐	☐			
5.	Construction Material Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Stockpiles of Aggregate (ACoC)	☑	☐	☐	☐	☐			Removing existing stockpile
6.	Flammable/Fuel Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Hazardous Material Storage (ACoC)	☑	☐	☐	☐	☐			
	Waste Storage Area (ACoC)	☐	☑	☐	☐	☑			
7.	Good Housekeeping Practices (Is project generally free of litter, sediment, etc.?)	☐	☑	☐	☑	☐			Ongoing, See Note E
8.	Spill Prevention/Control - Spill Kit	☑	☐	☐	☐	☐			

Major Site Activities (please check any if applicable):
☐ Demolition ☐ Paving ☑ Excavation ☑ Hauling Materials ☐ Concrete Pouring ☐ Other, please specify:

If any of the item listed below checked "Yes", please provide detailed information under Additional Notes.

A. Is contaminated soil present? ☐ Yes ☑ No
B. Is sediment basin(s) present? ☐ Yes ☑ No
C. Is any illicit discharge present? ☐ Yes ☑ No
D. Dewatering and/or Hydrotesting - Is this project in compliance with these NPDES storm water permitting requirements? ☐ Yes ☐ No ☑ N/A

Verified By (HDOT Project Inspector/Engineer's Signature)

6/9/2017
Date

Construction Site Best Management Practices Inspection Checklist

Permanent Post-Construction BMP Inspection			
Please indicate inspection status here:	☐ Initial Inspection	☐ Inspection During Construction Phase	☐ Final Inspection after Installation
Post-construction BMPs are being installed in accordance with construction plans.		☐ Yes ☐ No	☑ N/A
Notes:			

Additional Notes:

A. Management of Contaminated Soil:

B. Control and Maintenance Related to Sediment Basin(s):

C. Evidence of Discharge of Pollutant(s) to State Receiving Waters:

D. Summary of Dewatering and/or Hydrotesting Activity (please list permit numbers and verify compliance):

E. At the time of inspection, no stockpile hauling activities were conducted on-site. Middle section of the existing stabilized construction entrance was filled with fine soil particles and minor track-outs leading from the site were observed on the road (Photo 1), which needed to be maintained to retain the construction entrance's efficiency to remove the fine soil particles from tires. Please continue to sweep the road regularly.

F. Other on-site representatives included Karen Awana from Harbors Division Property Management Section and Vincent Telles from Royal Contracting Company. Next round of inspection has been scheduled on July 27, 2017 at 1000.

G. Neither SWPPP nor self-inspection records were available for review at the time of inspection. Please provide us (e.g., through emails) copies of all self-inspection records since April.

Remarks: This checklist is to be completed before commencement of grading or site-work and then every two weeks from October through March, otherwise, bimonthly. Harbors Division will not allow construction activities to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the site-specific BMPs and pollution prevention devices are implemented correctly and in the appropriate locations.

State of Hawaii
Department of Transportation
Harbors Division

1. Overview of the construction entrance (facing southeast). Middle section (circled in red) filled with fine soil particles.

2. Overview of the active excavating area at the top of the stockpile 2A (facing southeast).

3. Another view of the top of stockpile 2A (facing north). Large boulders piled at the north end.

4. Biosocks placed along the bottom of the stockpile 2A (facing southeast).

5. Placement of biosocks extended to the south end of stockpile 2A (facing southeast).

6. Extension of biosocks on John Wayne Avenue (facing southwest). GLP Asphalt facility is in the background.

Construction Site Best Management Practices Inspection Checklist

Date of Inspection: July 27, 2017	**Project Title: Ho'opili Development Stockpile 2A Removal Plans at Kalaeloa Barbers Point Harbor**	
Contractor: Royal Contracting Company, Ltd	**Project Job No.:** N/A	**NGPC No.:** HI R10F194
Inspector: Y. Zhang, C. Chun (Harbors); D. Wiley (D. R. Horton)	**SWPPP Updated and Onsite:** ☐ Yes ☑ No	**Photographs Attached:** ☑ Yes ☐ No
Inspection Type: ☐ Initial ☑ Recurring ☐ Final ☐ Other		
Weather: Sunny with clouds		

AC: Adequate Containment
ACoC: Adequate Cover or Containment

		N/A	Control Device(s) Properly Installed: Yes	Control Device(s) Properly Installed: No	Require Maintenance: Yes	Require Maintenance: No	Description of Any Deficiency	Date Corrective Actions Taken	Notes
1.	Stabilized Construction Ingress/Egress?	☐	☑	☐	☐	☑			
	Vehicular Tracking	☐	☑	☐	☑	☐	Minor track-outs		See Note E
2.	Erosion Control Device(s) - Slopes/Exposed Area	☐	☑	☐	☐	☑			
	Sediment Control (Silt fence, Perimeter sock)	☐	☑	☐	☐	☑			
	Storm Drain Inlet Protection (Fabric filter, Witch's hat)	☑	☐	☐	☐	☐			
3.	Dust Control/Suppressant - Sawcutting/Demolition	☐	☑	☐	☑	☐	No water truck stand-by		See Note E
	Concrete Washout Area (AC)	☑	☐	☐	☐	☐			
4.	Vehicle/Equipment Maintenance Area (ACoC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Cleaning Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Fueling Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Storage Area (AC)	☑	☐	☐	☐	☐			
5.	Construction Material Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Stockpiles of Aggregate (ACoC)	☑	☐	☐	☐	☐			Removing existing stockpile
6.	Flammable/Fuel Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Hazardous Material Storage (ACoC)	☑	☐	☐	☐	☐			
	Waste Storage Area (ACoC)	☐	☑	☐	☐	☑			
7.	Good Housekeeping Practices (Is project generally free of litter, sediment, etc.?)	☐	☑	☐	☑	☐			Ongoing, See Note E
8.	Spill Prevention/Control - Spill Kit	☑	☐	☐	☐	☐			

Major Site Activities (please check any if applicable):
☐ Demolition ☐ Paving ☑ Excavation ☑ Hauling Materials ☐ Concrete Pouring ☐ Other, please specify:

If any of the item listed below checked "Yes", please provide detailed information under Additional Notes.

A. Is contaminated soil present? ☐ Yes ☑ No
B. Is sediment basin(s) present? ☐ Yes ☑ No
C. Is any illicit discharge present? ☐ Yes ☑ No
D. Dewatering and/or Hydrotesting - Is this project in compliance with these NPDES storm water permitting requirements? ☐ Yes ☐ No ☑ N/A

Verified By (HDOT Project Inspector/Engineer's Signature)

7/27/2017
Date

Construction Site Best Management Practices Inspection Checklist

Permanent Post-Construction BMP Inspection			
Please indicate inspection status here:	☐ Initial Inspection	☐ Inspection During Construction Phase	☐ Final Inspection after Installation
Post-construction BMPs are being installed in accordance with construction plans.		☐ Yes ☐ No	☑ N/A
Notes:			

Additional Notes:

A. Management of Contaminated Soil:

B. Control and Maintenance Related to Sediment Basin(s):

C. Evidence of Discharge of Pollutant(s) to State Receiving Waters:

D. Summary of Dewatering and/or Hydrotesting Activity (please list permit numbers and verify compliance):

E. At the time of inspection, minor track-outs and loose sediment leading from the site were observed on the road (Photos 1 and 2). No water truck was on-site. The overall condition of the stabilized construction entrance was acceptable. Please continue to sweep the paved road at the end of each hauling day and have the water truck readily available to control fugitive dust.

F. Please keep copies of SWPPP and issued NPDES C permit readily available on-site. It is recommended that the Contractor review HAR 11-55 Appendix C and provide HDOH all necessary submittals under Section 13. Additional documentation requirements under Sections 9 and 10 shall be implemented accordingly.

G. Next round of inspection will be on September 28, 2017 at 1000.

Remarks: This checklist is to be completed before commencement of grading or site-work and then every two weeks from October through March, otherwise, bimonthly. Harbors Division will not allow construction activities to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the site-specific BMPs and pollution prevention devices are implemented correctly and in the appropriate locations.

State of Hawaii
Department of Transportation
Harbors Division

1. Overview of the construction entrance (facing southeast).

2. Minor tracking and loose sediment observed on paved road (facing east-southeast). Construction entrance is to the left. Biosocks were placed along and between Stockpile 2A and paved road.

3. Biosocks placed around Stockpile 2A on the north (facing northeast).

4. View of the color variation of Stockpile 2A at the north end (facing southeast).

5. View of the large boulders separated from the stockpile (facing north).

6. Overview of the active excavating area at the top of Stockpile 2A (facing southeast).

7. View of truck turning area at the bottom of Stockpile 2A (facing west).

8. Snapshot of self-inspection records for June and July 2017.

Construction Site Best Management Practices Inspection Checklist

Date of Inspection: September 28, 2017	**Project Title: Ho'opili Development Stockpile 2A Removal Plans at Kalaeloa Barbers Point Harbor**	
Contractor: Royal Contracting Company, Ltd	**Project Job No.:** N/A	**NGPC No.:** HI R10F194
Inspector: Y. Zhang, C. Chun (Harbors); D. Wiley (D. R. Horton)	**SWPPP Updated and Onsite:** ☑ Yes ☐ No	**Photographs Attached:** ☑ Yes ☐ No
Inspection Type: ☐ Initial ☑ Recurring ☐ Final ☐ Other		
Weather: Sunny with clouds		

		N/A	Control Device(s) Properly Installed		Require Maintenance		Description of Any Deficiency	Date Corrective Actions Taken	Notes
	AC: Adequate Containment **ACoC: Adequate Cover or Containment**		**Yes**	**No**	**Yes**	**No**			
1.	Stabilized Construction Ingress/Egress?	☐	☑	☐	☑	☐			See Note E
	Vehicular Tracking	☐	☑	☐	☑	☐	Minor track-outs		See Note E
2.	Erosion Control Device(s) - Slopes/Exposed Area	☐	☑	☐	☐	☑			Vegetated
	Sediment Control (Silt fence, Perimeter sock)	☐	☑	☐	☑	☐	Insufficient overlap		See Note F
	Storm Drain Inlet Protection (Fabric filter, Witch's hat)	☑	☐	☐	☐	☐			
3.	Dust Control/Suppressant - Sawcutting/Demolition	☐	☑	☐	☑	☐			Water truck offsite to get water
	Concrete Washout Area (AC)	☑	☐	☐	☐	☐			
4.	Vehicle/Equipment Maintenance Area (ACoC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Cleaning Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Fueling Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Storage Area (AC)	☑	☐	☐	☐	☐			
5.	Construction Material Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Stockpiles of Aggregate (ACoC)	☑	☐	☐	☐	☐			Removing existing stockpile
6.	Flammable/Fuel Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Hazardous Material Storage (ACoC)	☑	☐	☐	☐	☐			
	Waste Storage Area (ACoC)	☑	☐	☐	☐	☐			
7.	Good Housekeeping Practices (Is project generally free of litter, sediment, etc.?)	☐	☑	☐	☑	☐			Ongoing, See Note E
8.	Spill Prevention/Control - Spill Kit	☑	☐	☐	☐	☐			

Major Site Activities (please check any if applicable):
☐ Demolition ☐ Paving ☑ Excavation ☑ Hauling Materials ☐ Concrete Pouring ☐ Other, please specify:

If any of the item listed below checked "Yes", please provide detailed information under Additional Notes.

A. Is contaminated soil present? ☐ Yes ☑ No
B. Is sediment basin(s) present? ☐ Yes ☑ No
C. Is any illicit discharge present? ☐ Yes ☑ No
D. Dewatering and/or Hydrotesting - Is this project in compliance with these NPDES storm water permitting requirements? ☐ Yes ☐ No ☑ N/A

Verified By (HDOT Project Inspector/Engineer's Signature)

9/29/2017
Date

Construction Site Best Management Practices Inspection Checklist

Permanent Post-Construction BMP Inspection			
Please indicate inspection status here:	☐ Initial Inspection	☐ Inspection During Construction Phase	☐ Final Inspection after Installation
Post-construction BMPs are being installed in accordance with construction plans.		☐ Yes ☐ No	☑ N/A
Notes: Post-construction BMP would be applied near the end of this project.			

Additional Notes:

A. Management of Contaminated Soil:

B. Control and Maintenance Related to Sediment Basin(s):

C. Evidence of Discharge of Pollutant(s) to State Receiving Waters:

D. Summary of Dewatering and/or Hydrotesting Activity (please list permit numbers and verify compliance):

E. At the time of inspection, minor track-outs and loose sediment leading from the site were observed on the road (Photos 1 and 2). The truck turning area appeared to be damped with water. The water truck was offsite getting more water. Front portion of the stabilized construction entrance appeared to be settled with fine soil material. Contractor's sweeper was sweeping the paved driveway. Please continue this effort.

F. Insufficient biosock overlap was observered at few spots close to the south end of the paved road. Please adjust the biosocks so that all ends have at least six-inch overlap.

G. The Contractor should review HAR 11-55 Appendix C and provide HDOH all necessary submittals under Section 13. These documents should be kept onsite during the inspection. Additional documentation requirements under Sections 9 and 10 shall be implemented accordingly.

H. Next round of inspection will be on October 12, 2017 at 1000.

Remarks: This checklist is to be completed before commencement of grading or site-work and then every two weeks from October through March, otherwise, bimonthly. Harbors Division will not allow construction activities to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the site-specific BMPs and pollution prevention devices are implemented correctly and in the appropriate locations.

State of Hawaii
Department of Transportation
Harbors Division

1. Overview of the construction entrance (facing northwest). Minor tracking and loose sediment observed on paved road.

2. Biosocks placed around Stockpile 2A on the north (facing northeast).

3. View of the driving route to the top of Stockpile 2A (facing east). The ground appeared to be damp. The right side of the stockpile appeared to be heavily vegetated.

4. Overview of the active excavating area at the top of Stockpile 2A (facing southeast). Large boulders separated from the stockpile were stored in the center.

5. Overview of truck turning area at the bottom of Stockpile 2A (facing west).

6. Biosocks placed along the bottom of Stockpile 2A (facing southeast).

7. Contractor's sweeper in action (facing northeast).

8. Snapshot of self-inspection record for the week of 9/11.

Construction Site Best Management Practices Inspection Checklist

Date of Inspection: October 12, 2017	**Project Title: Ho'opili Development Stockpile 2A Removal Plans at Kalaeloa Barbers Point Harbor**	
Contractor: Royal Contracting Company, Ltd	**Project Job No.:** N/A	**NGPC No.:** HI R10F194
Inspector: Y. Zhang (Harbors); D. Wiley (D. R. Horton); V. Telles (Royal)	**SWPPP Updated and Onsite:** ☑ Yes ☐ No	**Photographs Attached:** ☑ Yes ☐ No
Inspection Type: ☐ Initial ☑ Recurring ☐ Final ☐ Other		
Weather: Sunny with clouds		

AC: Adequate **C**ontainment
ACoC: Adequate **C**over **o**r **C**ontainment

		N/A	Control Device(s) Properly Installed		Require Maintenance		Description of Any Deficiency	Date Corrective Actions Taken	Notes
			Yes	No	Yes	No			
1.	Stabilized Construction Ingress/Egress?	☐	☑	☐	☑	☐			Ongoing. See Note E
	Vehicular Tracking	☐	☑	☐	☑	☐	Track-outs		Ongoing. See Note E
2.	Erosion Control Device(s) - Slopes/Exposed Area	☐	☑	☐	☐	☑			Vegetated
	Sediment Control (Silt fence, Perimeter sock)	☐	☑	☐	☑	☐	Insufficient overlap		See Note F
	Storm Drain Inlet Protection (Fabric filter, Witch's hat)	☑	☐	☐	☐	☐			
3.	Dust Control/Suppressant - Sawcutting/Demolition	☐	☑	☐	☑	☐			Water truck onsite
	Concrete Washout Area (AC)	☑	☐	☐	☐	☐			
4.	Vehicle/Equipment Maintenance Area (ACoC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Cleaning Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Fueling Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Storage Area (AC)	☑	☐	☐	☐	☐			
5.	Construction Material Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Stockpiles of Aggregate (ACoC)	☑	☐	☐	☐	☐			Removing existing stockpile
6.	Flammable/Fuel Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Hazardous Material Storage (ACoC)	☑	☐	☐	☐	☐			
	Waste Storage Area (ACoC)	☑	☐	☐	☐	☐			Oversize boulders onsite
7.	Good Housekeeping Practices (Is project generally free of litter, sediment, etc.?)	☐	☑	☐	☑	☐			Ongoing, See Note E
8.	Spill Prevention/Control - Spill Kit	☑	☐	☐	☐	☐			

Major Site Activities (please check any if applicable):
☐ Demolition ☐ Paving ☑ Excavation ☑ Hauling Materials ☐ Concrete Pouring ☐ Other, please specify:

If any of the item listed below checked "Yes", please provide detailed information under Additional Notes.

A. Is contaminated soil present? ☐ Yes ☑ No
B. Is sediment basin(s) present? ☐ Yes ☑ No
C. Is any illicit discharge present? ☐ Yes ☑ No
D. Dewatering and/or Hydrotesting - Is this project in compliance with these NPDES storm water permitting requirements? ☐ Yes ☐ No ☑ N/A

Verified By (HDOT Project Inspector/Engineer's Signature)

10/13/2017
Date

Construction Site Best Management Practices Inspection Checklist

Permanent Post-Construction BMP Inspection			
Please indicate inspection status here:	☐ Initial Inspection	☑ Inspection During Construction Phase	☐ Final Inspection after Installation
Post-construction BMPs are being installed in accordance with construction plans.		☐ Yes ☐ No	☑ N/A
Notes: Post-construction BMP would be applied near the end of this project.			

Additional Notes:

A. Management of Contaminated Soil:

B. Control and Maintenance Related to Sediment Basin(s):

C. Evidence of Discharge of Pollutant(s) to State Receiving Waters:

D. Summary of Dewatering and/or Hydrotesting Activity (please list permit numbers and verify compliance):

E. At the time of inspection, tire track-outs leading from the site were observed on the road (Photo 1). Middle portion of the stabilized construction entrance appeared to be settled with fine soil particles and needs to be maintained (Photo 3). Water truck was onsite spraying water (Photo 4) and the truck turning area appeared to be damped (Photos 2, 5, and 6). Contractor's miniature street sweeper was sweeping the paved driveway (Photo 3). However, its vacuuming system needs to maintained. Please continue the sweeping effort and removing the deposited sediment by the end of each hauling day. In addition, please ensure that all truck-loads are fully covered prior to leaving the site.

F. Insufficient biosock overlap was observered at few spots close to the south end of the paved road (Photo 8). Please adjust the biosocks so that all ends have at least six-inch overlap.

G. Please continue to keep all required documents onsite (e.g., NPDES-C permit, updated SWPPP, self-inspection records).

H. Next round of inspection will be on October 26, 2017 at 1000.

Remarks: This checklist is to be completed before commencement of grading or site-work and then every two weeks from October through March, otherwise, bimonthly. Harbors Division will not allow construction activities to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the site-specific BMPs and pollution prevention devices are implemented correctly and in the appropriate locations.

State of Hawaii
Department of Transportation
Harbors Division

1. Overview of the construction entrance (facing northwest). Tire tracking observed on paved road.

2. Biosocks placed around Stockpile 2A on the north (facing northeast). The truck driving route damped with water.

3. Miniature street sweeper used to clean up tracking on paved road (facing southeast).

4. Water truck used for dust control (facing east).

5. Overview of the area being excavated at the top of Stockpile 2A (facing southwest). Rainfall from Monday accumulated onsite. Oversize boulders temporarily stored onsite in the center.

6. Overview of truck turning area at the bottom of Stockpile 2A (facing west).

7. Biosocks placed along the existing vegetated area (facing southeast).

8. Ends of biosocks lacking sufficient overlap (circled in red; facing southeast).

Draft Notice of Deficiency

Deficiency Tracking #: 5
Related Permit(s): Kalaeloa Harbor

Deficiency Narrative Description:

At the Stockpile 2A project, HDOT inspection reports from the 12/1/17 On-Site Evaluation noted issues with the lack of stabilization of exposed soil. This, however, was the first time to date that HDOT inspection reports have noted this issue in the 10 months that the project has been active. Based on that observation, the Audit Team is concerned that site stabilization may not be adequately addressed in Harbors Division's construction program, particularly for projects greater than 1 acre which are subject to the requirements of HAR 11-55 Appendix C.

As an example, Harbors Division's inspection checklist does not specifically prompt the user to assess whether site stabilization is adequate. Also, while the Construction Site Design Review Checklist lists several soil stabilization practices, the Audit Team was unclear on how the checklist prompts action on the part of the project proponent. The checklist for this project indicated that a number of listed soil stabilization practices were not in the project's plan, but the checklist was nonetheless approved by Harbors Division.

Recommendations for Improvement:

Harbors Division should review the treatment of soil stabilization practices throughout their construction program to ensure that adequate practices are included in project plans and that inspectors know to look for these practices.

Description of Attachments (if applicable): HDOT inspection reports from the 12/1/17 On-Site Evaluation and Construction Site Design Review Checklist for the project

Applicable Regulatory References:

NPDES Permit No.: n/a

SWMPP: Section C

Hawaii Administrative Rules (HAR): n/a

Code of Federal Regulations (CFR): n/a

Construction Site Best Management Practices Inspection Checklist

Date of Inspection: December 1, 2017	**Project Title: Ho'opili Development Stockpile 2A Removal Plans at Kalaeloa Barbers Point Harbor**	
Contractor: Royal Contracting Company, Ltd	**Project Job No.:** N/A	**NGPC No.:** HI R10F194
Inspector: Y. Zhang, P. Miyashiro (Harbors); (D. Wiley) D. R. Horton	**SWPPP Updated and Onsite:** ☐ Yes ☑ No	**Photographs Attached:** ☑ Yes ☐ No
Inspection Type: ☐ Initial ☑ Recurring ☐ Final ☐ Other		
Weather: Overcast		

			Control Device(s) Properly Installed		Require Maintenance				
AC: Adequate Containment **ACoC: Adequate Cover or Containment**		**N/A**	**Yes**	**No**	**Yes**	**No**	**Description of Any Deficiency**	**Date Corrective Actions Taken**	**Notes**
1.	Stabilized Construction Ingress/Egress?	☐	☑	☐	☐	☑			Ongoing. See Note E
	Vehicular Tracking	☐	☑	☐	☐	☑			No hauling at the time of inspection.
2.	Erosion Control Device(s) - Slopes/Exposed Area	☐	☑	☐	☑	☐			See Note F
	Sediment Control (Silt fence, Perimeter sock)	☐	☑	☐	☐	☑			See Note G
	Storm Drain Inlet Protection (Fabric filter, Witch's hat)	☑	☐	☐	☐	☐			
3.	Dust Control/Suppressant - Sawcutting/Demolition	☐	☑	☐	☐	☑			
	Concrete Washout Area (AC)	☑	☐	☐	☐	☐			
4.	Vehicle/Equipment Maintenance Area (ACoC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Cleaning Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Fueling Area (AC)	☑	☐	☐	☐	☐			
	Vehicle/Equipment Storage Area (AC)	☐	☑	☐	☐	☑			
5.	Construction Material Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Stockpiles of Aggregate (ACoC)	☑	☐	☐	☐	☐			Removing existing stockpile
6.	Flammable/Fuel Storage Area (ACoC)	☑	☐	☐	☐	☐			
	Hazardous Material Storage (ACoC)	☑	☐	☐	☐	☐			
	Waste Storage Area (ACoC)	☑	☐	☐	☐	☐			Oversize boulders onsite
7.	Good Housekeeping Practices (Is project generally free of litter, sediment, etc.?)	☐	☑	☐	☑	☐			Ongoing. See Note E
8.	Spill Prevention/Control - Spill Kit	☑	☐	☐	☐	☐			

Major Site Activities (please check any if applicable):
☐ Demolition ☐ Paving ☑ Excavation ☑ Hauling Materials ☐ Concrete Pouring ☐ Other, please specify:

If any of the item listed below checked "Yes", please provide detailed information under Additional Notes.

A. Is contaminated soil present? ☐ Yes ☑ No

B. Is sediment basin(s) present? ☐ Yes ☑ No

C. Is any illicit discharge present? ☐ Yes ☑ No

D. Dewatering and/or Hydrotesting - Is this project in compliance with these NPDES storm water permitting requirements? ☐ Yes ☐ No ☑ N/A

Verified By (HDOT Project Inspector/Engineer's Signature)

12/4/2017
Date

Construction Site Best Management Practices Inspection Checklist

Permanent Post-Construction BMP Inspection			
Please indicate inspection status here:	☐ Initial Inspection	☑ Inspection During Construction Phase	☐ Final Inspection after Installation
Post-construction BMPs are being installed in accordance with construction plans.		☐ Yes ☐ No	☑ N/A
Notes: Post-construction BMP would be applied near the end of this project.			

Additional Notes:

A. Management of Contaminated Soil:

B. Control and Maintenance Related to Sediment Basin(s):

C. Evidence of Discharge of Pollutant(s) to State Receiving Waters:

D. Summary of Dewatering and/or Hydrotesting Activity (please list permit numbers and verify compliance):

E. No active hauling was observered at the time of inspection. It appeared that a new layer of gravel was placed on top of the stabilized construction entrance recently (Photo 1). Please continue the maintenance effort and sweep the temporary paved access road regularly on each hauling day.

F. As part of the findings and discussions following the onsite inspection, it is recommended that the exposed soil at and around Stockpile 2A, if exceeding 14 days, be proper stabilized. These areas include, but are not limited to, berms surrounding the top of Stockpile 2A (Photos 3, 4, and 6), banks along the driving ramp (Photo 3), and "small valley" along the mid-point of Stockpile 2A (Photos 8 and 9). It is also recommended that a check dam or similar BMP be installed along the banks of the driving ramp and within the "small valley" to slow down the runoff flow rate. Please follow up with these items and provide Harbors any photo-graphic documentations within five working days from the day of inspection (by the end of next Friday, December 8, 2017).

G. Please review the SWPPP and update the plan to reflect the current site consition and provide Harbors Division a copy of the updated SWPPP within five working days from the day of this inspection (by the end of next Friday, December 8, 2017).

H. Other onsite people include Vincent Telles from Royal Construction, Chris Takeno from ENV, Patti Miyashiro from HAR-PM, Brian Shono from HAR-ESP, Michele Freitas from HAR-EE, and Phil Potter, Sheuli Molla, and Cale Yamada from Kenny/Jenks Consultants. Next inspection will be on 12/15/2017 (a Friday) at 1000.

Remarks: This checklist is to be completed before commencement of grading or site-work and then every two weeks from October through March, otherwise, bimonthly. Harbors Division will not allow construction activities to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the site-specific BMPs and pollution prevention devices are implemented correctly and in the appropriate locations.

State of Hawaii
Department of Transportation
Harbors Division

1. Overview of the construction entrance with new layer of gravel placed atop (facing north-northwest). Concrete barrier in place. No active hauling at the time of inspection.

2. Biosocks placed along the north end of Stockpile 2A and along the ramp (facing north).

3.Overview of the ramp to the top of Stockpile 2A (facing southeast).

4. Overall-View of the top of Stockpile 2A (facing southeast). Oversize boulders stored onsite in the center.

5. Close view of area being excavated (facing east).

6. Plastic sheet and absorbent material placed underneath the heavy-duty backhoe loader to-be-removed offsite (facing north).

7. Plastic sheet and absorbent material placed underneath the second heavy-duty equipment staged onsite (facing northwest).

8. Overview of the small valley in the middle point of Stockpile 2A (facing southwest).

9. View of the small valley from the ground by the foot of Stockpile 2A (facing northeast). Biosocks and concrete barrier placed by exiting point.

10. Biosocks placed along the south boundary of Stockpile 2A (facing southeast).

11. Ends of biosocks with overlap of at least six inches (facing northeast).

12. Snapshot of the first page of the self-inspection form.

Hawaii Department of Transportation – Harbors Division

"Mālama i ke kai" - Protect our harbor waters

Construction Site Design Review Checklist

Project Description	
Project Title: Ho'opili Development Stockpile 2A Removal Plans at Kalaeloa Barbers Point Harbor	
Project Job No.: N/A	Acreage of Site: 15.4
Name of Design Firm: R.M. Towill Corporation	
Projected Construction Timeframe: 1 Year	
Description of Project: This project consists of the removal of a stockpile site called "Stockpile 2A".	

Site Information			
Construction Site Location: Kalaeloa Barbers Point Harbor, Oahu, Hawaii			
Latitude: 21° 19' 41.20" N		Longitude: 158° 6' 30.73" W	
Tax Map Key No(s): 9-1-014-024			
Disturbed Area (to nearest tenth of an acre)	15.4	Total Project Area (to nearest tenth of an acre)	15.4
Existing Percentage of Impervious Area	0	Percentage of Impervious Area After Completion	0

Nearest Water Body Information	
Name of Nearest Receiving Water Body(s) and Distance	Barbers Point Harbor 280 feet
Any New or Modified Storm Drain Connections	No
Description of Existing Storm Drains On or Adjacent to Project Area: N/A	

Design Submittal (Check one):		
☐ Preliminary Design	☐ Semi-Final Design	☒ Final Design

Signature and Certifications	
Designer: I certify that the design is complete, accurate, and addresses the items on this checklist to the best of my knowledge.	
Print Name: Brent Nakaoka	Job Title: Project Coordinator
Signature: Brent N	Date: March 5, 2013
Reviewer: HDOT Harbors Project Manager and Environmental Section.	
Harbors Project Manager Signature	Print Name: Carmen Chun Date: [illegible]
Harbors Environmental Section Signature	Print Name: Spencer K. Yim Date: March 5, 2013

Existing and Proposed Site Features	Yes	No	N/A
1. The following site features should be included on the plans. If deemed necessary based on project type, size, and scope			
• Existing and proposed topography, features, and storm water flow paths	☒	☐	☐
• Preliminary lot sizes, sizes in square feet, and limits of disturbance	☒	☐	☐
• Locations of existing and proposed roads, curbs, gutters, storm drains inlets, buildings, signs, sidewalks, traffic signals, light standards, guardrails, and other structures	☒	☐	☐
• Locations of natural swales and ditches, and other drainage facilities	☒	☐	☐
• Maps of predominant soils from USDA soil surveys	☒	☐	☐
• Boundaries of existing predominant vegetation and proposed limits of clearing and grading	☒	☐	☐
• Existing and proposed utilities and easements	☒	☐	☐
• Preliminary location and dimensions of proposed channel modifications such as bridge or culvert crossings	☐	☐	☒
2. If the project site includes, is adjacent to, or otherwise may impact any of the following, they should be included on the plans			
• Perennial and intermittent streams or other surface water	☐	☐	☒
• Location and boundaries of resource protection areas such as wetlands, lakes, ponds, and other habitats (e.g., stream buffers, drinking water well setbacks, septic setbacks)	☐	☐	☒
• Location of downstream/receiving inlets and tributaries of site to upstream and downstream properties and drainages	☐	☐	☒
• The limits of the expected and proposed maps and plans shall extend past the project limits if any existing conditions have an impact on the project (include future projects that have the potential to start prior to the subject project)	☐	☒	☐
• Stream flow velocity for stream work	☒	☐	☒
3. Identify potential pollutants related to non storm water on site	☒	☐	☒

Submittal	Yes	No	N/A
1. Include sequencing of construction activities with the implementation of construction site BMP's is provided?	☐	☒	☐
2. Show how the rainy season relates to soil disturbing and/or stabilization activities?	☐	☒	☐
3. Include detail on the implementation and deployment of soil stabilization, sediment control, dust control, water management, construction material management, waste management, pollution control, soil control practices, and inspection and maintenance (BMP's)?	☒	☐	☐
4. If the project is phased in multiple phases, are the phase specific BMP's that take into account relevant potential pollutants?	☐	☒	☐

Construction Site BMPs (Please refer to City storm water Design and Procedure Manual – Construction Activities for more information)	Yes	No	N/A
1. Soil Stabilization Practices (Plans address or include the following practices and situations?)			
• Preservation of existing vegetation	☒	☒	☐
• Stabilization of construction entrance	☒	☐	☐
• Protection of stockpiles	☒	☐	☐
• Bank stabilization	☒	☐	☐
• Topsoil management	☒	☐	☐
• Mulching, seeding, and/or planting with installation/application procedures and requirements	☒	☐	☐
• Velocity reduction devices in storm water flow paths	☐	☒	☐
• Temporary stabilization covers for unfinished roads, and/or erosion control blankets/mats, with installation/application procedures and requirements	☒	☒	☐
• Temporary drains, swales, earth dikes, and/or level spreaders	☒	☒	☐

▪ Slope length, subsurface drains	☐	☒	☐
▪ Top and toe of slope dissipaters (diffusers/pads)	☐	☒	☐
2. Sediment Control Practices (Plans address or include the following practices and situations?)			
▪ Location of potential sediment sources	☐	☒	☐
▪ Clean run-off drainage enter into off site drainage	☐	☒	☐
▪ Check/silt fences, wattles, perimeter socks, and matting rolls	☒	☒	☐
▪ Watering	☒	☐	☐
▪ Stabilizers, including acrylic polymers	☒	☒	☐
▪ Storm drain inlet protection	☒	☒	☒
▪ Temporary sediment basin	☒	☒	☒
▪ Sediment trap	☒	☒	☒
▪ Flared culvert end sections	☒	☒	☒
▪ Outlet protection	☒	☒	☒
▪ Temporary stream crossing	☒	☐	☒
▪ Improved grass sediment control	☒	☐	☒
▪ Slope roughening/terracing/grading	☒	☐	☒
▪ Sand bag barrier	☒	☒	☐
▪ Brush or rock filter	☒	☒	☐
▪ Dewatering, pumping, and disposing	☒	☐	☐
3. Non-Storm Water Management Practices (Plans address or include the following practices and situations?)			
▪ Employee training	☒	☐	☐
▪ Vehicle and equipment cleaning, refueling, and maintenance	☒	☐	☐
▪ Dewatering operations	☒	☐	☒
▪ Paving operations	☒	☐	☒
▪ Concrete washout procedures	☒	☐	☒
▪ Illicit connections and pumping	☒	☐	☒
▪ Water conservation	☒	☐	☐
▪ CGGT monitoring/sampling activities	☒	☐	☐
4. Construction Material Management, Waste Management and Spill Control Practices (Plans address or include the following practices and situations?)			
▪ Material delivery, use, and storage	☒	☐	☐
▪ Spill prevention control, spill kit	☒	☐	☐
▪ Hazardous waste properly stored in designated areas	☒	☐	☐
▪ Sanitary/Septic waste management	☒	☐	☒
▪ Liquid waste managed with storage containment devices	☒	☐	☒
▪ Contaminated soil management	☒	☐	☐
▪ Concrete waste management	☒	☐	☒
▪ Fertilizer, pesticide, herbicide, fungicide, and litter management	☒	☐	☐

Inspection and Maintenance Responsibility	Yes	No	N/A
(Plans address or include the following practices and situations?)			
1. Long term inspection, maintenance, and management responsibility	☐	☒	☐
2. Minimum maintenance frequency identified	☐	☒	☐
3. Recordkeeping	☐	☐	☐
4. Schedule and/or triggers for inspection of BMP measures	☒	☐	☐
5. Rain gauge monitoring	☒	☒	☐
6. Inspection report	☒	☒	☐

Permits, Reports, and Plans	Yes	No	N/A
Assess if the project requires any of the following that may include or impact BMPs. If not required, check N/A.			
1. NPDES Form C for Construction Activities is provided, if required	☒	☐	☐
2. NPDES Form 2 for Hydrostatic waters discharge is provided, if required	☐	☒	☐
3. NPDES Form G for Dewatering discharge is provided, if required	☐	☒	☐

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"Malama i ke kai" - Protect our harbor waters

Appendix B5

Permit-Specific Information – Highways Maui District

Appendix B5: Permit-Specific Information – Highways Maui District

1. Key Documents

Permit / Document	5. Maui District Small MS4 Permit HI 15KE674
2016 Annual Report	00MauiDistrictAnnualReport2016.pdf, plus appendices (available in 5. Highways Maui District\2016 Annual Report)
BMP Manual	a. Construction BMP Field Manual (January 2008).pdf b. I.1_Maintenance-Activities-BMPs-Field-Manual.pdf
Construction Site Inventory	a. HDOTProjectStatus.pdf b. C.2 Active Encroachment Construction Projects-v1.pdf c. C.4 Contract Construction Projects Advertised or Awarded-v1.pdf d. C.1 Active Contract Construction Projects-v1.pdf e. C.3 Connection and Discharge Permits Associated with Construction Activities Issued-v1.pdf
Enforcement Response Plan	a. Section 4.2.2 of MauiSWMP--Dec 2016 Final w-o Appendices.pdf b. 10AppendixJ-ConstructionERP.pdf
Memoranda of Understanding or Agreement	MOU HWY & HAR 8-7-15.pdf
Organizational charts	Page 20 of 61 Maui-SWMP-Plan.pdf

Appendix B5: Permit-Specific Information – Highways Maui District

Permit / Document	5. Maui District Small MS4 Permit HI 15KE674
Other Program Checklists and Forms	a. Appx-D.5-Water-Pollution-and-Erosion-Control-Notes.pdf b. Appx D.2.A HSS Road Bridge Construction.pdf c. Appx D.2.B. Harbors General Provisions.pdf d. Appx-C.2-Connection-Permit.pdf e. Appx-C.1-Application-for-Connect_Discharge-Permit.pdf f. Appx-C.3-Discharge-Permit.pdf g. Appx D.6 NPDES for Permit Projects Within State Highway Right-of-Way Notes .pdf h. Appx-D.8-Independent-Inspection-Checklist.pdf
Permit	Appx-D.6-NPDES-for-Permit-Projects-Within-State-Highway-Right-of-Way-Notes-
Plan Review Checklist	a. Site Specific BMP Plan SWPPP Review Checklist (December 2013).pdf b. Appx D.4.B Harbors Construction Site Design Review Checklist.pdf
Program Records	a. 04AppendixD-TrainingActivities.pdf b. 05AppendixE-ConstructionActivities.pdf
SWMPP	MauiSWMP--Dec 2016 Final w-o Appendices.pdf Plus Appendices
Training and Education Materials	a. Appx B.1 Outreach and Training Strategy.pdf
Website	http://hidot.hawaii.gov/stormwater/storm-water-management/maui/swmp/

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name *(Original File Name)*	**Sections/Pages Relevant to PEAR 2**
2016 Annual Report (*00MauiDistrictAnnualReport2016.pdf, plus appendices (available in 5. Highways Maui District\2016 Annual Report)*	Table 1 (pages 10, 11) Table 2 (page 14) Appendix J
BMP Manual *(Construction BMP Field Manual (January 2008).pdf)*	In entirety
(I.1_Maintenance-Activities-BMPs-Field-Manual.pdf)	Pages 2, 7, 9, and 13
Construction Site Inventory *(HDOTProjectStatus.pdf)*	In entirety
(C.2 Active Encroachment Construction Projects-v1.pdf)	In entirety
(C.4 Contract Construction Projects Advertised or Awarded-v1.pdf)	In entirety
(C.1 Active Contract Construction Projects-v1.pdf)	In entirety
(C.3 Connection and Discharge Permits Associated with Construction Activities Issued-v1.pdf)	In entirety
Enforcement Response Plan *(Section 4.2.2 of MauiSWMP--Dec 2016 Final w-o Appendices.pdf)*	In entirety
(10AppendixJ-ConstructionERP.pdf)	In entirety
Memoranda of Understanding or Agreement *(MOU HWY & HAR 8-7-15.pdf)*	Item G, IV Item G, VII.a.5
Organizational charts *(Maui-SWMP-Plan.pdf)*	Page 20 of 61
Other Program Checklists and Forms *(Appx-D.5-Water-Pollution-and-Erosion-Control-Notes.pdf)*	Page 3
(Appx D.2.A HSS Road Bridge Construction.pdf)	In entirety
(Appx D.2.B. Harbors General Provisions.pdf)	Pages 2-3
(Appx-C.2-Connection-Permit.pdf)	Pages 1-2
(Appx-C.1-Application-for-Connect_Discharge-Permit.pdf)	Pages 1-2
(Appx-C.3-Discharge-Permit.pdf)	In entirety
(Appx D.6 NPDES for Permit Projects Within State Highway Right-of-Way Notes .pdf)	In entirety
(Appx-D.8-Independent-Inspection-Checklist.pdf)	In entirety

Document Name *(Original File Name)*	Sections/Pages Relevant to PEAR 2
Permit *(Appx-D.6-NPDES-for-Permit-Projects-Within-State-Highway-Right-of-Way-Notes-)*	In entirety
Plan Review Checklist *(Site Specific BMP Plan SWPPP Review Checklist (December 2013).pdf)* *(Appx D.4.B Harbors Construction Site Design Review Checklist.pdf)*	In entirety In entirety
Program Records *(04AppendixD-TrainingActivities.pdf)* *(05AppendixE-ConstructionActivities.pdf)*	In entirety
SWMPP *(MauiSWMP--Dec 2016 Final w-o Appendices.pdf)* *Plus Appendices*	Table 4-1 Section 4.0 in entirety Appendices D.3.A- D.4.B
Training and Education Materials *(Appx B.1 Outreach and Training Strategy.pdf)*	Section 2 Section 5.1 Table 5-1
Website *(http://hidot.hawaii.gov/stormwater/storm-water-management/maui/swmp/)*	In entirety

3. On-Site Evaluation

As of the time of the On-Site Audit (late November 2017), two projects were eligible for review. Those projects had not yet broken ground by date of the On-Site Audit (27 November 2017). Therefore, the Audit Team only reviewed records related to those projects; no field effort could be completed.

4. On-Site Evaluation Photos

See Section 3; no photographs were taken, as no On-Site Audit was completed.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix B6

Permit-Specific Information – Highways Oahu District

Appendix B6: Permit-Specific Information – Highways Oahu District

1. Key Documents

Permit / Document	6. Oahu District Individual Permit HI S000001
2016 Annual Report	a. 20161101.Compliance Submission of Other-Annual Report 2015-2016-HIS000001.pdf
BMP Manual	a. Construction BMP Field Manual (January 2008).pdf b. I.1_Maintenance-Activities-BMPs-Field-Manual.pdf
Construction Site Inventory	a. HDOTProjectStatus.pdf b. C.2 Active Encroachment Construction Projects-v1.pdf c. C.4 Contract Construction Projects Advertised or Awarded-v1.pdf d. C.1 Active Contract Construction Projects-v1.pdf e. C.3 Connection and Discharge Permits Associated with Construction Activities Issued-v1.pdf
Enforcement Response Plan	Enforcement Response Plan_Construction Site Runoff Control (April 2015).pdf
Memoranda of Understanding or Agreement	a. MOU Between HDOT and DOH (July 1999).pdf b. A.4_MOU-DOT-Highways-City-2002.pdf
Organizational charts	Figure 4-1 on Page 4-8 SWMPP (April 2015)

Permit / Document	6. Oahu District Individual Permit HI S000001
Other Program Checklists and Forms	a. 20140124.Inspection Forms and Reporting and Corrective Procedures-S000001.PDF b. (1) 209f_Temporary_Water_Pollution_Dust_and_Erosion_Control_dated_11-30-15 a. Water Pollution Notes dated 100515 d. C.2_Permit-for-Connection-to-the-State-Highways-Drainage-System.pdf e. J.1_Permit-to-Discharge-into-the-State-Highways-Drainage-System.pdf f. Contractor Certification of NPDES Compliance (April 2015).pdf g. D.4_SSBMP-SWPPP-Inspection-Maintenance-Report.pdf h. D.5_Independent-Inspection-Checklist.pdf

Permit / Document	6. Oahu District Individual Permit HI S000001
Permit	20160318.Modified NPDES Permit HI S000001.PDF
Permitting Authority Correspondence with Construction Programs	a. 20131029.Petition for Review - Part 1 - HI S000001.PDF b. 20131029.Petition for Review - Part 2 - HI S000001.PDF c. 20131029.Petition for Review - Part 3 - HI S000001.pdf d. 20131029.Petition for Review - Part 4 - HI S000001.pdf e . 20131029.Petition for Review - Part 5 - HI S000001.pdf f. 20130307 response to HDOT MS4 DRAFT PERMIT COMMENTS.pdf g. 20130927.DOT Comments - HI S000001 - 09072PRM.13b.pdf h. 20130628.DOT comments on the Public Notice - HI S000001.PDF
Plan Review Checklist	a. Site Specific BMP Plan SWPPP Review Checklist (December 2013).pdf b. Construction BMP Checklist (May 2015).pdf
Audit Findings	HDOT Highways Audit 2004.pdf
Program Records	a. C.7 Oahu Construction BMP Training Sign-in Sheets-v1.pdf b. C.6 Periodic Inspections for Encroachment Construction Project-v1.pdf c. 20130822.Construction Site Runoff Control-Inspections and Enforcement of Contract Construction Projects-S000001.PDF d. Central Oahu BMP Ph 2 Sep 14 16_DOH Submittal-v1.pdf e. C.5 Periodic Inspections for Contract Projects-v1.pdf
SWMPP	SWMPP (April 2015).pdf

Permit / Document	6. Oahu District Individual Permit HI S000001
Training and Education Materials	a. B.1_Public-Education-Plan_REV1_9.23.15.pdf b. Contractor Compliance Inspection Handout.pdf c. D.8_Permit-Holders-Guide-to-Understanding-Storm-Water.pdf d. DOT_HWYS_YouTube_2016Conference Videos.pdf
Website	http://www.stormwaterhawaii.com/

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
2016 Annual Report *(20161101.Compliance Submission of Other-Annual Report 2015-2016-HIS000001.pdf)*	Table 1 (pages 10, 11) Table 2 (page 14) Appendix J
BMP Manual *(Construction BMP Field Manual (January 2008).pdf)* *(I.1_Maintenance-Activities-BMPs-Field-Manual.pdf)*	In entirety Pages 2, 7, 9, and 13
Construction Site Inventory *(HDOTProjectStatus.pdf)*	In entirety
(C.2 Active Encroachment Construction Projects-v1.pdf)	In entirety
(C.4 Contract Construction Projects Advertised or Awarded-v1.pdf)	In entirety
(C.1 Active Contract Construction Projects-v1.pdf)	In entirety
(C.3 Connection and Discharge Permits Associated with Construction Activities Issued-v1.pdf)	In entirety
Enforcement Response Plan *(Enforcement Response Plan_Construction Site Runoff Control (April 2015).pdf)*	In entirety
Memoranda of Understanding or Agreement *(MOU Between HDOT and DOH (July 1999).pdf)*	No discussion of PEAR 2 topics
(A.4_MOU-DOT-Highways-City-2002.pdf)	Pages 2 and 4
Organizational charts *(SWMPP (April 2015).pdf)*	Figure 4-1, Page 96
Other Program Checklists and Forms *(20140124.Inspection Forms and Reporting and Corrective Procedures-S000001.PDF)*	Pages: 3, 6, 15, 21, 24, 27, and 29
(Spec05-Pro-fd-209e_Temporary_Water_Pollution_Dust_and_Erosion_Control_dated_2-10-14.pdf)	Pages: 1-15 and 22-31
(Water Pollution Notes dated 100515.pdf)	In entirety
(C.2_Permit-for-Connection-to-the-State-Highways-Drainage-System.pdf)	In entirety
(J.1_Permit-to-Discharge-into-the-State-Highways-Drainage-System.pdf)	In entirety
(Contractor Certification of NPDES Compliance (April 2015).pdf)	In entirety
(D.4_SSBMP-SWPPP-Inspection-Maintenance-Report.pdf)	Page 2
(D.5_Independent-Inspection-Checklist.pdf)	In entirety
Permit *(20160318.Modified NPDES Permit HI S000001.PDF)*	In entirety
Permitting Authority Correspondence with Permittee Regarding Construction Programs *(20131029.Petition for Review - Part 1 - HI S000001.PDF)*	Pages: 7, 18, 26, 30-35, 72-77, 121-123, 138, and 154
(20131029.Petition for Review - Part 2 - HI S000001.PDF)	Pages: 13-19
(20131029.Petition for Review - Part 3 - HI S000001.pdf)	Pages: 1, 2, 5 and 39

Appendix B6: Permit-Specific Information – Highways Oahu District

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
(20131029.Petition for Review - Part 4 - HI S000001.pdf)	Pages 2-10
(20131029.Petition for Review - Part 5 - HI S000001.pdf)	Pages 8-12
(20130307 response to HDOT MS4 DRAFT PERMIT COMMENTS.pdf)	Pages 1-11
(20130927.DOT Comments - HI S000001 - 09072PRM.13b.pdf)	Pages 6-11
(20130628.DOT comments on the Public Notice - HI S000001.PDF)	Pages 2, 3, 4, 5, and 7
Plan Review Checklist *(Site Specific BMP Plan SWPPP Review Checklist (December 2013).pdf)*	In entirety
(Appx D.4.B Harbors Construction Site Design Review Checklist.pdf)	In entirety
Audit Findings *(HDOT Highways Audit 2004.pdf)*	Pages: 1, 2, 3, 7, 9, and 11
Program Records *(C.7 Oahu Construction BMP Training Sign-in Sheets-v1.pdf)*	In entirety
(C.6 Periodic Inspections for Encroachment Construction Project-v1.pdf)	In entirety
(20130822.Construction Site Runoff Control-Inspections and Enforcement of Contract Construction Projects-S000001.PDF)	Pages: 1, 4, 6, 7, and 9
(Central Oahu BMP Ph 2 Sep 14 16_DOH Submittal-v1.pdf)	
(C.5 Periodic Inspections for Contract Projects-v1.pdf)	
SWMPP *(SWMPP (April 2015).pdf)*	Figures 4-1 to 4-8 Tables 4-1 to 4-3 Chapter 4 - In entirety Chapter 8.3 Appendix D.1
Training and Education Materials (B.1_Public-Education-Plan_REV1_9.23.15.pdf)	Pages: 7, 23, 26-33, 72-75, 77, 126, 128, 138, 139, and 155
(Contractor Compliance Inspection Handout.pdf)	In entirety
(D.8_Permit-Holders-Guide-to-Understanding-Storm-Water.pdf)	In entirety
(DOT_HWYS_YouTube_2016Conference Videos.pdf)	In entirety
Website *(http://hidot.hawaii.gov/stormwater/storm-water-management/maui/swmp/)*	In entirety

3. On-Site Evaluation

4 December 2017

On 4 December 2017, the Audit Team held a kickoff meeting at Highways Oahu District's Kakoi office with Highways Oahu District staff and consultants. Photographs taken during the On-Site Evaluation can be found in Section 4 below.

Construction Project 6.1 Miscellaneous Permanent Best Management Practices, Phase 2A. Project Number HWY-O-01-15.

The Audit Team drove to the project and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Highways Oahu District staff and consultants as they conducted an inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

Construction Project 6.2 Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7. Project Number HWY-O-04-16

The Audit Team drove to the project and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Highways Oahu District staff and consultants as they conducted an inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

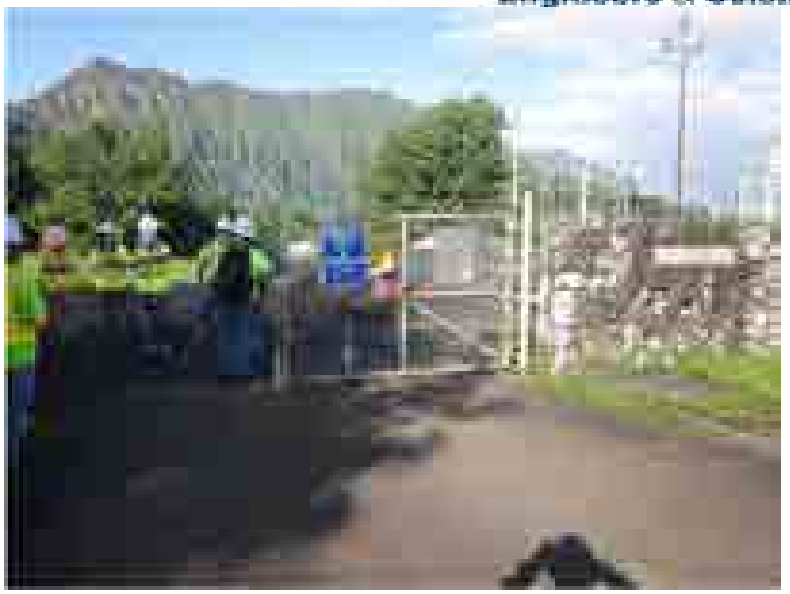
4. On-Site Evaluation Photos

Photographs are provided on the subsequent pages below.

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.1
Construction Site Entrance



Construction Site 6.1 Photo 6.1.2
Construction Site Entrance

Construction Site 6.1 Photo 6.1.3
Construction Site Entrance

Construction Site 6.2 Photo 6.1.4
Construction Site Entrance

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.5
Construction Ingress/Egress Mat

Construction Site 6.1 Photo 6.1.6
Construction Ingress/Egress Mat

Construction Site 6.1 Photo 6.1.7
Construction Ingress/Egress Mat

Construction Site 6.1 Photo 6.1.8
Construction Ingress/Egress Mat

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.9
Construction Staging Area

Construction Site 6.1 Photo 6.1.10
Construction Site Entrance

Construction Site 6.1 Photo 6.1.11
Construction Staging Area

Construction Site 6.1 Photo 6.1.12
Construction Staging Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.13
Construction Staging Area

Construction Site 6.1 Photo 6.1.14
Construction Staging Area

Construction Site 6.1 Photo 6.1.15
Construction Staging Area

Construction Site 6.1 Photo 6.1.16
Construction Staging Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.17
Construction Staging Area

Construction Site 6.1 Photo 6.1.18
Construction Staging Area

Construction Site 6.1 Photo 6.1.19
Construction Staging Area

Construction Site 6.1 Photo 6.1.20
Construction Staging Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.21
Construction Staging Area

Construction Site 6.1 Photo 6.1.22
Construction Staging Area

Construction Site 6.1 Photo 6.1.23
Construction Staging Area

Construction Site 6.1 Photo 6.1.24
Construction Staging Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.25
Construction Staging Area

Construction Site 6.1 Photo 6.1.26
Construction Staging Area

Construction Site 6.1 Photo 6.1.27
Construction Staging Area

Construction Site 6.1 Photo 6.1.28
Construction Staging Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.29
Construction Staging Area

Construction Site 6.1 Photo 6.1.30
Construction Staging Area

Construction Site 6.1 Photo 6.1.31
Construction Staging Area

Construction Site 6.1 Photo 6.1.32
Construction Ingress/Egress Mat

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.33
Construction Staging Area

Construction Site 6.1 Photo 6.1.34
Construction Ingress/Egress Mat

Construction Site 6.1 Photo 6.1.35
Construction Ingress/Egress Mat

Construction Site 6.1 Photo 6.1.36
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.37
Erosion Control Berms

Construction Site 6.1 Photo 6.1.38
Erosion Control Berms

Construction Site 6.1 Photo 6.1.39
Erosion Control Berms

Construction Site 6.1 Photo 6.1.40
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.41
Erosion Control Berms

Construction Site 6.1 Photo 6.1.42
Erosion Control Berms

Construction Site 6.1 Photo 6.1.43
Erosion Control Berms

Construction Site 6.1 Photo 6.1.44
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.45
Erosion Control Berms

Construction Site 6.1 Photo 6.1.46
Erosion Control Berms

Construction Site 6.1 Photo 6.1.47
Erosion Control Berms

Construction Site 6.1 Photo 6.1.48
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.49
Erosion Control Berms

Construction Site 6.1 Photo 6.1.50
Erosion Control Berms

Construction Site 6.1 Photo 6.1.51
Erosion Control Berms

Construction Site 6.1 Photo 6.1.52
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.53
Erosion Control Berms

Construction Site 6.1 Photo 6.1.54
Construction Material Stockpiles

Construction Site 6.1 Photo 6.1.55
Construction Material Stockpiles

Construction Site 6.1 Photo 6.1.56
Slope Stabilization

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.57
Slope Stabilization

Construction Site 6.1 Photo 6.1.58
Slope Stabilization

Construction Site 6.1 Photo 6.1.59
Slope Stabilization

Construction Site 6.1 Photo 6.1.60
Slope Stabilization

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.61
Slope Stabilization

Construction Site 6.1 Photo 6.1.62
Construction Material Stockpiles

Construction Site 6.1 Photo 6.1.63
Slope Stabilization

Construction Site 6.1 Photo 6.1.64
Slope Stabilization

Construction Site 6.1 Photo 6.1.65
Slope Stabilization

Construction Site 6.1 Photo 6.1.66
Slope Stabilization

Construction Site 6.1 Photo 6.1.67
Slope Stabilization

Construction Site 6.1 Photo 6.1.68
Equipment Laydown Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.69
Erosion Control Berms

Construction Site 6.1 Photo 6.1.70
Erosion Control Berms

Construction Site 6.1 Photo 6.1.71
Erosion Control Berms

Construction Site 6.1 Photo 6.1.72
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.73
Erosion Control Berms

Construction Site 6.1 Photo 6.1.74
Erosion Control Berms

Construction Site 6.1 Photo 6.1.75
Erosion Control Berms

Construction Site 6.1 Photo 6.1.76
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.77
Slope Stabilization

Construction Site 6.1 Photo 6.1.78
Slope Stabilization

Construction Site 6.1 Photo 6.1.79
Stabilize Slope: Exposed dirt and dead grass

Construction Site 6.1 Photo 6.1.80
Drain Inlet Protection: Sediment buildup around inlet

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.81
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.82
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.83
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.84
Drain Inlet Protection: Sediment buildup around inlet

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.85
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.86
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.87
Slope Stabilization

Construction Site 6.1 Photo 6.1.88
Slope Stabilization

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.89
Slope Stabilization

Construction Site 6.1 Photo 6.1.90
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.91
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.92
Drain Inlet Protection: Sediment buildup around inlet

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.93
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.94
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.95
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.96
Drain Inlet Protection: Sediment buildup around inlet

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.97
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.98
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.99
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.100
Slope Stabilization

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.101
Slope Stabilization

Construction Site 6.1 Photo 6.1.102
Grubbed Accessway

Construction Site 6.1 Photo 6.1.103
Erosion Control Berms: Sediment buildup along berm

Construction Site 6.1 Photo 6.1.104
Erosion Control Berms: Sediment buildup along berm

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.105
Site Inspection Debrief

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.1
North of Construction Staging Area

Construction Site 6.2 Photo 6.2.2
North of Construction Staging Area

Construction Site 6.2 Photo 6.2.3
North of Construction Staging Area

Construction Site 6.1 Photo 6.2.4
Drain Inlet Protection: North of Construction Staging Area

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.5
Drain Inlet Protection: North of Construction Staging Area

Construction Site 6.2 Photo 6.2.6
Construction Staging Area: Vehicle Storage Area

Construction Site 6.2 Photo 6.2.7
Construction Staging Area: Material Stockpile

Construction Site 6.2 Photo 6.2.8
Construction Staging Area: Vehicle Storage Area

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.9
Construction Staging Area: Vehicle Storage Area

Construction Site 6.2 Photo 6.2.10
Construction Staging Area: Vehicle Storage Area

Construction Site 6.2 Photo 6.2.11
Erosion Control Berms and ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.12
Erosion Control Berms and ProWattle Perimeter Control

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.13
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.14
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.15
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.16
ProWattle Perimeter Control

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.17
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.18
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.19
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.20
ProWattle Perimeter Control

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.21
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.22
Slope Grubbing and ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.23
Slope Grubbing

Construction Site 6.2 Photo 6.2.24
Slope Grubbing

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.25
Slope Grubbing

Construction Site 6.2 Photo 6.2.26
Slope Grubbing

Construction Site 6.2 Photo 6.2.27
Slope Grubbing and ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.28
Slope Grubbing and ProWattle Perimeter Control

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.29
Installing ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.30
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.31
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.32
Sediment buildup along ProWattle

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.33
Sediment buildup along ProWattle

Construction Site 6.2 Photo 6.2.34
Sediment buildup along ProWattle

Construction Site 6.2 Photo 6.2.35
Sediment buildup along ProWattle

Construction Site 6.2 Photo 6.2.36
Sediment buildup along ProWattle

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.37
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.38
Sediment buildup along ProWattle

Construction Site 6.2 Photo 6.2.39
Sediment buildup along ProWattle

Construction Site 6.2 Photo 6.2.40
Sediment buildup along ProWattle

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.41
Installing ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.42
Installing ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.43
Temporary Check Dam

Construction Site 6.2 Photo 6.2.44
Temporary Check Dam: Remove debris & needs reinforcement

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.45
Site North of Temporary Check Dams

Construction Site 6.2 Photo 6.2.46
Site North of Temporary Check Dams

Construction Site 6.2 Photo 6.2.47
Site North of Temporary Check Dams

Construction Site 6.2 Photo 6.2.48
Temporary Check Dam

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.49
Temporary Check Dam

Construction Site 6.2 Photo 6.2.50
Temporary Check Dam: Remove debris

Construction Site 6.2 Photo 6.2.51
Temporary Check Dam: Remove debris

Construction Site 6.2 Photo 6.2.52
Temporary Check Dam: Remove debris

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.53
Temporary Check Dam

Construction Site 6.2 Photo 6.2.54
Temporary Check Dam

Construction Site 6.2 Photo 6.2.55
Temporary Check Dam: Remove debris

Construction Site 6.2 Photo 6.2.56
Temporary Check Dam: Remove debris

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.57
Temporary Check Dam

Construction Site 6.2 Photo 6.2.58
Temporary Check Dam

Construction Site 6.2 Photo 6.2.59
Temporary Check Dam: Remove debris & needs reinforcement

Construction Site 6.2 Photo 6.2.60
Temporary Check Dam: Remove debris & needs reinforcement

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.61
Temporary Check Dam: Remove debris & needs reinforcement

Construction Site 6.2 Photo 6.2.62
South of Temporary Check Dams

Construction Site 6.2 Photo 6.2.63
South of Temporary Check Dams

Construction Site 6.2 Photo 6.2.64
South of Temporary Check Dams

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.65
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.66
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.67
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.68
Catch Basin Inlet Protection

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.69
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.70
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.71
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.72
Catch Basin Inlet Protection

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.73
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.74
Catch Basin Outfall

Construction Site 6.2 Photo 6.2.75
Catch Basin Outfall

Construction Site 6.2 Photo 6.2.76
Catch Basin Outfall

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.77
Site Inspection Debrief

Construction Site 6.2 Photo 6.2.78
Site Inspection Debrief

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix C

Revised Audit Work Plan, November 2016

State of Hawaii Department of Transportation
Office of Environmental Compliance

Revised Audit Work Plan

State Project No. OSC-15-01

November 2016

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B1 - B6 PEAR 1 - 6 Guiding Questions

- B1: PEAR #1 – Post-Construction / Permanent Best Management Practices
- B2: PEAR #2 – Construction Site Runoff Control
- B3: PEAR #3 – Public Outreach / Public Involvement
- B4: PEAR #4 – Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
- B5: PEAR #5 – Pollution Prevention / Good Housekeeping Program
- B6: PEAR #6 – Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

C1 - C6 PEAR 1 - 6 Schedule

- C1: PEAR #1 – Schedule for Post-Construction / Permanent Best Management Practices
- C2: PEAR #2 – Schedule for Construction Site Runoff Control
- C3: PEAR #3 – Schedule for Public Outreach / Public Involvement
- C4: PEAR #4 – Schedule for Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
- C5: PEAR #5 – Schedule for Pollution Prevention / Good Housekeeping Program
- C6: PEAR #6 – Schedule for Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

D1 – D3 Notices to EPA & DOH

- D1: Draft Notice of Potential Violation
- D2: Final Notice of Potential Violation
- D3: Notice of Corrective Action

List of Acronyms

ACR	Annual Compliance Report
AWPC	Audit Work Plan Commencement
BMP	best management practice
CD	Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC)
CFR	Code of Federal Regulations
DOH	Department of Health
EPA	United States Environmental Protection Agency
HAR	Hawaii Administrative Rules
HARP	Hazard Appraisal and Recognition Plan
HDOT	State of Hawaii Department of Transportation
MEP	maximum extent practicable
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
PEAR	Program Element Audit Report
PM	Project Manager
QA	quality assurance
QC	quality control
SWMPP	Storm Water Management Program Plan

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Section 1: Introduction, Purpose, and Goals

Under Paragraph 10.d of the Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC) entered on 5 November 2014 (CD) with the United States Environmental Protection Agency (EPA) and the State of Hawaii (State) Department of Health (DOH), the State of Hawaii Department of Transportation (HDOT) is required to perform compliance audits of Municipal Separate Storm Sewer System (MS4)[1] permits issued to HDOT's Airports, Highways, and Harbors Divisions (referred to herein as the singular "MS4 Permit Audit"). Specific requirements for the MS4 Permit Audit are defined in Appendix A of the CD and included in Appendix A of this document. The MS4 Permit Audit will be conducted in accordance with this Audit Work Plan (AWP) by Kennedy/Jenks Consultants (Kennedy/Jenks), the selected independent third-party audit firm.

This AWP was conditionally approved by EPA & DOH on 31 October 2016. As memorialized in the conditional approval letter, HDOT will begin the audit on 15 March 2017. This date is hereafter referred to as the AWP Commencement date (AWPC). This AWP includes project milestones with defined dates in some cases (e.g., "15 April 2017") while other dates may be specified relative to the AWPC (e.g., "30 days after AWPC"). All "days" in this AWP refer to calendar days as opposed to business days.

The defined purpose of the MS4 Permit Audit is to assess HDOT's current regulatory and administrative compliance with its MS4 permits, DOH National Pollutant Discharge Elimination System (NPDES) General Permit Coverage Authorizing Discharges of Storm Water and Certain Non-Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Hawaii Small MS4 General Permit), applicable Storm Water Management Program Plans (SWMPPs), and the CD.

The defined goals of the MS4 Permit Audit focus on meeting the requirements listed in Appendix A of the CD, including:

- Evaluating compliance with HDOT MS4 permits and the CD
- Identifying information gathered during the MS4 Permit Audit that may be used to promote information and technology transfer between HDOT Divisions
- Identifying Potential Violations (areas where the evaluation found the permittee not in compliance with a specific permit requirement or SWMPP commitment) and Deficiencies (items which, if not corrected, may be anticipated to lead to Potential Violations) in HDOT's stormwater programs and assisting with timely self-correction of identified Potential Violations and Deficiencies by HDOT.

[1] The MS4 refers to the conveyance system in addition to the jurisdiction(s) which own/operate the system.

In addition to meeting the CD requirements and EPA & DOH expectations, the overarching goal of the MS4 Permit Audit is to develop internal trust and collaboration within HDOT. The Audit Team will seek HDOT-wide opportunities for improvement rather than focusing on minor issues of non-compliance.

Reporting requirements of the MS4 Permit Audit are defined in Appendix A Section D.7. of the CD and include:

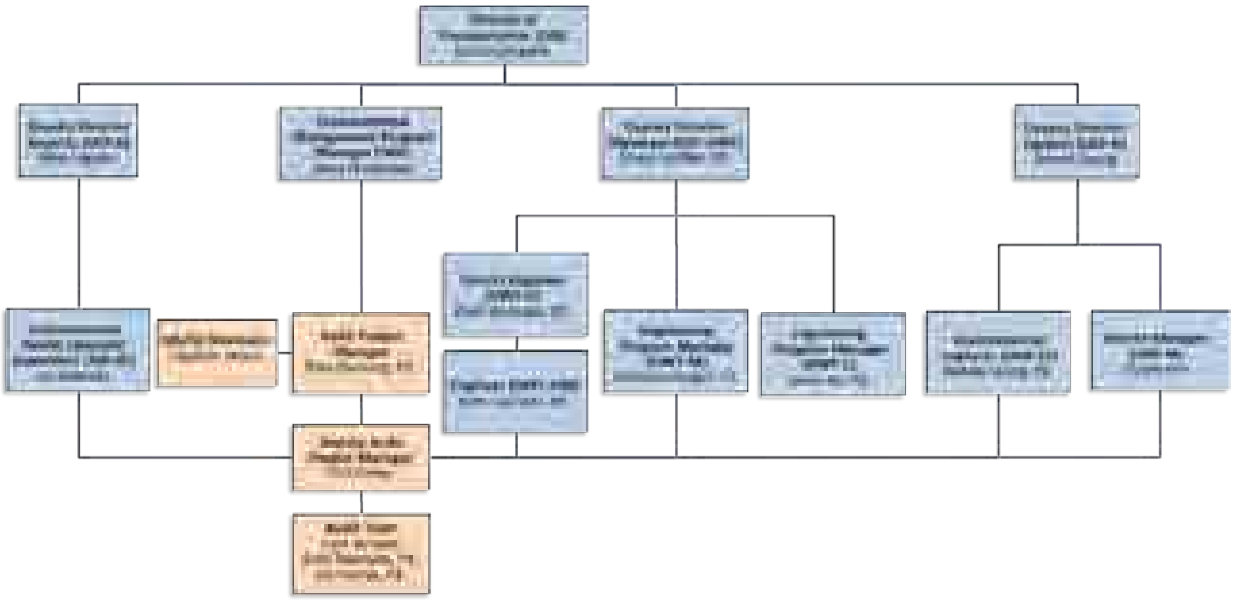
- A specific statement of the procedures followed, HDOT sites and activities visited, and all materials reviewed during the MS4 Permit Audit
- Retrospective analysis of activities that may be outmoded, ineffective, insufficient, or excessively burdensome, and providing recommendations to modify, streamline, or augment them in accordance with what has been learned during the MS4 Permit Audit, as appropriate.
- Identification of Potential Violations and Deficiencies and of MS4 permit conditions, applicable SWMPPs, the CD, and/or other applicable regulations, and providing recommendations for improvements as found to be appropriate
- Identification of best practices and opportunities for information/technology transfer to be applied across the three HDOT Divisions
- An analysis of the practices implemented for each HDOT Division's program elements and a determination as to whether identified best practices can be universally implement across all three Divisions. If best practices cannot be universally implemented, the report will clearly describe impediments identified.

In accordance with requirements defined in Appendix A of the CD, EPA's *MS4 Program Evaluation Guidance* (hereinafter EPA (2007) guidance) was consulted in the development of this AWP. The audit protocols included herein are intended to promote consistency among regulated facilities when conducting environmental audits and to validate that the MS4 Permit Audit is conducted in a thorough and comprehensive manner. Program evaluation worksheets (included in Appendix B) were developed to guide the Audit Team while performing the MS4 Permit Audit. Each worksheet addresses a separate program element, and includes key questions derived from the EPA (2007) guidance document recommended to be considered during an MS4 evaluation. While this AWP is based on the EPA (2007) guidance for auditing small MS4s, HDOT has adapted the guidance to focus some aspects of the audit process to reflect the unique nature of HDOT operations.

Section 2: Audit Team and HDOT Personnel

Figure 2-1 provides an organizational chart defining the Audit Team and HDOT staff that will be involved in the MS4 Permit Audit.

Figure 2-1 Organizational Chart



Additional information describing key MS4 Permit Audit personnel is provided below.

HDOT Project Manager – Anna Fernandez

In her role as Environmental Program Manager, Anna Fernandez reports directly to the HDOT Director. She serves as the HDOT Project Manager (PM) for this project. In this role, she administers and manages Kennedy/Jenks in performing the MS4 Permit Audit and their contact with HDOT leaders and stakeholders.

Deputy Director(s)

Deputy Directors report directly to the HDOT Director. They are responsible for facilitating the Audit Team's access to HDOT personnel and facilities within their respective Divisions as appropriate. The following Deputy Directors will be directly involved in the MS4 Permit Audit process:

Airports (DEP-A) – Ross Higashi
Highways (DEP-HWY) – Edwin Sniffen, P.E.
Harbors (DEP-H) – Darrell Young

MS4 Permit Coordinator(s)

MS4 Permit Coordinators are those HDOT personnel responsible for managing compliance with the MS4 permit for each Division, district, or designated MS4 permitted area. The following MS4 Permit Coordinators will be directly involved in the MS4 Permit Audit process:

Airports (AIR-EE) – Joy Masuda (Environmental Health Specialist Supervisor)
Oahu Highways (HWY-OW) – Kelly Lee Sato, P.E. (Engineer)
Maui Highways (HWY-M) – Ferdinand Cajigal, P.E. (Engineering Program Manager)
Oahu Harbors (HAR-EE) – Randal Leong, P.E. (Environmental Engineer)
Maui Harbors (HAR-M) – Duane Kim (District Manager)

Additional Key MS4 Permit Audit Personnel

The following key staff will also be consulted throughout the MS4 Permit Audit Process:

District Engineer (HWY-O) - Pratt Kinimaka, P.E.
Engineering Program Manager (HWY-C) - Jamie Ho, P.E.

Audit Project Manager – Ross W. Dunning, P.E. / Principal (Kennedy/Jenks)

Ross is a Principal of Kennedy/Jenks and leads their companywide stormwater practice. He has assisted many Western U.S. Port authorities for almost 20 years with development of strategies and stormwater management plans to address Clean Water Act and NPDES regulations. He is Kennedy/Jenks' point of contact for the HDOT PM, and manages the Audit Team to verify that MS4 Permit Audit procedures and reports meet CD requirements and are on schedule. The Audit PM is responsible for updating this Audit Work Plan (with the approval of the HDOT PM), producing schedules, preparing audit reports, and maintaining audit records.

Lead Quality Assurance/Quality Control (QA/QC) Reviewer: Heather Wood (Kennedy/Jenks)

Heather is the former Director of Sustainability for the Port of Virginia, responsible for development of their environmental programs and permit compliance (including NPDES). Heather is also the former Chair of the American Association of Port Authorities Environmental Committee. She is Kennedy/Jenks' Ports and Harbors Sector Leader. In her role as the Lead QA/QC Reviewer, she will direct the review of MS4 Permit Audit work products, including draft and final audit reports, by qualified Kennedy/Jenks staff.

Deputy Audit Project Manager – Phil Potter (Kennedy/Jenks)

Phil is based in Kennedy/Jenks' Honolulu office and leads the firm's stormwater practice in Hawaii. For over 8 years, he has assisted municipal clients including the HDOT Highways Oahu District and the City and County of Honolulu with development and implementation of their NPDES compliance programs. In his role as the Deputy Audit PM, Phil is responsible for assisting the Audit PM in the execution of the Audit Work Plan and will directly coordinate with the HDOT MS4 Permit Coordinators and other stakeholders.

Auditors – Cale Yamada; Brad Takenaka, P.E.; Jon Honda P.E. (Kennedy/Jenks)

Cale, Brad, and Jon are experienced stormwater professionals in Kennedy/Jenks' Honolulu office. Among their many stormwater projects, they currently assist the City and County of Honolulu with ongoing development and implementation of its municipal stormwater program including, but not limited to, providing periodic MS4 program compliance inspections for hundreds of City and County industrial facilities throughout the island of Oahu.

Auditors are responsible for performing inspections of HDOT facilities and documentation, and performing interviews with HDOT employees responsible for MS4 program implementation and management in order to assess compliance with applicable MS4 program and CD requirements. Auditors are also responsible for coordinating with the Audit PM and Deputy Audit PM regarding any Potential Violations and Deficiencies identified. Hereinafter, the "Audit Team" refers to the Kennedy/Jenks' staff introduced above.

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Section 3: Audit Notes and Guidelines

This Section addresses various topics intended to guide the Audit Team in completing the MS4 Permit Audit in a safe and efficient manner.

3.1 Health, Safety, and Site Access Considerations

Prior to initiating onsite evaluations (see Section 5.2), the Audit PM will lead the Audit Team in developing a Hazard Appraisal and Recognition Plan (HARP), following Kennedy/Jenks' standard safety program. The HARP describes how to identify and analyze safety risks associated with field activities, operations, and facilities; approaches for mitigating identified risks; and processes for documenting and reporting accidents, near misses, and potentially unsafe conditions which may be encountered in the field. The HARP is a "living document" which will be updated as appropriate throughout the term of the MS4 Permit Audit. The Audit Team will wear appropriate personal protective equipment (hard hat, safety vest, safety shoes, protective eyewear, and hearing protection as appropriate) while performing the onsite evaluations.

Harbors Facilities

At this time, no special security clearances or requirements are defined to be necessary at Harbors facilities and/or project sites, as long as the Audit Team is escorted by personnel with valid Transportation Worker Identification Credentials (TWIC) and documentation of Maritime Security (MARSEC) Facility Security Awareness training certification. Active loading or unloading of cargo may necessitate additional safety requirements at certain pier locations.

Airports Facilities

At this time, Airports Division facilities to be evaluated are anticipated to be outside secured air operations areas; therefore, no special requirements or clearances are defined to be necessary. Adequate notice will be provided to the Airports Division MS4 Permit Coordinator to arrange security escort as found to be necessary.

Highways Facilities

At this time, there are no defined security restrictions to access Oahu District or Maui District Highway facilities as the Audit Team will be escorted by HDOT personnel at all times.

3.2 Quality Control Procedures

The Audit PM is responsible for ensuring that Kennedy/Jenks' effort and deliverables meet their company's professional mandate to consistently perform work in a technically correct manner, meeting the standard of care for their profession. The standard of care is defined to represent the watchfulness, attention, caution, prudence, and skill that other qualified professionals in the same or similar circumstances would exercise.

Kennedy/Jenks' quality assurance (QA) program includes processes and procedures developed over their near century-old history to achieve and maintain a rigorous level of quality, planning,

application, and verification. Its quality control (QC) program implements this process and QC reviewers will continuously monitor their effort and work products on this project to meet contract and CD requirements, Kennedy/Jenks' QA/QC standards, and HDOT's expectations.

3.3 Photographs

Digital photographs collected and archived during the course of the MS4 Permit Audit will be managed in accordance with EPA's *Digital Camera Guidance for EPA Civil Inspections and Investigations* (2006). Photographs taken will be organized into photograph logs with each photograph numbered with the date and time included. A brief photograph caption will identify the facility or site name, describe what is depicted in the photograph, the location, direction, and other pertinent data (e.g., the location within the facility or site) as appropriate.

3.4 "Maximum Extent Practicable" Concept

Unlike NPDES industrial wastewater permits which typically contain specific end-of-pipe effluent limits based on water quality standards or available treatment technology, HDOT's MS4 permits include programmatic requirements involving the implementation of BMPs in order to reduce pollutants discharged to the "maximum extent practicable" (MEP). In addition, HDOT's permits allow flexibility in the types of BMPs and activities implemented to meet permit requirements. There is also added complexity in evaluating several similar permits applicable to the very different operations conducted at HDOT Highways, Airports, and Harbors facilities. This makes it challenging to assess the true effectiveness of HDOT's several MS4 stormwater programs and how they may be integrated.

Per EPA (2007) guidance, HDOT is considered a non-traditional MS4 permittee, and as such, the evaluation of its MS4 programs will be specific to their particular circumstances and applicable permit requirements. Some HDOT MS4 permits contain broad requirements that outline the basic SWMPP components the permittee is required to implement, giving the permittee the flexibility to develop a program to meet these broad requirements. Other MS4 permits are more prescriptive and specify in detail the minimum activities and best management practices (BMPs) for each program element.

Given these inherent operational differences and challenges, each HDOT permittee has traditionally applied different approaches to comply with specific permit requirements based on MS4-specific traits or issues. For example, EPA regulations require permittees to develop "procedures for site inspection and enforcement" for addressing construction activities. Few MS4 permits specify how the permittee should inventory their active construction projects or track enforcement activities. A permittee with only a few construction projects a year may be able to use a paper system to inventory and track construction projects. A permittee with hundreds or thousands of construction projects would likely need a database or similar electronic tracking system to ensure it was implementing the program to a level considered to meet MEP.

It is relatively straightforward to assess whether HDOT has developed certain programs and conducted various activities that are called for and within the timeframes specified in each of the permits under consideration, as well as activities or programs specified under SWMPPs or other documents prepared by HDOT. The challenge for the Audit Team and HDOT is to assess

whether the programs and activities implemented have or will constitute MEP. EPA (2007) guidance will assist with this determination, but is not definitive. Determination requires application of the Audit Team's best professional judgment.

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Section 4: Audit Structure and Schedule

For each of the six program elements required to be reviewed by the CD, Kennedy/Jenks will review the six permitted MS4 programs concurrently, developing six Program Element Audit Reports (Final PEARs) that represent the culmination of the auditing efforts across the three HDOT Divisions.

Appendix A of the CD defines various project milestones and deadlines, described for ease of reference below:

Table 4-1 CD Appendix A Deadlines

Program Element	Evaluation Complete: [a]	Draft PEAR to HDOT: [d]	HDOT Review of Draft PEAR: [e]	Final PEAR to HDOT: [f]
PEAR #1: Post-Construction Runoff Control / Permanent Best Management Practices	3 Months (90 Days) [b] After AWPC[c] 13 June 2017	135 Days After AWPC 28 July 2017	165 Days After AWPC 27 August 2017	210 Days After AWPC 11 October 2017
PEAR #2: Construction Site Runoff Control	9 Months (270 Days) After AWPC 10 December 2017	315 Days After AWPC 24 January 2017	345 Days After AWPC 23 February 2017	390 Days After AWPC 9 April 2018
PEAR #3: Public Outreach / Public Involvement	15 Months (450 Days) After AWPC 8 June 2018	495 Days After AWPC 23 July 2018	525 Days After AWPC 22 August 2018	570 Days After AWPC 8 October 2018
PEAR #4: Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Programs	21 Months (630 Days) After AWPC 5 December 2018	675 Days After AWPC 19 January 2019	705 Days After AWPC 18 February 2019	750 Days After AWPC 4 April 2019
PEAR #5: Pollution Prevention / Good Housekeeping	27 Months (810 Days) After AWPC 3 June 2019	855 Days After AWPC 18 July 2019	885 Days After AWPC 17 August 2019	930 Days After AWPC 1 October 2019
PEAR #6: Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability	33 Months (990 Days) After AWPC 30 November 2019	1035 Days After AWPC 14 January 2020	1065 Days After AWPC 13 February 2019	1110 Days After AWPC 29 March 2020

Notes:

(a) "Evaluation" as referenced in CD Appendix A Section B.5. is defined in this AWP to represent the conclusion of the Post-Onsite Evaluation Review Period (See Section 5.2.3) for PEARs #1, 2, 4, and 5. For PEARs #3 and 6, no onsite evaluation is required and therefore "evaluation" is defined to represent the date of conclusion of the Records Review period. Please refer to Appendix C for more detail.

(b) “Months” are based on 30-day months in this AWP.
(c) AWPC = Audit Work Plan Commencement (15 March 2017)
(d) Pursuant to CD Appendix A Section D.2., Kennedy/Jenks will complete a draft audit report and transmit it to HDOT within 45 days of completing an audit of a program element (defined in this AWP as the conclusion of “evaluation”, as discussed in Note (a)).
(e) Pursuant to CD Appendix A Section D.3., HDOT will review the draft PEAR to correct any factual inaccuracies within 30 days of receipt.
(f) Pursuant to CD Appendix A Section D.4., Kennedy/Jenks will complete a final PEAR within 120 days of completing an audit of a program element (defined in this AWP as the conclusion of “evaluation”, as discussed in Note (a)).

Section 5: Program Element Audits

Each program element audit will follow a similar schedule and structure, discussed generally in this section. The Program Element Audits will occur over a 37-month period depicted graphically below (Figure 5-1):

Figure 5-1 Program Element Audit Schedule

Appendices B1 - B6 list the basic information anticipated to be reviewed for each MS4 program element to be audited. The Audit Team will utilize worksheets provided in Appendices B1 - B6 to collect and track information for each MS4 permit and element. References to Appendices C1 - C6 are also included, defining specific schedules for each of the six PEARs. Each Program Element Audit will include three phases (Pre-Audit, Onsite Evaluation, and Reporting), detailed in the following sections.

5.1 Pre-Audit

This Section describes the first phase of each Program Element Audit.

5.1.1 Notice of Audit

The Audit Team will schedule events, confirm appropriate participants, and begin planning the upcoming program element audit with the HDOT PM prior to initiating each Program Element Audit (Appendices C1 - C6 Item 1). The HDOT PM will coordinate with the MS4 Permit Coordinators to provide the following for each of the six MS4 permits:

- Facility or Division-specific SWMPPs
- Recent Annual Reports
- Documentation of required training, inspection reports, legal enforcement correspondence, if any, etc.
- Relevant memoranda of understanding with adjacent of contributing agencies, municipalities, etc.
- Organizational charts specifically listing HDOT staff with MS4 permit authority and responsibility.

The HDOT PM will coordinate with the MS4 Permit Coordinators to identify individuals and stakeholders that should be engaged during the MS4 Permit Audit.

5.1.2 Records Request

The Audit Team will review those sections of the NPDES permits, SWMPPs, guidance documents, the CD, etc. pertinent to the each individual audit element. Based on this review, the Audit Team will develop a records request and submit it to the HDOT PM (Appendices C1 - C6 Item 2). Where documentation is required (completed forms, logs, sign-in sheets, etc.), the Audit Team will request a subset of relevant records for verification. Electronic records are preferred, but physical copies of hard copy records are also acceptable. The HDOT PM will work with the MS4 Permit Coordinators to acquire and provide requested records to the Audit Team (Appendices C1 - C6 Item 3).

5.1.3 Records Review

The Audit Team will compare the program element requirements and commitments identified in the NPDES permits, SWMPPs, CD, annual reports, etc. and the records obtained in the record review (Appendices C1 - C6 Item 4). This review will be informed to the extent appropriate by the interview questionnaire provided in Appendices B1 - B6. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators may be conducted during this period.

5.2 Onsite Evaluation

This Section describes the second phase of each Program Element Audit.

5.2.1 Pre-Onsite Evaluation Conference Call

The Audit Team and HDOT PM will contact each MS4 Permit Coordinator to confirm schedules, address questions and security concerns, confirm personnel safety equipment needed, and organize training and orientation briefings that may be required (Appendices C1 - C6 Item 5).

5.2.2 Onsite Evaluation

For work planning purposes, it is assumed that onsite evaluations for each Program Element will be conducted over the course of five (5) days (except for PEAR #4, which requires an extra day). Detailed activity descriptions and schedules are included in Appendices C1 - C6 (Item 6). It should be noted that following EPA (2007) guidance, PEAR #3 and PEAR #6 do not require onsite evaluations[2]. The onsite evaluations for each Program Element are tentatively scheduled during the following time periods (Table 5-1):

[2] Although no on-site evaluation is required for PEAR #3 (Public Outreach / Public Involvement Program), the Audit Team will endeavor to identify and attend events such as Harbors' tenant outreach in order to gain a well-rounded understanding of this program.

Table 5-1 Tentative On-Site Evaluation Dates

PEAR	On-Site Evaluation
PEAR #1: Post-Construction / Permanent Best Management Practices	Tuesday 30 May 2017 to Monday 5 June 2017
PEAR #2: Construction Site Runoff Control	Monday 27 November 2017 to Friday 1 December 2017
PEAR #3: Public Outreach / Public Involvement Program	[none required]
PEAR #4: Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program	Monday 19 November 2018 to Wednesday 28 November 2018
PEAR #5: Pollution Prevention / Good Housekeeping Program	Monday 20 May 2019 to Friday 24 May 2019
PEAR #6: Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability	[none required]

5.2.3 Post-Onsite Evaluation Review Period

Following the Onsite Evaluations, the Audit Team will review the findings of the Pre-Audits and Onsite Evaluations and address final evaluation-related tasks that may have been noted (Appendices C1 - C6 Item 7). This review period completes the evaluation of the program element, as referenced in CD Appendix A Section B.5.

5.3 Reporting

This Section describes the third phase of each Program Element Audit.

5.3.1 Draft PEARs

Pursuant to the CD, the Audit Team will prepare draft PEARs documenting the procedures followed, sites and activities visited, materials reviewed, and a summary of major findings from the program element audits of the six HDOT NPDES permits (Appendices C1 - C6 Item 8). The PEARs will be structured so that they may be easily incorporated into each Division's Annual Compliance Report (ACR) (see Section 7).

The Audit Team will endeavor to draw defensible conclusions based on the NPDES permit requirements and conditions, the SWMPP developed to meet the permit goals, measurable achievement of those goals, and the Audit Team's best professional judgment interpretation of compliance with the NPDES regulations.

EPA (2007) guidance describes that, in some cases, it may not be possible to assess compliance with a program component because of the limitations of the MS4 program evaluation process. If this is found to be the case, the draft PEAR for the program element will state that this is the case and provide as much supporting information as possible. Similarly, if there were no findings of note for a particular SWMPP or NPDES component, this fact will be stated in the PEAR.

If the Audit Team identifies what may be a Potential Violation or Deficiency at any point during the Pre-Audit, Onsite Evaluation, or Reporting periods, actions will be taken in accordance with the decision tree defined in Section 6 for the Audit Team, HDOT PM, and MS4 Permit Coordinators to follow. The draft PEAR will describe the two findings as follows:

- Findings reviewed per Section 6 and found to be Potential Violations, reported to DOH/EPA and addressed via Corrective Actions.
- Findings found to be Deficiencies, for which recommendations for improvement will be included.

Each draft PEAR will identify BMPs and opportunities for information/technology transfer that may be considered for application across the three HDOT Divisions. The draft PEARs will also analyze the practices implemented for each HDOT Division's program elements and assess whether identified best practices can be universally implemented across the three HDOT Divisions. If best practices cannot be universally implemented, the draft PEAR report will describe identified impediments (such as legal barriers). The draft PEAR will also identify positive program elements considered to exceed the NPDES requirements and SWMPP. Finally, the draft PEAR will include a retrospective analysis of activities that are considered to be potentially outmoded, ineffective, insufficient, or excessively burdensome. Recommendations to modify, streamline, or expand them in accordance with what has been learned will be listed.

The Audit Team will complete the draft PEAR within 45 days of the completion of the evaluation for each program element. The Audit Team will provide five (5) copies of the draft PEAR and one electronic file copy in Word (Version 2007 or earlier) to the HDOT PM.

5.3.2 HDOT Review

Upon receipt, the HDOT PM will distribute copies of the draft PEARs to the appropriate MS4 Permit Coordinators, who will be responsible for reviewing the reports and distributing the reports to key personnel for their review. The MS4 Permit Coordinators will submit to the HDOT PM a consolidated written request for clarification and corrections to the draft PEAR for their respective permit as found to be necessary (Appendices C1 - C6 Item 9). The HDOT PM will then submit the consolidated requests and corrections to the Audit PM (Appendices C1 - C6 Item 10).

5.3.3 Final Audit Report

Upon receipt of the consolidated requests and corrections, the Audit Team will make appropriate changes to the draft PEARs and submit the final PEARs (Appendices C1 - C6 Item 11).

For PEARs #1 - 5, the Final PEAR is scheduled to be submitted approximately 25 days in advance of the CD deadline. This is intended to afford additional time for the Divisions in each subsequent Program Element Audit. The CD is structured such that, if followed strictly, only 60 calendar days are afforded for Steps 1 to 7 of PEARs #2 - 6. For example, Final PEAR #1 is due at 210 days following AWPC and the evaluation of PEAR #2 is due at 270 days following AWPC. By reducing the time it takes Kennedy/Jenks to write the Final PEAR, an additional 25 days are afforded to the Divisions to fulfill the records request for the subsequent audit (Appendices C2 - C6 Item 3).

The Audit Team will provide five (5) copies of the final PEARs and one electronic file copy in Word (Version 2007 or earlier) to the HDOT PM.

5.3.4 Post-Audit Report Review

The HDOT PM and Audit PM will meet after the submission of each PEAR to discuss QC procedures and potential improvements to be made prior to the subsequent PEAR.

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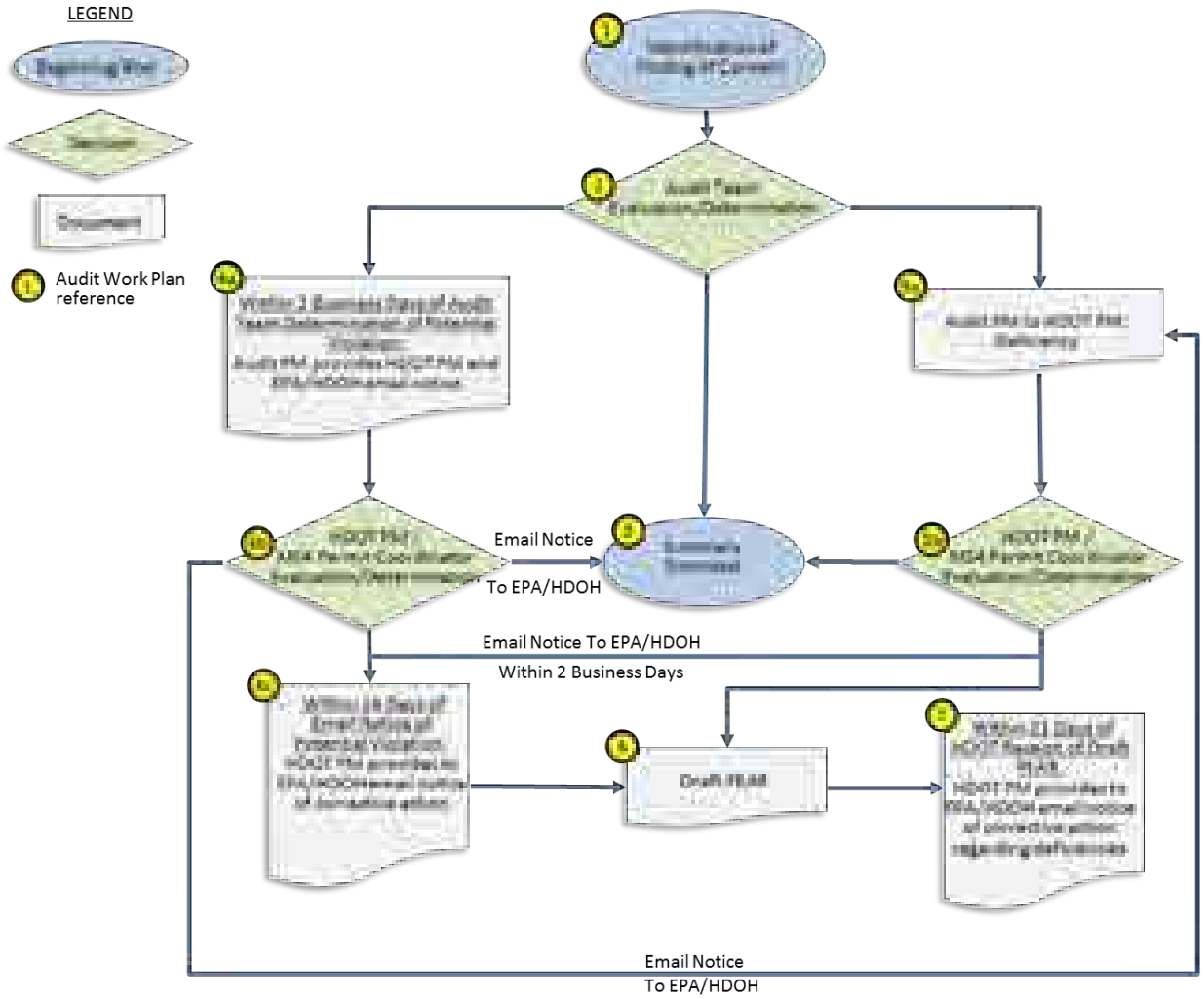
Section 6: Potential Violations and Deficiencies

If at any point during the Pre-Audit, Onsite Evaluation or Reporting Periods the Audit Team identifies what may represent a Potential Violation or Deficiency (hereinafter "Finding of Concern"), the Audit Team, HDOT PM, and MS4 Permit Coordinators will follow the decision tree shown on Figure 6-1.

Figure 6-1 Potential Violation and Deficiency Decision Tree



1 6.1 Identification of Finding of Concern

2 6.2 Audit Team Consultation

Upon identification of a Finding of Concern, the Audit Team will consult internally to assess whether the Finding of Concern may represent a Potential Violation, a Deficiency, or whether it summarily merits dismissal.

Potential Violation - The Audit Team will categorize the Finding of Concern as a Potential Violation if it meets the EPA (2007) guidance definition of an "area where the evaluation found the permittee not in compliance with a specific permit requirement or SWMPP commitment". These occurrences would follow the procedures listed in Section 6.3.

Deficiency – The Audit Team will categorize the Finding of Concern as a Deficiency if it meets the Consent Decree definition of an "item which, if not corrected, will lead to potential violations"[1]. These occurrences would follow the procedures listed in Section 6.4.

3 Summary Dismissal – The Audit Team will dismiss the Finding of Concern if it does not meet either the definition of a Potential Violation or a Deficiency. No further action will be required.

[1] EPA (2007) guidance further elaborates that deficiencies are areas of concern impeding effective program implementation. They are typically areas where the permit or SWMPP does not describe specifically how the permittee should conduct an activity, yet the evaluator believes the permittee may consider altering how they conduct the activity to meet water quality goals. Deficiencies can also be areas where future permit violations could result if the permittee continues on its present path. The Audit Team will look for opportunities to enhance program elements (e.g. recommending that MS4 Coordinators perform required annual reviews earlier in the year, thereby allowing time for self-correction).

6.3 Potential Violation Decision Tree

Notification: Audit PM to HDOT PM and EPA & DOH

If the Finding of Concern is categorized by the Audit Team as a Potential Violation, the Audit PM will notify the HDOT PM and EPA & DOH via email[1] within 2 business days of making the determination using the form presented in Appendix D1. Additionally, the HDOT PM will be notified via telephone. These notifications will include the following information:

1. Specific details of the Potential Violation
2. Related photographs, if any
3. Applicable regulatory references [i.e., NPDES permit, SWMPP, Hawaii Administrative Rules (HAR), or Code of Federal Regulations (CFR) references, as applicable].

Evaluation/Determination

The HDOT PM will consult with the appropriate MS4 Permit Coordinator to further investigate the factual accuracy of the Potential Violation determination. Based on that consultation, the Potential Violation may be summarily dismissed (if found to be factually inaccurate) or re-categorized as a Deficiency (if incorrectly categorized as a Potential Violation). Both of these scenarios would be accompanied by email notification from the HDOT PM to EPA & DOH using the form presented in Appendix D2. The time required for this consultation is included in the 14-day timeline described in Item 4c, below.

Determination of Potential Violation

If the Finding of Concern is confirmed to be a Potential Violation, the HDOT PM will then work with the appropriate MS4 Permit Coordinator to assess suitable corrective actions.

Unless otherwise agreed upon with EPA & DOH, HDOT will correct the Potential Violation within 14 days of initial Audit Team email notification to EPA & DOH (see Item 4a above). Email notification of the Corrective Action will be provided to EPA & DOH by the HDOT PM using the forms presented in Appendix D2 and Appendix D3. The Consent Decree allows HDOT the option to request an extension to this reporting deadline. In order for EPA & DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA & DOH.

[1] Per EPA & DOH request, Connor Adams (EPA) and Matthew Kurano (DOH) will be copied on all email notifications to EPA & DOH.

6.4 Deficiency Decision Tree

5a **Notification: Audit PM to HDOT PM**

If a Finding of Concern is categorized as a Deficiency, the Audit PM will notify the HDOT PM via telephone and email and include the following information:

1. Specific details of the Deficiency
2. Related photographs, if any
3. Applicable regulatory references (i.e., NPDES permit, SWMPP, HAR, or CFR references, as applicable).

5b **Evaluation/Determination**

The HDOT PM will consult with the appropriate MS4 Permit Coordinator to further investigate the factual accuracy of the Deficiency determination. Based on that consultation, the Deficiency may be summarily dismissed (if found to be factually inaccurate) or re-categorized as a Potential Violation (if incorrectly categorized as a Deficiency). The latter scenario will be accompanied by an email notification to EPA & DOH within 2 business days of making the determination using the form presented in Appendix D2.

6 **Deficiency**

If the finding is confirmed to be a Deficiency, this finding (along with confirmed Potential Violations) will be documented in the appropriate draft PEAR. The HDOT PM will work with the appropriate MS4 Permit Coordinator to assess the appropriate corrective actions.

7 Unless otherwise agreed upon with EPA & DOH, HDOT will correct Deficiencies within 21 days of receiving the draft PEAR (Appendices C1 - C6 Item 8). Email notification of the Corrective Action will be provided to EPA & DOH by the HDOT PM using the form included in Appendix D3. The CD allows HDOT the option to request an extension to this reporting deadline. In order for EPA & DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA & DOH.

Section 7: Annual Compliance Report

Due to the differences in Division operations, not all portions of each PEAR will be applicable to all MS4 permittees. As such, the PEARs will be structured so that they may be easily incorporated into each Division's Annual Compliance Report (ACR). The HDOT PM will work with each permittee to ensure that the appropriate PEAR content is included in each individual ACR. Each ACR will include a detailed summary of actions taken as a result of the audit reports and dates at which corrective actions, if warranted, were taken.

Additionally, pursuant to CD Appendix A Section D.5., the HDOT PM will submit each original draft and final PEAR to EPA & DOH at the same time that ACRs are submitted. Within the draft and final PEAR, an authorized HDOT official will certify that, to the best of the official's knowledge and information, the MS4 Permit Audit was conducted in accordance with this AWP. If items have not been corrected, HDOT will provide a schedule for implementing corrective measures.

References

United States Environmental Protection Agency. 2005. Small SM4 Stormwater Program Overview. December. Accessed online at <https://www3.epa.gov/npdes/pubs/fact2-0.pdf>.

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Appendix A

Consent Decree Sections Pertaining to Audit
(10.d Page and Appendix A)

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APPENDIX A

ENVIRONMENTAL COMPLIANCE AUDITS

A. General Provisions

1. This Appendix provides details of the NPDES MS4 compliance audits required by Paragraph 10.d of the Consent Decree. The audits shall include evaluation of common stormwater program elements at each of HDOT's three divisions (Airports, Highways and Harbors), as stated in Paragraph A.3 below, throughout the state on a per element schedule. The audits shall be completed to fulfill the following goals:
    a. Determine compliance with the federal regulations and state MS4 permits and regulations and this Consent Decree (see Paragraph A.2, below);
    b. Ensure information gathered during the audits is used to promote information and technology transfer between divisions; and
    c. Identify deficiencies and potential violations that are discovered by the third party auditor and allow for timely self-correction of the deficiencies and potential violations by HDOT.
2. The audits shall be designed to assess current regulatory and administrative compliance with the following items throughout each of HDOT's divisions:
    a. The Hawaii NPDES General Permit Authorizing Discharges of Storm Water and Certain Non-Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Hawaii Small MS4 General Permit), Hawaii Administrative Rules, chapter 11-55, Appendix K;
    b. NPDES permit, Permit No. HI S000001, MS4 Permit for the HDOT-Highways, Oahu District;
    c. NPDES Permit, Permit No. HIS000005, MS4 Permit for the HDOT-Airports, Honolulu International Airport;
    d. Applicable Storm Water Management Plans (SWMPs); and
    e. This Consent Decree.
    f. Future NPDES MS4 permits and SWMPs issued to HDOT. This obligation shall not delay or prevent termination of the Consent Decree.
3. The audits shall include, but not be limited to, an evaluation of the following MS4 Program Elements as they relate to compliance at each of HDOT's three divisions:
    a. Public Education/Outreach and Participation/Involvement
    b. Illicit Discharge Detection and Elimination (including commercial/tenant oversight programs)
    c. Construction Site Runoff Control
    d. Post-Construction Runoff Control/ Permanent BMPs
    e. Pollution Prevention/ Good Housekeeping
    f. An analysis of how Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability impact MS4 compliance
4. HDOT shall audit Program Elements for the Harbors, Airports and Highways Divisions in accordance with the schedule defined in the Work Plan described in Paragraph B.1, below.

5. The audits shall be conducted by a qualified third party environmental consulting firm retained by HDOT and selected by a committee consisting of representatives of the HDOH and HDOT. The selection committee shall choose an audit firm which is experienced with environmental auditing and the permits and regulations described in Paragraph A.2, above.
6. The requirements of this Appendix related to the consulting firm's qualifications, authority to conduct the audits, and production of the HDOT Audit Reports (Audit Reports) shall be incorporated in any contract relating to the audits entered into by HDOT and the selected consulting firm to the extent allowed by State Procurement Code.
7. Any violations by HDOT discovered though the execution of the Environmental Compliance Audit detailed in this Appendix are neither "voluntarily discovered" within the terms of EPA's revised *Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations Policy* (Audit Policy) nor voluntarily disclosed to EPA under EPA penalty policies. Accordingly, any such violations are ineligible for penalty mitigation or other favorable treatment under the Audit Policy.
8. HDOT agrees not to attempt to use any state audit and/or privilege laws to restrict EPA's or HDOH's ability to review the Audit Reports at HDOT facilities to determine if the audits have been properly completed and HDOT has corrected any uncorrected non-compliance, potential violation, or deficiency as per its certification (see Paragraph F below). Also, HDOT agrees not to attempt to use any state audit and/or privilege laws to restrict EPA's or HDOH's ability to obtain, review and/or use the Audit Reports in any action to enforce the audit provisions of the Consent Decree. Neither information contained in the Audit Reports, nor underlying information upon which the Audit Reports relied, that indicates regulatory violations at any HDOT facility, shall be claimed as confidential business information by HDOT or its consulting firm.

B. Procurement of Services/Audit Work Plan

1. HDOT shall advertise a Request for Qualifications from third party audit firms to conduct the audits. Advertisement for the Request for Qualifications shall not exceed forty-five (45) days.
2. Within thirty (30) days of the end of the Request for Qualifications period, the HDOT and HDOH selection committee shall conduct the professional services selection of an audit firm and provide the recommendation to the Director.
3. Within fifteen (15) days of the selection committee recommendation to the Director of Transportation, or another length of time agreed to by EPA and HDOH, HDOT shall notify the potential audit firm with a letter of selection, pending negotiation of fees.
4. Within thirty (30) days or another length of time agreed to by EPA and HDOH, HDOT shall, as approved by the Director of Transportation, award the selected audit firm and proceed to process the contract for the audit work. Within seven (7) days of each milestone, HDOT shall notify EPA and HDOH by email that the following milestones were completed:
    a. Request for Qualifications advertisement;
    b. Awarding of contract between HDOT and the selected audit firm;
    c. Notice to Proceed on the Audit.
5. On or before September 16, 2016, HDOT shall submit a draft audit work plan (Audit Work Plan) to EPA and HDOH for review and approval. In developing the Audit Work Plan, HDOT shall consult EPA's guidance on auditing small MS4s:

http://www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf The Audit Work Plan shall include the following audit schedule and describe each task necessary to accomplish the Audit Scope with targeted time frames for the consulting firm to complete:

a. 3 months after the Audit Work Plan is approved: Evaluation of Post Construction/Permanent BMP programs for all three HDOT divisions;
b. 9 months after the Audit Work Plan is approved: Evaluation of Construction Site Runoff Control programs for all three HDOT divisions;
c. 15 months after the Audit Work Plan is approved: Evaluation of Public Outreach/Public Involvement for all three HDOT divisions;
d. 21 months after the Audit Work Plan is approved: Evaluation of Illicit Discharge Detection and Elimination, Industrial Commercial Activities/Tenant Programs for all three HDOT Divisions;
e. 27 months after the Audit Work Plan is approved: Evaluation of Pollution Prevention/Good Housekeeping for all three HDOT Divisions;
f. 33 months after the Audit Work Plan is approved: Evaluation of Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability for all three HDOT divisions.

6. The Audit Work Plan shall include, but is not limited to: the minimum documents to be reviewed (e.g. SWMPs, training records, inspection reports, etc.), minimum number of field verifications, as necessary, for each program element evaluated, deliverables (notices of potential violations, draft and final audit reports), and reporting deadlines.
7. EPA, after consultation with HDOH, may reject the draft Audit Work Plan in whole or in part. If EPA rejects the Audit Work Plan or any portion of it, EPA shall identify the reason(s) in writing to HDOT for such rejection and may require HDOT to redraft the Audit Work Plan in its entirety or part. EPA shall provide any comments to HDOT within forty-five (45) days.
8. If EPA and HDOH reject the Audit Work Plan in whole or part, HDOT shall resubmit a revised Audit Work Plan within one hundred and twenty (120) days. After submission of the revised Audit Work Plan, EPA, after consultation with HDOH, shall provide any comments to HDOT within forty-five (45) days. HDOT will review all comments and make all required modifications to the revised Audit Work Plan. If EPA does not provide written comments, the revised Audit Work Plan shall be deemed approved by EPA and HDOH.

C. Audits

1. HDOT shall take all appropriate measures to facilitate the audit firm in performing the audits in accordance with the approved Audit Work Plan.
2. HDOT shall grant the audit firm full access to and unrestricted review of all HDOT records, documents and information that the audit firm requires to complete the audits.

D. Reporting/Audit Reports

1. HDOT shall require the audit firm to provide preliminary written notice of any potential violations identified in any audit to HDOT, EPA and HDOH within 2 business days following an audit of a program element in Paragraph B.1, above.
2. HDOT shall require the audit firm to complete a draft audit report to HDOT within 45 days of completing an audit of a program element.
3. HDOT shall review the draft audit report to correct any factual inaccuracies within 30 days after receiving the draft audit report.
4. HDOT shall require the audit firm to complete a final audit report within 120 days, or another length of time agreed to by EPA and DOH, of completing an audit of a program element.
5. HDOT shall submit original draft and final audit reports to EPA and HDOH with the Annual Compliance Report (ACR).
6. HDOT shall provide a detailed summary of any actions taken as a result of the audit reports and dates at which those actions were taken with the ACR.
7. The HDOT Audit Reports shall contain:
    a. A specific statement of the procedures followed, HDOT sites and activities visited and all materials reviewed during the audits;
    b. Retrospective analysis of activities that may be outmoded, ineffective, insufficient, or excessively burdensome, and recommendations to modify, streamline, or expand them in accordance with what has been learned;
    c. An identification of deficiencies (items which, if not corrected, will lead to potential violations) and potential violations with the applicable SWMPs, this Consent Decree, and/or applicable permit and regulations, and recommendations for improvement;
    d. Identification of best practices and opportunities for information/technology transfer to be applied across all divisions; and
    e. An analysis of the practices implemented for each Division's program elements and a determination as to whether identified best practices can be universally implement across all three Divisions. If best practices cannot be universally implemented, the report shall clearly describe the identified impediments.
8. HDOT shall correct any deficiency or potential violation identified in the Audit Reports or otherwise discovered by HDOT as part of the audit process set forth herein within the time frames identified in Paragraph E below.

E. Corrections of Potential Violations and Deficiencies

1. HDOT shall correct any potential violations within 14 days of notification as described in D.1 of this Appendix, or another period of time agreed to by EPA and DOH. In order for EPA and DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA and HDOH.
2. HDOT shall correct any deficiencies within 21 days of receiving the draft Audit Report, or another period of time agreed to by EPA and HDOH. In order for EPA and HDOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA and HDOH.
3. If HDOT corrects any violation discovered through the Audit process within the time frames described above, it shall not be subject any related stipulated penalties under Paragraph 30.

4. Notwithstanding anything in E.3 of this Appendix, the United States and HDOH reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree or to obtain penalties or injunctive relief under the Act or its implementing regulations, or under other federal or State laws, regulations, or permit conditions, if HDOH or EPA independently discovers a violation of a permit, law, or statute.
5. Similarly, United States and HDOH, reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree or to obtain penalties or injunctive relief under the Act or its implementing regulations, or under other federal or State laws, regulations, or permit conditions, if an activity or violation poses an immediate threat to human health or the environment.

F. Certifications

1. HDOT shall provide the following information and certifications to EPA and HDOH regarding completion of each audit and correction of any non-compliance or potential violation identified in the Audit Reports or otherwise discovered by HDOT as part of the audit process within an Environmental Compliance Audit section of the ACR. An authorized HDOT official shall certify that, to the best of the official's knowledge and information, the audits were conducted in accordance with the Work Plan described above, the Audit Reports are submitted to HDOT, EPA and HDOH in the ACR as described above, and all items of non-compliance identified in the Audit Reports have been corrected or steps have been taken to correct them. If all items have not been corrected, HDOT must include a schedule for correcting the issue.

Appendix B

PEAR 1 through 6 Guiding Questions

B1: PEAR #1 – Post-Construction / Permanent Best Management Practices

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Overall Approach**						
A1	Discuss the process chronologically in the order that a project would occur. Walk us through the process as if we were a developer proposing a project.						
B	**Laws/Rules/Regulations/Policies**						
B1	What legal authority does the permittee have to require post-construction BMPs on development sites and to ensure maintenance?						
B2	Does the permittee's legal authority address post-construction requirements for all projects disturbing one acre or more?						
B3	Does the legal authority require site design, source control, and stormwater treatment BMPs?						
B4	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
B5	What procedures for alternative compliance (i.e., planning-level BMPs and other non-structural controls) are allowed?						
B6	Does the legal authority authorize the permittee to require stormwater management plans to address post-construction impacts?						
B7	Do the laws/rules/regulations/policies outline the contents of an approvable plan and responsibilities for operation and maintenance of approved BMPs?						
C	**Post-Construction BMP Standards**						
C1	What technical guidance (e.g., BMP manual) does the permittee use as the standard for design and selection of post-construction BMPs? Note: It is not necessary to do a thorough review of the manual or standards used by the permittee.						
C2	Are project proponents required to follow a technical guidance manual?						
C3	Does the guidance provide siting and use criteria for the BMPs to ensure proper and adequate BMPs are being selected and implemented?						
C4	Does the guidance provide siting and use criteria for BMP selection based on the development context (i.e., BMP selection appropriate for ultra urban-areas versus those more appropriate for more rural settings with larger parcels)?						
C5	Are pollutants of concern that are typically generated by the proposed development type considered when selecting or approving BMPs?						
C6	Does the technical manual provide guidance on sizing, performance, and location of BMPs?						
C7	When was the BMP manual last updated?						
C8	Does the permittee have different requirements or standards for different types of developments (e.g., specific post-construction requirements for gas stations or automobile repair facilities)?						
C9	Does the permittee have design manuals related to land-efficient site designs (e.g. better site design, better models for large retailers)?						
C10	Does the permittee promote source control and site design standards to reduce the generation of pollutants in addition to treatment BMPs?						
C11	Does the permittee include in standards and manuals specifications for innovative site design practices, such as low-impact development and other techniques that manage runoff on-site?						

Question Number	Question	Airports		Harbors		Highways	
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C12	Are project applicants encouraged or required to use vegetative BMPs that promote infiltration, such as swales, biofiltration practices, etc., where possible?						
C12	Does the permittee offer financial incentives to support post-construction stormwater goals (e.g., programs to support redevelopment, such as enterprise zones, or stormwater utility credits)?						
D	**Plan Review and Approval Procedures**						
D1	Which Division/District is responsible for post-construction stormwater plan review?						
D2	How many plan reviewers are there?						
D3	How many plans submitted for review (private and public projects) each year?						
D4	What is the project size threshold for the permittee to require post-construction BMPs?						
D5	Does the permittee apply standard conditions that incorporate post-construction installation and maintenance requirements into its plan review process?						
D6	Do plan reviewers use specific criteria or a checklist when reviewing plans?						
D7	Does the permittee consider pollutants of concern or whether the project discharges to a 303(d) listed impaired water when determining which BMPs are required?						
D8	Does the permittee consider such regional concerns as smart growth initiatives, watershed master plans, and other larger-scale planning efforts to ensure that each new development and redevelopment plan is consistent with the goals of these initiatives?						
D9	For up to three sets of post-construction plans provided by permitee:						
D9a	Are adequate BMPs included on plans, details, and drawings?						
D9b	What types of standard conditions or notes are included?						
D9c	Are maintenance requirements specified?						
D9d	Do the location of BMPs hinder maintenance?						
D10	What types of projects must be reviewed by the permittee for post-construction stormwater controls?						
D11	Does the permittee have a process to identify priority projects identified in the MS4 NPDES permit?						
D12	What types of standards or technical guidance do the permittee's reviewers use to review projects?						
D13	Does the permittee condition improvements to existing developments with requirements for post-construction stormwater controls? How are these redevelopment requirements triggered?						
E	**Post-Construction BMP Inventory**						
E1	How does the permittee track the installation and maintenance of post-construction BMPs?						
E2	Is your post-construction BMP inventory managed in a database and/or linked to GIS?						
E3	What information is collected?						
F	**BMP Inspection & Maintenance**						
F1	Does the permittee require maintenance agreements for all projects with post-construction BMPs?						
F2	Are as-built inspections conducted at the conclusion of a project to ensure the BMP has been built properly? What Division/District is responsible for this?						
F3	Do staff conduct these inspections or are they self-certified?						
F4	Does the permittee inspect private facilities or require inspections by owner/operators?						

Question Number	Question	Airports		Harbors		Highways	
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F5	If the permittee performs the inspections, how often are they performed?						
F6	If owner/operators are required to inspect and maintain their BMPs, how is this authorized? Through a MOU? Through conditions of approval? Through another type of agreement?						
F7	How does the permittee ensure inspections are occurring? Reminder notices? Inspection reports?						
F8	Who is responsible for structural stormwater BMP maintenance (public and private)? Permitee? Owner?						
G	**Enforcement**						
G1	How does the permittee require proper maintenance and repair after the inspection?						
G2	What types of enforcement actions are provided by laws/rules/regulations/policies (e.g., notices of violation, abatement)?						
G3	Is the permittee's enforcement authority limited (e.g., limits on the dollar amount of fines, inability to issue civil penalties)?						
G4	How many enforcement actions have been taken in the past year due to lack of BMP maintenance?						
H	**Public Construction Projects**						
H1	For staff:						
H1a	Are plan reviewers trained on post-construction BMPs and requirements?						
H1b	What type of training do staff performing "as built" and post-construction inspections receive?						
H1c	How often are the trainings conducted?						
H1d	How many staff have been trained?						
H1e	What type of training or education does the permittee provide to developers and engineers on post-construction requirements?						
H2	For developers and plan designers:						
H2a	What types of educational materials have been developed and distributed to developers and designers regarding post-construction BMPs and application requirements?						
H2b	How are the materials distributed? At the permit desk? During inspections?						
H2c	What type of training does the permittee provide or advertise to local developers and designers?						
H2d	How often is this training conducted?						
H2e	How many developers and designers have been trained?						
H2f	Are they required to attend?						
I	**Consent Decree Questions**						
I1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
I1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
I2a	Have deficiencies or potential violations been identified?						
I2b	What are recommendations for correcting these deficiencies or potential violations?						
I4	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
I5	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
I6	If best practices cannot be universally implemented, what are the identified impediments?						

B2: PEAR #2 – Construction Site Runoff Control

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Laws/Rules/Regulations/Policies**						
A1	What legal authority does the permittee have to require erosion and sediment control BMPs on construction sites and to ensure compliance?						
A2	Does the permittee's legal authority address stormwater quality for all projects disturbing at least 1 acre?						
A3	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
A4	Does the legal authority authorize the permittee to require erosion and sediment control plans?						
B	**Construction Site Inventory**						
B1	How does the permittee track construction projects?						
B2	Is the following information collected?						
B2a	The number and status (active/inactive/completed) of construction sites						
B2b	The number, frequency, results, and follow-up actions resulting from inspections						
B2c	The actions taken to resolve the issues and dates when compliance was achieved.						
B2d	The number and type of enforcement actions taken at sites in violation						
B2e	Complaints submitted by the public						
B3	Does the inventory include construction sites disturbing less than 1 acre?						
B4	What is the threshold for tracking projects?						
B5	Does the inventory track which sites have submitted an NOI for coverage under a state/EPA construction general permit?						
B6	How is the inventory updated? How often?						
B7	Does the permittee prioritize projects for more frequent or targeted inspections? If yes, based on what criteria?						
C	**Construction Requirements and BMPs**						
C1	What technical guidance (e.g., BMP manual or fact sheets) does the permittee use as the standard for design and selection of nonstructural and structural construction BMPs?						
C2	Are project applicants required to follow these technical manuals?						
C3	Does the guidance set minimum operation and maintenance requirements for BMPs?						
C4	Does the guidance include installation requirements for the BMPs?						
C5	Does the guidance provide proper siting and use criteria for BMPs to ensure that adequate BMPs are being selected and implemented?						
C6	Does the permittee provide guidance as to recommended BMPs to be used?						
C7	Does the permittee have different requirements or standards for different times of the year (i.e., during the rainy season vs. the dry season)?						
D	**Plan Review Procedures**						
D1	Does the permittee hold pre-application meetings on any construction project? Are stormwater and erosion and sediment control requirements addressed at these meetings?						
D2	What is the permittee's threshold for plan review? (For example, does the permittee review plans for all projects disturbing greater than 1 acre, or do they use another threshold?)						

Question Number	Question	Airports		Harbors		Highways	
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D3	Does the permittee apply standard conditions that incorporate erosion and sediment control requirements into its plan review process?						
D4	Do the plan reviewers verify whether the project applicant has submitted an NOI to the state or EPA? Is evidence of NOI submission required before a plan can be approved or a local permit issued?						
D5	Do plan reviewers use specific criteria or a checklist when reviewing plans?						
D6	Does the permittee consider during the review process whether the construction project discharges to a TMDL/impaired water?						
D7	For up to two construction plans provided:						
D7a	Are adequate BMPs included on plans?						
D7b	What types of standard conditions or notes are included?						
D7c	Are maintenance requirements specified?						
D7d	Are BMPs addressing other construction activities, such as materials storage and waste disposal, incorporated into the construction plans?						
D7e	Do the plans include notes addressing the prohibition of non-stormwater discharges?						
D7f	Were comments provided by the permittee to the project proponent reasonable and appropriate?						
E	**Construction Site Inspections**						
E1	Does the permittee adequately inspect the following phases of construction?						
E1a	Clearing and grubbing and site preparation						
E1b	Mass grading and public infrastructure/utility construction						
E1c	Building construction and final grading						
E1d	Final stabilization						
E2	What group is charged with erosion and sediment control inspections?						
E3	Do the inspectors use a checklist or inspection form during each inspection?						
E4	How many inspectors does the permittee use to verify erosion and sediment control compliance at construction sites?						
E5	Does this number appear adequate to assess active construction occurring in the permitted area? Compare this to the total number of construction sites that need to be inspected at any one time (number of inspections per construction site per year). Consider project durations and phasing, local conditions (e.g., dry vs. wet seasons), and additional duties assigned to inspectors.						
E6	Does the permittee have an established prioritization process for establishing inspection frequency? If so, on what factors is the prioritization based (i.e., size, proximity to water body, sensitive areas)?						
E7	How often are sites inspected?						
E8	Does the permittee target inspections during and immediately after wet weather events? If so:						
E8a	What size rain event triggers an inspection?						
E8b	How soon after a rain event?						
E9	Is there an established rainy season for the area? Are sites inspected prior to the start of the rainy season to determine preparedness?						

Question Number	Question	Airports		Harbors		Highways	
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F	**Program Support and Resources**						
F1	Does the program have a dedicated source of funding to support plan review staff and inspectors?						
G	**Enforcement**						
G1	What types of enforcement actions are provided for in applicable laws/rules/regulations/policies (e.g., notices of violation, “stop work” orders, fines)?						
G2	Is use of these actions outlined in an established, escalating enforcement policy?						
G3	Review with the permittee statistics on enforcement of construction site erosion and sediment controls.						
G3a	How many enforcement actions are taken per year?						
G3b	Are follow-up inspections conducted to verify compliance?						
G4	Are there limitations on the permittee’s enforcement authority (e.g., limits on the dollar amount of fines, inability to issue civil penalties)?						
G5	Do staff feel that their enforcement authority is adequate to achieve compliance on construction projects?						
H	**Training and Education**						
H1	For staff:						
H1a	What type of training do construction inspectors receive? Are plan reviewers trained on erosion and sediment control BMPs and requirements?						
H1b	How often is training conducted?						
H1c	How many staff have been trained?						
H1d	What type of follow-up is conducted by the permittee to verify that the training is effective?						
H2	For construction operators:						
H2a	What types of educational materials have been developed and distributed to construction operators?						
H2b	How are the educational materials distributed?						
H2c	What type of training does the permittee provide or advertise to local construction operators?						
H2d	How often is this training conducted? How many construction site operators have been trained?						
H2e	Are contractors and developers required to attend?						
H2f	Are training sessions held in cooperation with other local permittees or regional authorities?						
I	**Public Construction Projects**						
I1	Do RFPs or contracts include language specifying stormwater requirements?						
I2	Are inspection and maintenance requirements specified in the contract?						
I3	What oversight does the permittee implement to ensure the contractor is implementing all requirements appropriately and adequately?						
I4	What penalties are in place to require compliance from the permittee’s contractors?						
J	**Consent Decree Questions**						
J1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						

Question Number	Question	Airports		Harbors		Highways	
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J1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
J2a	Have deficiencies or potential violations been identified?						
J2b	What are recommendations for correcting these deficiencies or potential violations?						
J3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
J4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
J5	If best practices cannot be universally implemented, what are the identified impediments?						

B3: PEAR #3 – Public Outreach / Public Involvement

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Goals and Objectives**						
A1	Does the permittee have a strategy document for education and participation?						
A2	Does the document include specific goals?						
A3	On what are the goals based?						
A4	Are the goals measurable? How?						
B	**Message Development**						
B1	Have specific messages been developed for stormwater outreach?						
B2	On what are the messages based? Pollutants of concern? General awareness? Problem target audience? All of the above?						
B3	Are different messages used for different target audiences (i.e., children, homeowners, industry, etc.) or is one central message used for all?						
B4	Do the messages encourage participation in stormwater-related activities?						
B5	Do the messages educate about behavior changes that the audience can make to contribute to a solution?						
B6	Have messages been developed specific to reducing illicit discharges with information about how to report them to the appropriate authorities?						
B7	Have messages been developed to educate pesticide, fertilizer, and herbicide applicators (including homeowners) about ways to reduce stormwater pollution?						
C	**Target Audiences**						
C1	Has the permittee identified target audiences for outreach efforts? How are these target audiences selected? What are the target audiences?						
C2	What land use groups (i.e., industry, commercial businesses) has the permittee targeted?						
C3	Have certain ethnic groups or nationalities been identified as audiences to be targeted based on an evaluation of local demographics?						
C4	Have the target groups been reevaluated based on evaluation of the strategy and progress that has been made?						
C5	For Phase I permittees: have they targeted pesticide, herbicide, and fertilizer applicators (including homeowners) and construction site operators for outreach?						
C6	For Phase II permittees: have they targeted industries or commercial businesses of concern for outreach?						
D	**Message Packaging**						
D1	Does the permittee have a variety of written educational materials?						
D2	Does the permittee have a variety of other packages (i.e., Web site, presentations, displays) for educational materials?						
D3	Did the permittee produce the education and outreach materials in the different languages that are spoken in the community?						
D4	Do the permittee's materials explain stormwater issues in easy-to-understand terms?						

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E	**Distribution Mechanisms**						
E1	Does the permittee track distribution of materials to measure effectiveness?						
E2	Is the permittee focused solely on distribution or is an effort made to evaluate the impact of the messages?						
E3	Does the permittee use a variety of distribution mechanisms to target various audiences?						
F	**Evaluation Methods**						
F1	How does the permittee evaluate the effectiveness of the outreach strategy?						
F2	Has the permittee conducted a public awareness survey?						
F3	Which outreach materials have been the most effective in soliciting public involvement and participation? Changing audience behaviors? Increasing general stormwater awareness?						
F4	Have any changes been made to the outreach strategy or materials based on an evaluation of effectiveness?						
G	**Public Participation Activities**						
G1	What opportunities does the permittee give to the public to review and comment on any changes to the SWMP, such as public comment via a Web site, a public meeting, or a stormwater advisory group?						
G2	What volunteer opportunities (i.e., stream cleanups, storm drain stenciling) does the permittee coordinate or publicize to encourage the public to participate in stormwater-related activities?						
G3	Does the permittee sponsor or promote any of the following activities?						
G3a	Beach/stream/lake cleanups						
G3b	Volunteer stream monitoring						
G3c	Stream clean-ups or equivalent activities						
G3d	Stormwater citizen panel						
H	**Consent Decree Questions**						
H1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
H1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
H2a	Have deficiencies or potential violations been identified?						
H2b	What are recommendations for correcting these deficiencies or potential violations?						
H3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
H4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
H5	If best practices cannot be universally implemented, what are the identified impediments?						

B4: PEAR #4 – Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program

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A	**Legal Authority (IDDE)**						
A1	Does the permittee have laws/rules/regulations/policies to prohibit illicit discharges and dumping to the MS4?						
A2	What exclusions are included in laws/rules/regulations/policies?						
A3	What enforcement mechanisms are authorized in the event of an illicit discharge being detected?						
A4	Has an enforcement escalation plan been developed?						
B	**Mapping (IDDE)**						
B1	Does the permittee have a map showing storm drain pipes, outfalls, and storm drain inlets?						
B2	Is the map readily available to the personnel who would respond to an illicit discharge incident?						
B3	Does the permittee have a map of the storm drain system showing the locations of outfalls and municipally maintained structural stormwater controls?						
C	**Field Screening (IDDE)**						
C1	How are field screening areas identified?						
C2	Are areas of the MS4 prioritized based on incidents of illicit discharges, land use, dumping reports, etc.?						
C3	How often are field screening areas evaluated?						
C4	Are outfalls inspected during dry weather to identify any potential dry-weather discharges? What does the inspection include?						
C5	If dry-weather flows are present, are they being sampled to determine potential sources of pollutants? For what parameters?						
C6	Does the permittee have a database (or other method) to track locations of illicit discharges, spills, and illegal dumping?						
C7	Does the database track dry-weather monitoring or screening data?						
D	**Investigation of Potential Illicit Discharges (IDDE)**						
D1	Does the permittee have a procedure for tracing the source of an active illicit discharge?						
D2	Who performs the investigations?						
D3	Are these procedures written in a document or plan?						
D4	What equipment does the permittee use to find illicit discharges?						
D5	Does the permittee have equipment to videotape storm drains, or can it quickly contract out this work?						
D6	How are investigations tracked?						
D7	Has an enforcement response plan been adopted for use when an illicit discharge source has been located?						
E	**Spill Response and Prevention (IDDE)**						
E1	Does the permittee have a clear set of procedures in place that details who is responsible for responding to spills and emergency situations?						
E2	Do field staff have spill containment supplies in their vehicles, and are they trained to contain minor spills?						

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E3	Is a contractor or other entity available for larger spills?						
E4	Does the permittee have the ability to collect cleanup and abatement costs from the responsible party?						
E5	How are spills and spill response tracked to ensure adequate reporting?						
F	**Public Awareness and Reporting Program (IDDE)**						
F1	Does the permittee prioritize subwatersheds or neighborhoods and assign resources for educational efforts based on frequency and types of illicit discharge incidents?						
F2	Is there a general phone number or “hotline” in the phone book or Web site that people can call to report a spill or dumping?						
F3	What types of public outreach materials are available to publicize public reporting?						
F4	Does the permittee track the number of public calls or complaints reporting illicit discharges?						
G	**Preventing Sanitary Sewer Discharges (IDDE)**						
G1	Has the permittee conducted any studies or evaluations to determine whether sanitary sewers are contributing pollutants to the MS4?						
G2	What is the extent of infiltration and inflow into the sanitary sewer system? How is this impacting discharge from the MS4?						
G3	If the permittee also operates a sanitary sewer system, do they have procedures to prevent sewage spills and SSOs to the MS4?						
H	**Education and Training (IDDE)**						
H1	What type of training do field staff (e.g., storm sewer maintenance crews, street sweepers) receive on spill response and IDDE?						
H2	Are staff generally educated about what illicit discharges are and how to report them?						
I	**Legal Authority (I/C)**						
I1	Does the Phase I permittee have the authority to require industrial and commercial facilities to implement stormwater BMPs?						
I2	Does the Phase I permittee have the authority to conduct inspections and enforce requirements?						
I3	What laws/rules/regulations/policies provide this legal authority?						
I4	What types of facilities are covered under this legal authority?						
I5	Who (e.g., specific staff, Division/District, etc.) has the authority to enforce the laws/rules/regulations/policies and/or inspect the facilities?						
I6	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
J	**Facility Inventory (I/C)**						
J1	Has the permittee completed an inventory of industrial/commercial facilities discharging to the stormwater system?						
J2	What types of facilities are included on the inventory?						
J3	What sources were used to create the inventory?						
J3A	Facilities that filed NOIs for EPA MSGP or state industrial general permit coverage?						
J3B	Significant industrial users within the pretreatment program?						

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J3C	Business licenses?						
J3D	Phone book?						
J3E	"Windshield" survey?						
J4	Does the inventory include all the industrial/commercial facilities subject to the industrial general permit?						
J5	Does the permittee periodically check to see if new facilities that must be covered by an industrial stormwater general permit have filed an NOI?						
J6	What is the process for notifying the permitting authority of non-filers?						
J7	If applicable, does the inventory include all the facilities specified as required in the MS4 NPDES permit?						
J8	How is the inventory updated? How often?						
J9	What information is maintained about the facilities?						
J10	How is the inventory maintained and stored?						
J11	Does the permittee prioritize the facilities?						
J12	Is the prioritization based on facility type, past inspection or enforcement results, proximity to receiving waters, potential pollutant sources on-site, and so forth?						
J13	Is the prioritization used to determine frequency of inspections?						
J14	Has the permittee mapped the locations of prioritized facilities to cross-reference reports of dumping, illicit discharges, or other water quality issues?						
K	**Standards, BMPs and Outreach (I/C)**						
K1	Has the permittee adopted standards or BMPs that industrial/commercial facilities are required to implement (e.g., all car dealerships must install a wash rack plumbed to the sanitary sewer)?						
K2	Are the requirements for new developments only or are they triggered by improvements of existing facilities? Are there schedules for implementing retrofits?						
K3	Are these standards applicable to existing facilities, new facilities, or both?						
K4	Does the permittee refer facility operators to specific stormwater BMP or standards guidance documents?						
K5	What type of educational program has been developed for industrial and commercial facility operators?						
K6	What type of brochures, handouts, or guidance on BMPs is provided to these facilities by the permittee?						
K7	When is this information provided? During inspections? During training events? During professional organization presentations?						
L	**Staff Training (I/C)**						
L1	What type of training do the industrial and commercial inspectors receive?						
L2	How often?						
L3	If additional inspectors are used (e.g., food safety inspectors for restaurant inspections, pretreatment inspectors), are they trained specifically on stormwater BMPs and requirements? By whom?						

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M	**Inspections (I/C)**						
M1	Who performs inspections and for what types of facilities (e.g., health inspectors for restaurants, pretreatment inspectors for industrial facilities with a pretreatment permit)						
M2	How often are industrial and commercial facilities inspected? How is the frequency determined?						
M3	Does the permittee's industrial/commercial inspector(s) use a standard checklist during inspections?						
M4	Is a report written after the inspection? How is the inspection documented in the file?						
M5	Does the permittee verify NPDES permit coverage for facilities?						
M6	For industrial facilities, does the inspector review the SWPPP and monitoring data during the inspection?						
M7	Does the permittee refer non-filers to the permitting authority?						
M8	Do inspectors provide educational materials during inspections? What types?						
M9	If multiple Divisions/Districts perform inspections, how is information transferred or cataloged?						
N	**Program Support and Resources (I/C)**						
N1	Does the program have a dedicated source of funding to support inspectors?						
O	**Enforcement (I/C)**						
O1	In instances of noncompliance, do the inspection staff use a formalized, approved enforcement escalation procedure?						
O2	How was the enforcement escalation procedure developed? Is it used? Is it effective?						
O3	Who is authorized to apply various enforcement procedures (e.g., NOVs, fines)?						
O4	What types of penalties are readily available to the inspection staff?						
O5	What is the most common method of gaining compliance (e.g., NOVs, fines, abatement)?						
O6	Can the permittee describe a recent non-compliance issue at an industrial/commercial facility? If so, how was compliance achieved?						
O7	At what point are non-compliance cases referred to the NPDES permitting authority? How many have been referred in the last 12 months?						
P	**Consent Decree Questions**						
P1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
P1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
P2a	Have deficiencies or potential violations been identified?						
P2b	What are recommendations for correcting these deficiencies or potential violations?						
P3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
P4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
P5	If best practices cannot be universally implemented, what are the identified impediments?						

B5: PEAR #5 – Pollution Prevention / Good Housekeeping Program

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A	**Infrastructure Mapping and Characterization**						
A1	Does the permittee have a map showing all inlets, outfalls, storm drain conduits, stormwater management facilities, and receiving water bodies?						
A2	Does this map include catch basins and structural stormwater controls?						
A3	Is the map readily available and used by maintenance field staff when performing maintenance activities?						
A4	Is the map in hard copy format only or is it also in a geographic information system (GIS)?						
A5	Are infrastructure assets or components named or numbered to better track necessary maintenance and repairs?						
A6	Is information regarding stormwater infrastructure maintained in a database or mapping system? What types of data are maintained?						
A6a	Type of structure or asset						
A6b	Location (address, latitude/longitude)						
A6c	Photo						
A6d	Date built						
A6e	Date last inspected						
A6f	Date last cleaned/maintained						
B	**Catch Basin Cleaning**						
B1	Does the permittee have a schedule for routine maintenance or cleaning of catch basins?						
B1a	How many are cleaned and how often?						
B1b	Has the permittee targeted certain areas for more frequent maintenance?						
B1c	Does the permittee set goals for how many basins are inspected and cleaned each year?						
B1d	How does the permittee track and record cleaning and maintenance needs?						
B1e	What information is documented? Does the permittee track which catch basins are cleaned, how much material is removed, and so forth?						
B1f	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency? Are they used to identify areas for targeted outreach?						
B2	What are the permittee's procedures for disposing of waste removed from catch basins or storm drains?						
B2a	Does the permittee flush material that could potentially discharge to surface water?						
B2b	If the material is removed using a wet vacuum, how is the material dewatered? How is the decanted water disposed?						
B3	Does the permittee have a schedule for routine maintenance or inspection of storm drain pipes?						
B4	What are the permittee's maintenance procedures for cleaning clogged storm drain pipes?						
C	**Stormwater Management Structures**						
C1	Are catch basins and other inlet structures marked so that the public knows they drain to surface waters?						

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C2	Has the permittee inventoried the type and location of public stormwater management structures in its jurisdiction? How are the data collected and stored?						
C2a	Pump stations						
C2b	Drainage structures (debris basins, detention basins, regional ponds, etc.)						
C2c	Structural treatment controls						
C2d	Open channels						
C3	How is vegetation maintained in grassed swales, rain gardens, pond perimeters, and other vegetated stormwater controls?						
C4	Has the permittee mapped private stormwater management structures?						
C5	How often are these facilities inspected?						
C6	Are the stormwater management structures regularly maintained by the permittee?						
C6a	Are records kept of material and debris removed during maintenance?						
C6b	How is maintenance conducted? Are chemicals used to maintain vegetation and pests?						
C7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency? Are they used to identify areas for targeted outreach based on type and volume of materials removed?						
D	**Street Sweeping**						
D1	Does the permittee regularly sweep streets? Public parking lots?						
D2	What is the schedule for street sweeping?						
D3	Are areas scheduled for sweeping based on aesthetics only or is consideration given for reducing impacts on the stormwater management infrastructure and surface water?						
D4	What types of sweepers are used? Wet or dry?						
D5	How is street-sweeping debris disposed? If the debris is dewatered, how is this done? How is the decanted water disposed?						
D6	Are records kept of the amount of debris collected?						
D7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency?						
E	**Public Streets, Roads and Highway Maintenance**						
E1	What types of public streets, roads, and highways operation and maintenance practices and procedures are performed by the permittee?						
E2	Are BMPs used by field crews to minimize stormwater impacts during road maintenance or repair activities?						
E3	What types of BMPs are used? Discuss BMPs used for such activities as:						
E3a	Ditch cleaning						
E3b	Sidewalk repair						
E3c	Asphalt patching						
E3d	Curb and gutter repair						
E3e	Street striping						

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E3f	Sign painting						
E3g	Maintaining dirt and gravel roads (preventing erosion, dust control)						
F	**Facility Inventory**						
F1	Does the permittee have an inventory of public facilities? At a minimum, this list should include the following, as applicable:						
F1a	Public works yards						
F1b	Public transit facilities						
F1c	Wastewater and domestic water treatment plants						
F1d	Sanitary sewer system overflow locations						
F1e	Public parks/open areas						
F1f	Public parking lots						
F1g	Public buildings						
F1h	Landfills and hazardous waste disposal sites, transfer locations, or storage facilities						
F2	Have the facilities been inspected and assessed for water quality impacts?						
F3	Are any facilities required to apply for coverage under a general industrial permit? Do these facilities have SWPPPs?						
G	**Chemical and Hazardous Material Use and Disposal**						
G1	What types of chemicals or hazardous materials are used by the permittee?						
G2	Where are these materials stored?						
G3	Has the permittee implemented an alternative materials program to reduce the use of hazardous materials?						
G4	Has the permittee implemented an inventory reduction program to reduce the quantity of chemicals and hazardous materials stored and used?						
G5	Does the permittee have a household hazardous waste collection center for the public?						
G5a	Are records of the quantity of materials collected maintained by type of material?						
G5b	How does the permittee notify the public of these sites?						
G6	Does the permittee have special household hazardous waste collection days?						
G7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize maintenance frequency? Are they used to identify areas of targeted outreach?						
H	**Pesticide, Herbicide and Fertilizer Application and Management**						
H1	What kind of program has been established to address pollutants associated with the application of pesticides, herbicides, and fertilizer at public facilities?						
H2	Are the permittee's fertilizer/pesticide applicators certified? Are permits or other certifications required?						
H3	Where are the chemicals stored? Are appropriate procedures and secondary containment followed?						
H4	Is there a pesticide/fertilizer application plan?						
H5	Does the permittee practice integrated pest management (IPM) or use alternatives to pesticides?						

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H6	How does the permittee implement alternative landscaping to minimize the use of fertilizers and pesticides?						
H7	What types of educational activities does the permittee conduct for applicators?						
H8	What types of BMPs are used during application of pesticides in public rights-of-way?						
H9	What types of BMPs are used during application of pesticides at municipal facilities such as parks?						
I	**Municipal Staff**						
I1	Have standard operating procedures or their equivalent been developed to ensure that municipal field staff integrate stormwater quality BMPs into their daily activities?						
I2	Have BMPs or standards been officially adopted by the permittee for use by municipal field staff?						
I3	What reference materials or guidance documents are provided to field staff regarding BMP specifications and details?						
I4	How does the permittee ensure that staff are fulfilling their responsibilities as outlined in standard operating procedures? Do managers provide oversight on a regular basis?						
J	**Contracted Services Staff**						
J1	Does the permittee require contractors to incorporate stormwater quality BMPs into their activities?						
J2	How are BMPs required? Are the requirements outlined in requests for proposals? Are they included in contracts?						
J3	Have BMPs or standards been officially adopted by the permittee for use by contractual staff?						
J4	What reference materials or guidance documents are provided to contractual staff regarding BMP specifications and details?						
J5	How does the permittee ensure that contractors are fulfilling their responsibilities as outlined in their contracts? Are inspections performed? Are periodic reports submitted?						
K	**Training and Education**						
K1	What type of general stormwater training is provided to staff that are not involved in field activities? How often?						
K2	How are new employees trained?						
K3	What types of activity-specific training is provided to field staff? Is information on specific BMPs provided?						
K4	Is any training provided to contract staff?						
L	**Consent Decree Questions**						
L1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
L1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
L2a	Have deficiencies or potential violations been identified?						
L2b	What are recommendations for correcting these deficiencies or potential violations?						
L3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						

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L4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
L5	If best practices cannot be universally implemented, what are the identified impediments?						

B6: PEAR #6 – Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

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A	**SWMP Planning Documents**						
A1	Has a SWMP Plan been developed? If so, when? Last revised?						
A2	Is there a schedule for revision of the SWMP plan?						
A3	Is there an additional MS4-wide document, plan, or program? Who developed it?						
A4	How were internal and external stakeholders included in the development or revision of the SWMP plan?						
B	**Staff Inventory and Organization**						
B1	Does the permittee have a person designated to lead and coordinate the stormwater program and activities?						
B2	Does the SWMP planning document include an organization chart listing responsible parties for each SWMP component?						
C	**Performance Standards or Goals**						
C1	Has the permittee established measurable goals or performance standards for program components?						
C2	If performance standards have been established, are they measurable or are they essentially BMP recommendations with level of service (i.e., number of miles swept) requirements?						
C3	Does the permittee attempt to quantify or assess a program or a BMP's water quality impact or effectiveness as opposed to merely tracking level of service?						
D	**Prioritization of Resources**						
D1	Has the permittee identified specific pollutants of concern for its local water bodies?						
D2	Are these pollutants of concern consistent with priorities identified in the 303(d)-listed impairments for local water bodies?						
D3	Are these pollutants of concern consistent with any water quality monitoring data or studies conducted by the permittee or another agency?						
D4	Has the permittee developed strategies to specifically address those pollutants?						
D5	How does the permittee decide on program priorities? Are these reassessed periodically?						
D6	Does the SWMP include a schedule of activities?						
D7	Does the MS4 discharge to a water body on the state's list of impaired waters?						
D7a	What pollutants are identified on the list?						
D7b	Has stormwater been identified as a source?						
D7c	Does the SWMP specifically address this pollutant?						
D7d	Does the SWMP identify BMPs specifically for sources or discharges to the listed water body						
D8	Has a TMDL been developed for a water body to which the MS4 discharges and for which stormwater has been identified as a pollutant source?						
D8a	What pollutants are addressed in the TMDL?						
D8b	Does the TMDL specifically address (or include wasteload allocations for) stormwater?						
D8c	Has the corrective action plan or other planning to address TMDLs been reviewed for integration with the SWMP?						

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D8d	Does the permittee's stormwater program address the pollutants of concern identified in the TMDL?						
D9	Is the permittee participating in any watershed planning efforts?						
D10	Have any goals been developed based on watershed issues, strategies, or challenges?						
D11	Has the permittee established a set of indicators or parameters to assess progress toward meeting the goal(s) of the watershed plan?						
D12	Is the permittee's stormwater program implemented on a watershed basis?						
E	**Assessment and Evaluation of Programs**						
E1	Does the permittee regularly measure progress against the established performance standards and goals?						
E2	Are the goals quantifiable?						
E3	Is the permittee analyzing data in the annual report to identify program activities that may need to change to address problem areas?						
E4	Has the SWMP been altered based on this evaluation?						
F	**Assessment and Evaluation of BMPs**						
F1	Is the permittee able to track both structural BMPs and non-structural BMPs and activities?						
F2	Has the permittee set measurable goals or performance standards to evaluate individual BMPs and activities or suites of BMPs that address a particular pollutant source?						
F3	Is there a process to evaluate or revise individual BMPs and suites of BMPs when receiving water outcomes or endpoints are not being met?						
F4	Do assessments evaluate impacts of BMPs on ground water?						
F5	Is the permittee analyzing data in the annual report to identify individual BMPs or suites of BMPs that may need to change to address problem areas?						
G	**Assessment and Evaluation of Water Quality**						
G1	Has the permittee documented environmental, water quality, stream corridor, habitat, or other types of improvements?						
G2	Has the permittee estimated reductions in pollutant loadings from the MS4 or other quantifiable water quality benefits expected as the result of the municipal stormwater program?						
H	**Dry & Wet Weather Outfall Screening and Monitoring (If Applicable)**						
H1	Does the permittee conduct dry or wet weather screening at outfalls to characterize stormwater flows from the MS4?						
H2	Does the permittee have written screening procedures?						
H3	What is the permittee's schedule for screening the sites?						
H4	Are parts of the permit area prioritized for screening based on incidents of illicit discharges, land use, dumping reports, etc.?						
H5	What parameters are being tested?						
H6	How does the permittee prioritize sites for follow-up (e.g., magnitude and nature of suspected discharge)?						

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
H7	Who conducts the sampling? What kind of training have sampling personnel received?						
H8	What type of records are kept?						
H8a	Analytical results						
H8b	Date and duration (in hours) of the storm events sampled (rainfall data)						
H8c	Rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff (rainfall data)						
H8d	Duration (in hours) of the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (rainfall data)						
H8e	Estimate of the total flow of the discharge sampled (stage and velocity)						
H9	What analytical methods are used (i.e., 40 CFR Part 136)?						
H10	What are the results of the initial sampling and analysis?						
H11	Has the permittee made any changes to the monitoring program based on past results and experience?						
H12	How have monitoring results been used to assess program components?						
H13	Are monitoring data used to estimate pollutant loads for a TMDL?						
I	**Biological Monitoring (If Applicable)**						
I1	Does the permittee perform biological sampling?						
I2	Has a plan been developed to conduct biological sampling? If so, does the plan include the following:						
I2a	Identification of sampling stations and rationale for selection						
I2b	Location of known major MS4 outfalls discharging to water bodies in which sampling stations were chosen						
I2c	Land use activities near sampling stations						
I2d	Frequency of monitoring						
I3	Who conducts biological sampling and what training have they received?						
I4	Has the permittee made any changes to the monitoring program based on past results and experience?						
I5	How have monitoring results been used to assess program components?						
J	**Ambient Monitoring (If Applicable)**						
J1	Does the permittee conduct ambient monitoring to characterize water quality conditions in receiving waters?						
J2	How were the sampling sites selected?						
J3	Is sampling conducted both during dry weather and wet weather?						
J4	What is the frequency of sampling?						
J5	What parameters are analyzed? What sampling and analytical methods have been used?						
J6	Does the permittee have a written protocol or procedures for this sampling program?						
J7	Who conducts the sampling and what training have they received?						
J8	Has the permittee made any changes to the monitoring program based on past results and experience?						

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
J9	How have monitoring results been used to assess program components?						
J10	Are monitoring data used to estimate pollutant loads for a TMDL?						
K	**Data Collection and Reporting**						
K1	What reporting requirements are included in the MS4 NPDES permit?						
K2	For co-permittees or Phase II permittees that rely on other entities to implement required elements of the program, how are data provided or reported?						
K3	How are the required data collected, tracked, and reported?						
K3a	Is there a database?						
K3b	Are there reporting forms?						
K4	Are there internal reporting deadlines within the municipal program structure?						
K5	Are the appropriate data being collected by the permittee to be able to measure effectiveness and determine if performance standards are being met?						
K6	How are data disseminated to those who use them, if at all?						
L	**Consent Decree Questions**						
L1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
L1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
L2a	Have deficiencies or potential violations been identified?						
L2b	What are recommendations for correcting these deficiencies or potential violations?						
L3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
L4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
L5	If best practices cannot be universally implemented, what are the identified impediments?						

Appendix C

PEAR 1 through 6 Schedule

C1: PEAR #1 – Schedule for Post-Construction / Permanent Best Management Practices

Appendix C1: Schedule for PEAR #1 – Post-Construction / Permanent Best Management Practices

1. Notice of Audit

- Within 7 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 22 March 2017

2. Records Request

- Within 14 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 29 March 2017

3. Fulfillment of Records Request

- Within 43 Days of AWPC
- Within 29 Days of Last Milestone
- By Thursday 27 April 2017

4. Records Review Complete

- Within 57 Days of AWPC
- Within 14 Days of Last Milestone
- By Thursday 11 May 2017

5. Pre-Onsite Evaluation Conference Call

- Within 64 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 18 May 2017

6. Completion of Onsite Evaluation

- Within 82 Days of AWPC
- Within 18 Days of Last Milestone
- By Monday 5 June 2017

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C1: Schedule for PEAR #1 – Post-Construction / Permanent Best Management Practices

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
76 Days After AWPC Tuesday 30 May 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* OGG CONRAC, location tentative *BMP 2:* Wash rack, location tentative [An additional BMP will be inspected only if one is installed by this time] **11am – 12pm** Debrief Meeting [See Note (c)]	77 Days After AWPC Wednesday 31 May 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* Pervious pavement and bioswale systems, NDWP New Employee Parking Lots at Elliott St. *BMP 2:* Contech CDS 2025 System and FloGuard drop inlet filtration insert, NDWP Diamondhead Site Improvements, GSE Lot fronting Hardstand 3 *BMP 3:* Bioswale system, Kalewa St Storage Lots 1-6, Corner of Lagoon and Kalewa St. **11am – 12pm** Debrief Meeting [See Note (c)]	79 Days After AWPC Friday 2 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1*: Alaska Marine Lines, Pier 29 *BMP 2:* Matson Auto Facility, Pier 32 *BMP 3:* HC&D Facility, Pier 60 Replaced with UH Marine Center Pier 35, per 4-18-17 Call with Spencer Yim **11am – 12pm** Debrief Meeting [See Note (c)]	82 Days After AWPC Monday 5 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* GLP Asphalt Facility [Additional BMPs will be inspected only if they are installed by this time] Spencer Yim confirmed via phone on 4-18-17 that no additional BMPs have been installed. **11am – 12pm** Debrief Meeting [See Note (c)]	76 Days After AWPC Tuesday 30 May 2017 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] [BMPs will be inspected only if they are installed by this time] See Records Request. No BMPs to inspect. Meeting only. **4pm – 5pm** Debrief Meeting [See Note (c)]	78 Days After AWPC Thursday 1 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* University Ave. Bioswales, In median of H-1 ramps to University Ave. on makai side of freeway *BMP 2:* Fort Weaver Rd. CDS Units, Fort Weaver Rd., Ewa *BMP 3:* Luluku Storm Water Treatment System, H-3/Likelike interchange, Kaneohe **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) The Audit Team will then verify that up to three (3) structural and source control BMPs approved by each permittee and subject to post-construction requirements were installed and are being maintained properly in the field. Approved plans and inspection records for each BMP will have been reviewed ahead of the onsite evaluation (during the records review period). The BMPs identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 90 Days of AWPC
- **Consent Decree Deadline:** Within 90 Days of AWPC
- Within 8 Days of Last Milestone
- By Tuesday 13 June 2017

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 135 Days of AWPC
- **Consent Decree Deadline:** Within 135 Days of AWPC
- Within 45 Days of Last Milestone
- By Friday 28 July 2017

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 162 Days of AWPC
- Within 27 Days of Last Milestone
- By Thursday 24 August 2017

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 163 Days of AWPC[1]
- **Consent Decree Deadline:** Within 165 Days of AWPC
- Within 1 Days of Last Milestone
- By Friday 25 August 2017

11. Completion of Final PEAR

- Within 183 Days of AWPC[2]
- **Consent Decree Deadline:** 210 Days of AWPC
- Within 20 Days of Last Milestone
- By Thursday 14 September 2017

[1] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.
[2] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C2: PEAR #2 – Schedule for Construction Site Runoff Control

1. Notice of Audit

- Within 190 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 21 September 2017

2. Records Request

- Within 197 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 28 September 2017

3. Fulfillment of Records Request

- Within 226 Days of AWPC
- Within 29 Days of Last Milestone
- By Friday 27 October 2017

4. Records Review Complete

- Within 239 Days of AWPC
- Within 13 Days of Last Milestone
- By Thursday 9 November 2017

5. Pre-Onsite Evaluation Conference Call

- Within 246 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 16 November 2017

6. Completion of Onsite Evaluation

- Within 261 Days of AWPC
- Within 15 Days of Last Milestone
- By Friday 1 December 2017

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C2: Schedule for PEAR #2 - Construction Site Runoff Control

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
257 Days After AWPC Monday 27 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* OGG Consolidated Rent A Car Facility, Kahului Airport, Near Hemaloa St and Keolani Pl. *Construction Site #2:* OGG Vehicle Washrack Installation, AOA side, Near Cargo Building and Triturator **11am – 12pm** Debrief Meeting [See Note (c)]	258 Days After AWPC Tuesday 28 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Corner of Aolele, Rodgers, Paiea St. *Construction Site #2:* HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal **11am – 12pm** Debrief Meeting [See Note (c)]	260 Days After AWPC Thursday 30 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* New Kapalama Container Yard, Kapalama, Honolulu Harbor *Construction Site #2:* Piers 24-29 Utilities **11am – 12pm** Debrief Meeting [See Note (c)]	261 Days After AWPC Friday 1 December 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] [Unable to forecast construction projects; will be re-contacted by Kennedy/Jenks Consultants closer to the date] **11am – 12pm** Debrief Meeting [See Note (c)]	257 Days After AWPC Monday 27 November 2017 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] *Construction Site #1:* Kuihelani Highway Resurfacing [An additional construction site will be inspected only if one is active at this time] **4pm – 5pm** Debrief Meeting [See Note (c)]	259 Days After AWPC Wednesday 29 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] [Unable to forecast construction projects; will be re-contacted by Kennedy/Jenks Consultants closer to the date] **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) The Audit Team will then accompany construction inspectors as they conduct up to two (2) inspections. The purpose of the field evaluation is to assess the permittee's construction inspection program—how knowledgeable the inspectors are about stormwater requirements and BMPs, how thorough of an inspection they conduct, and how they handle problems identified at construction sites. The construction sites identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 268 Days of AWPC[1]
- **Consent Decree Deadline:** Within 270 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 8 December 2017

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 313 Days of AWPC[2]
- **Consent Decree Deadline:** Within 315 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 22 January 2018

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM

- Within 338 Days of AWPC
- Within 25 Days of Last Milestone
- By Friday 16 February 2018

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM

- Within 342 Days of AWPC[2]
- **Consent Decree Deadline:** Within 345 Days of AWPC
- Within 4 Days of Last Milestone
- By Tuesday 20 February 2018

11. Completion of Final PEAR

- Within 362 Days of AWPC[3]
- **Consent Decree Deadline:** 390 Days of AWPC
- Within 20 Days of Last Milestone
- By Monday 12 March 2018

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[1] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.
[2] The deadline is ahead of the CD Deadline due to the required shift in the #7 deadline.
[3] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C3: PEAR #3 – Schedule for Public Outreach / Public Involvement

Appendix C3: Schedule for PEAR #3 - Public Outreach / Public Involvement Program

1. Notice of Audit

- Within 369 Days of AWPC
- Within 7 Days of Last Milestone
- By Monday 19 March 2018

2. Records Request

- Within 377 Days of AWPC
- Within 8 Days of Last Milestone
- By Tuesday 27 March 2018

3. Fulfillment of Records Request

- Within 420 Days of AWPC
- Within 43 Days of Last Milestone
- By Wednesday 9 May 2018

4. Records Review Complete

- Within 450 Days of AWPC
- **Consent Decree Deadline:** Within 450 Days of AWPC
- Within 30 Days of Last Milestone
- By Friday 8 June 2018

For this Program Element, the end of the records review period represents the completion of evaluation. No onsite evaluation will occur for this program element. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators may be conducted during the records review period. If requested by the Audit Team or MS4 Permit Coordinator, an in-person meeting may be scheduled during this period.

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.

5. – 7. Not Applicable (See #4)

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 495 Days of AWPC
- **Consent Decree Deadline:** Within 495 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 23 July 2018

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 523 Days of AWPC
- Within 28 Days of Last Milestone
- By Monday 20 August 2018

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 525 Days of AWPC
- **Consent Decree Deadline:** Within 525 Days of AWPC
- Within 2 Days of Last Milestone
- By Wednesday 22 August 2018

11. Completion of Final PEAR

- Within 545 Days of AWPC[1]
- **Consent Decree Deadline:** 570 Days of AWPC
- Within 20 Days of Last Milestone
- By Tuesday 11 September 2018

[1] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C4: PEAR #4 – Schedule for Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program

Appendix C4: Schedule for PEAR #4 - Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program

1. Notice of Audit

- Within 552 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 18 September 2018

2. Records Request

- Within 559 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 25 September 2018

3. Fulfillment of Records Request

- Within 583 Days of AWPC
- Within 24 Days of Last Milestone
- By Friday 19 October 2018

4. Records Review Complete

- Within 597 Days of AWPC
- Within 14 Days of Last Milestone
- By Friday 2 November 2018

5. Pre-Onsite Evaluation Conference Call

- Within 604 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 9 November 2018

6. Completion of Onsite Evaluation

- Within 623 Days of AWPC
- Within 19 Days of Last Milestone
- By Wednesday 28 November 2018

The table below provides a preliminary schedule for the onsite evaluation period.

Appendix C4: Schedule for PEAR #4 - Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
614 Days After AWPC Monday 19 November 2018	616 Days After AWPC Wednesday 21 November 2018	621 Days After AWPC Monday 26 November 2018	622 Days After AWPC Tuesday 27 November 2018	615 Days After AWPC Tuesday 20 November 2018	623 Days After AWPC Wednesday 28 November 2018
8am – 9am IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]
9am – 11am IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]
Outfall #1: Near baseyard, Keolani Place *Outfall #2:* Sampling #G, Basin G	*Outfall #1:* Near Iolana Place, Off Lagoon Drive *Outfall #2:* Aolewa Place, Near Access A	*Outfall #1:* SDDH035050, Pier 38 *Outfall #2:* SDDH0517960, Pier 51	*Outfall #1:* SDDBP043660, Pier P-4 [Outfall #1 is the only accessible outfall at this harbor, due to safety concerns]	*Outfall #1:* Outlet No. 1 *Outfall #2:* DP3	*Outfall #1:* PID 304162 Jarrett White Rd., north of Mahiole St., *Outfall #2:* PID 301831, Kaahele St., north of Moanalua Rd.
11am – 12pm IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]
12pm – 1pm LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH
1pm – 2pm I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	[I/C Program not evaluated, as Maui Highways does not have an I/C Program]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]
2pm – 4pm I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]		**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]
I/C Facility #1: UPS, 9682 Hemaloa Pl. *I/C Facility #2:* ASIC-HFFC, 761 Kaonawai Pl.	*I/C Facility #1:* UPS, 128 Mokuea Pl. *I/C Facility #2:* United Airlines, 110 Lauhoe Pl.	*I/C Facility #1:* Young Brothers Maintenance Facility, Pier 39 *I/C Facility #2:* Matson Maintenance Facility, Piers 52-53	*I/C Facility #1:* Marisco *I/C Facility #2:* Grace Pacific		*I/C Facility #1:* First Hawaiian Bank, 94-205 Leoku St., Waipahu, HI *I/C Facility #2:* CM Recycling, 204 Sand Island Access Rd., Honolulu, HI
4pm – 5pm I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]		**4pm – 5pm** I/C Debrief Meeting [See Note (d)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meetings. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) Illicit Discharge Detection and Elimination (IDDE) Program: The Audit Team will accompany inspectors in the field as they conduct up to two (2) dry-weather outfall screenings. The outfalls identified in this Appendix are preliminary and are subject to modification.

(c) Industrial/Commercial (I/C) Program: The Audit Team will accompany inspectors in the field as they inspect up to two (2) industrial/commercial facilities. The facilities identified in this Appendix are preliminary and are subject to modification.

(d) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period
- Within 630 Days of AWPC
- **Consent Decree Deadline:** Within 630 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 5 December 2018

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators
- Within 674 Days of AWPC[1]
- **Consent Decree Deadline:** Within 675 Days of AWPC
- Within 44 Days of Last Milestone
- By Friday 18 January 2019

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM
- Within 700 Days of AWPC
- Within 26 Days of Last Milestone
- By Wednesday 13 February 2019

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM
- Within 702 Days of AWPC[2]
- **Consent Decree Deadline:** Within 705 Days of AWPC
- Within 2 Days of Last Milestone
- By Friday 15 February 2019

11. Completion of Final PEAR
- Within 723 Days of AWPC[3]
- **Consent Decree Deadline:** 750 Days of AWPC
- Within 21 Days of Last Milestone
- By Friday 8 March 2019

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.
[2] The deadline is ahead of the CD Deadline due to the required shift in the #8 deadline.
[3] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C5: PEAR #5 – Schedule for Pollution Prevention / Good Housekeeping Program

Appendix C5: Schedule for PEAR #5: Pollution Prevention / Good Housekeeping Program

1. Notice of Audit

- Within 730 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 15 March 2019

2. Records Request

- Within 737 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 22 March 2019

3. Fulfillment of Records Request

- Within 762 Days of AWPC
- Within 25 Days of Last Milestone
- By Tuesday 16 April 2019

4. Records Review Complete

- Within 776 Days of AWPC
- Within 14 Days of Last Milestone
- By Tuesday 30 April 2019

5. Pre-Onsite Evaluation Conference Call

- Within 783 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 7 May 2019

6. Completion of Onsite Evaluation

- Within 800 Days of AWPC
- Within 17 Days of Last Milestone
- By Friday 24 May 2019

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C5: Schedule for PEAR #5: Pollution Prevention / Good Housekeeping Program

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
796 Days After AWPC Monday 20 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* OGG Baseyard, Keolani Pl. *Facility #2:* ARFF Station, Onsite **11am – 12pm** Debrief Meeting [See Note (c)]	797 Days After AWPC Tuesday 21 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* HNL Baseyard, 2919 Aolele St. *Facility #2:* Crash Fire Station 2, off Lagoon Drive **11am – 12pm** Debrief Meeting [See Note (c)]	799 Days After AWPC Thursday 23 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Sand Island Baseyard, 48 Sand Island Access Road [DOT-HAR only operates one maintenance facility at Honolulu Harbor] **11am – 12pm** Debrief Meeting [See Note (c)]	800 Days After AWPC Friday 24 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Kalaeloa Storage Facility [DOT-HAR only operates one maintenance facility at Kalaeloa Harbor] **11am – 12pm** Debrief Meeting [See Note (c)]	796 Days After AWPC Monday 20 May 2019 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] *Facility #1:* HWY-M Kahului Baseyard, 650 Palapapa Dr. *Facility #2:* HAR-M Kahului Harbor, 103 Ala Luina St. **4pm – 5pm** Debrief Meeting [See Note (c)]	798 Days After AWPC Wednesday 22 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Kakoi Baseyard, 727 Kakoi St. *Facility #2:* Windward Baseyard, 45-889 Pookela St. **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) After the Kickoff Meeting, the Audit Team will conduct a walk-through of up to two (2) permittee owned or operated facilities (maintenance yards, chemical storage facilities, etc.) with a facility supervisor and/or other key staff to verify that activities are performed as described in the SWMPP. The facilities identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 810 Days of AWPC
- **Consent Decree Deadline:** Within 810 Days of AWPC
- Within 10 Days of Last Milestone
- By Tuesday 3 June 2019

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 855 Days of AWPC
- **Consent Decree Deadline:** Within 855 Days of AWPC
- Within 45 Days of Last Milestone
- By Thursday 18 July 2019

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 882 Days of AWPC
- Within 27 Days of Last Milestone
- By Wednesday 14 August 2019

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 884 Days of AWPC[1]
- **Consent Decree Deadline:** Within 885 Days of AWPC
- Within 2 Day of Last Milestone
- By Friday 16 August 2019

11. Completion of Final PEAR

- Within 905 Days of AWPC[2]
- **Consent Decree Deadline:** 930 Days of AWPC
- Within 21 Days of Last Milestone
- By Friday 6 September 2019

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.
[2] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C6: PEAR #6 – Schedule for Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

Appendix C6: Schedule for PEAR #6 - Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

1. Notice of Audit

- Within 912 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 13 September 2019

2. Records Request

- Within 919 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 20 September 2019

3. Fulfillment of Records Request

- Within 961 Days of AWPC
- Within 42 Days of Last Milestone
- By Friday 1 November 2019

4. Records Review Complete

- Within 989 Days of AWPC[1]
- **Consent Decree Deadline:** Within 990 Days of AWPC
- Within 28 Days of Last Milestone
- By Friday 29 November 2019

For this Program Element, the end of the records review period represents the completion of evaluation. No onsite evaluation will occur for this program element. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators will be conducted during the records review period. If requested by the Audit Team or MS4 Permit Coordinator, an in-person meeting may be scheduled during this period.

Airports		**Harbors**		**Highways**	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.

5. – 7. Not Applicable (See #4)

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 1034 Days of AWPC[2]
- **Consent Decree Deadline:** Within 1035 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 13 January 2020

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM

- Within 1058 Days of AWPC
- Within 24 Days of Last Milestone
- By Thursday 6 February 2019

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM

- Within 1064 Days of AWPC[2]
- **Consent Decree Deadline:** Within 1065 Days of AWPC
- Within 6 Days of Last Milestone
- By Wednesday 12 February 2020

11. Completion of Final PEAR

- Within 1108 Days of AWPC[3]
- **Consent Decree Deadline:** 1110 Days of AWPC
- Within 44 Days of Last Milestone
- By Friday 27 March 2020

[2] The deadline is ahead of the CD Deadline due to the required shift in the #4 deadline.
[3] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.

Appendix D

Notices to EPA & DOH

D1: Draft Notice of Potential Violation

State of Hawaii Department of Transportation
MS4 Permit Audit
Draft Notice of Potential Violation

Potential Violation Tracking #: _____

Determination of Potential Violation Date: _____

Potential Violation Notification Date:_____
(Today's Date)

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

_____

_____

_____

_____

_____

_____

_____

Description of Attached Photographs (if applicable):

_____

_____

_____

_____

Applicable Regulatory References

NPDES Permit No.: _____

SWMPP: _____

Hawaii Administrative Rules (HAR): _____

Code of Federal Regulations (CFR):_____

DRAFT

D2: Final Notice of Potential Violation

State of Hawaii Department of Transportation
MS4 Permit Audit
Final Notice of Potential Violation

Potential Violation Tracking #: _____

Determination of Potential Violation Date: _____

Potential Violation Notification Date: _____
(Today's Date)

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

_____
_____
_____
_____
_____
_____
_____

Description of Attached Photographs (if applicable):

_____
_____
_____
_____

Applicable Regulatory References

NPDES Permit No.: _____

SWMPP: _____

Hawaii Administrative Rules (HAR): _____

Code of Federal Regulations (CFR):_____

Result of HDOT PM Review:

- ☐ Confirmed Potential Violation
  - o Email Notice of Corrective Action sent to EPA/DOH on: _____
    (Due Within 14 Calendar Days of Potential Violation Notification Date)
- ☐ Re-categorized as Deficiency
  - o Email Notice sent to EPA/DOH on: _____
- ☐ Summarily Dismissed
  - o Email Notice sent to EPA/DOH on: _____

FINAL

D3: Notice of Corrective Action

State of Hawaii Department of Transportation
MS4 Permit Audit
Notice of Corrective Action

Corrective Action in Response to:

☐ Potential Violation (complete Section A & C)

☐ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:____ Potential Violation Notification Date:_____
(from Notice of Potential Violation Form)

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

HDOT Receipt of Draft PEAR Date:_____

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action

_____

_____

_____

_____

_____

_____

_____

_____

_____

Description of Attached Photographs (if applicable):

_____

_____

_____

_____

_____

FINAL Program Element Audit Report (PEAR) No. 2

Construction Site Runoff Control
Part 1 of 2

State Project No. OSC-15-01

March 2018

Prepared by

Kennedy/Jenks Consultants

Prepared for

State of Hawaii
Department of Transportation
Office of Environmental Compliance
869 Punchbowl Street
Honolulu, Hawaii 96813

K/J Project No. 1696025*00

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C Revised Audit Work Plan, November 2016

List of Acronyms

AWP	Audit Work Plan
BAT	Best Available Technology
BCT	Best Conventional Pollutant Control Technology
BMP	best management practice
CD	Consent Decree
CESSWI	Certified Erosion, Sediment & Stormwater Inspector
CISEC	Certified Inspector of Sediment and Erosion Control
CPESC	Certified Professional in Erosion and Sediment Control
CPSWQ	Certified Professional in Stormwater Quality
DOH	State of Hawaii Department of Health
EPA	United States Environmental Protection Agency
ERP	Enforcement Response Plan
HDOT	State of Hawaii Department of Transportation
I/C	Industrial Commercial Activities/Tenant
IDDE	Illicit Discharge Detection and Elimination
MS4	Municipal Separate Storm Sewer System
PEAR	Program Element Audit Report
PM	Project Manager
SWMPP	Stormwater Management Program Plan
SWPPP	Stormwater Pollution Prevention Plan

Section 1: Introduction

Under Paragraph 10.d of the Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC) entered on 5 November 2014 (CD) with the United States Environmental Protection Agency (EPA) and the State of Hawaii Department of Health (DOH), the State of Hawaii Department of Transportation (HDOT) was required to perform compliance audits of Municipal Separate Storm Sewer System (MS4) permits issued to HDOT's Airports, Highways, and Harbors Divisions (referred to herein as the singular "MS4 Permit Audit"). The ongoing MS4 Permit Audit is being conducted in accordance with an Audit Work Plan (AWP) approved by EPA and DOH on 31 October 2016 and provided as Appendix C of this report. The MS4 Permit Audit consists of individual audits of six program elements:

1. Post-Construction Runoff Control / Permanent Best Management Practices (BMPs)
2. Construction Site Runoff Control
3. Public Outreach / Public Involvement
4. Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
5. Pollution Prevention / Good Housekeeping Program
6. Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

This Program Element Audit Report (PEAR) 2 documents procedures and findings of the Construction Site Runoff Control audit.

Section 2: Methods (CD Appendix A Section D.7.a.)

As required in CD Appendix A Section D.7.a., this section includes a specific statement of the procedures followed, HDOT sites and activities visited, and materials reviewed during the MS4 Permit Audit. Additional details on specific dates can be found in Appendix A. Additional permit-specific details can be found in Appendices B1 through B6. The Audit Team reviewed the individual program element for the six permitted MS4 programs concurrently, developing a PEAR that represents the culmination of the auditing efforts across the three HDOT Divisions. The MS4 Permit Audit included three phases (Pre-Audit, On-Site Evaluation, and Reporting), detailed in the following sections.

2.1 Pre-Audit

2.1.1 Notice of Audit

The Audit Team began by providing a Notice of Audit to the MS4 Permit Coordinators via email. The Audit Team requested that the MS4 Permit Coordinators review two key documents.

First, the Audit Team created a table of Governing Regulations applicable to PEAR 2, which included sections of the Federal regulations, HDOT's MS4 permits, and the CD. This table was used by the Audit Team in conjunction with the guiding questions in Appendix B of the AWP to informally track the results from the evaluation. The MS4 Permit Coordinators provided comments on this table.

Second, the Audit Team developed a draft list of documents to be reviewed to generate the Records Request. The Audit Team asked the MS4 Permit Coordinators to confirm that the Audit Team had identified the most updated and suitable documents. The Audit Team finalized this list of documents based on feedback from the MS4 Permit Coordinators. This list is provided in Section 1 of Appendices B1 through B6.

2.1.2 Records Request

The Audit Team reviewed the key documents and identified those sections relevant to PEAR 2 (provided in Section 2 of Appendices B1 through B6). Based on this review, the Audit Team developed a Records Request that was shared with the MS4 Permit Coordinators.

2.1.3 Records Review

The MS4 Permit Coordinators responded to the Records Request and the Audit Team completed an initial review of the records received. The Audit Team next sent Requests for Clarification. The Audit Team also conducted in-person meetings with MS4 Permit Coordinators during this timeframe. MS4 Permit Coordinators provided additional information and records in response to this second request. The Audit Team then completed their review of records received.

2.2 On-Site Evaluation

2.2.1 Pre-On-Site Evaluation Conference Call

The Audit Team and HDOT Project Manager (PM) contacted the MS4 Permit Coordinators to confirm schedules, address questions and security concerns, confirm personnel safety equipment needed, and organize training and orientation briefings that were anticipated to be required.

2.2.2 On-Site Evaluation

During the On−Site Evaluation, the Audit Team visited several active construction sites at the Airports Division on Oahu and Maui, and the Harbors and Highways Divisions on Oahu. Additional details on specific sites visited during the On-Site Evaluations and associated photographs can be found in Sections 3 and 4, respectively, of Appendices B1 through B6.

2.2.3 Post-On-Site Evaluation Review Period

Following the On-Site Evaluations, the Audit Team reviewed the findings of the Pre-Audits and On-Site Evaluations and addressed final evaluation-related tasks that were noted. This review period completed the evaluation of the program element, as referenced in CD Appendix A, Section B.5.

2.3 Reporting

2.3.1 Draft PEAR

Pursuant to the CD, the Audit Team prepared a draft PEAR 2 and transmitted it to the HDOT PM, who distributed copies of the draft PEAR to the appropriate MS4 Permit Coordinators. The MS4 Permit Coordinators reviewed the draft PEAR and distributed the report to key personnel for their review (at the discretion of the MS4 Permit Coordinators). The MS4 Permit Coordinators submitted to the HDOT PM a consolidated written request for clarification and corrections to the draft PEAR for their respective permit. The HDOT PM then submitted the consolidated requests and corrections to the Audit PM.

2.3.2 Final PEAR

The Audit Team made appropriate changes to the draft PEAR and submitted the final PEAR.

Section 3: Key Findings (CD Appendix A Section D.7.b. – e.)

As required in CD Appendix A Section D.7.b. – e., this section includes details on the key findings of the MS4 Permit Audit for PEAR 2.

Compliance with several program components could not be determined, as discussed below.

Best Available Technology Currently Available (BAT) / Best Conventional Pollutant Control Technology (BCT) Discharge Requirement

HI S000005 Part D.1.d.(2)(i) and HI S000001 Part D.1.d.(3)(i) state the following:

[…prior to approval of the construction plans and specifications … (Permittee) shall review (various documents)… to verify that meets the following requirements:] Implementation of measures to ensure that the discharge of pollutants from the site will be reduced to the appropriate discharge limitations subject to the Best Available Technology currently available (BAT)/ Best Conventional Pollutant Control Technology (BCT) discharge requirement, consistent with the CWA and other respective federal and state requirements for such facilities and will not cause or contribute to an exceedance of water quality standards.

The Audit Team has concluded that this permit language requires further consultation between HDOT and DOH to clarify what is expected of HDOT as a permittee. As such, compliance with this permit requirement could not be determined.

Expression of Stormwater Management Program Plan as Goals

The Kahului Airport Stormwater Management Program Plan (SWMPP) establishes several goals intended to be met by 31 December 2018. These goals include completing plan review prior to initiating work on 90 percent of construction projects and conducting all required inspections. Because the stated deadline has not yet been reached, compliance with these permit requirements could not be determined.

Lack of Active Construction Sites

At both Honolulu Harbor and Highways Maui District, the MS4 Permit Coordinators communicated that there were no active construction sites as of the date of the On-Site Evaluation. For this reason, compliance with several permit and SWMPP commitments for these two permittees could not be determined.

Enforcement Response Plan (ERP) Under Development

As of December 2017, the Harbors Division ERP was in the process of being finalized and was not fully operational within the Division. Therefore, it was difficult for the Audit Team to fully assess compliance with enforcement-related permit requirements and SWMPP commitments for Harbors Division.

Aside from the limitations discussed above and unless otherwise noted otherwise in this report, the Audit Team found HDOT's permittees to be in compliance with their permit obligations.

3.1 Identification of Potential Violations and Deficiencies (CD Appendix A Section D.7.c.)

As required in CD Appendix A Section D.7.c., this section includes an identification of Potential Violations and Deficiencies and recommendations for improvement.

3.1.1 Potential Violations

A Potential Violation is defined in the AWP as an area where the evaluation found the permittee not in compliance with a specific SWMPP commitment, the CD, and/or permit and regulations. The Audit Team identified no Potential Violations related to PEAR 2.

3.1.2 Deficiencies

A Deficiency is defined in the AWP as an item which, if not corrected, may lead to Potential Violations.

The Audit Team identified four (4) Deficiencies related to Airports Division. More details on the Deficiencies and associated Corrective Actions proposed by HDOT are provided in Section 6 of Appendices B1 and B2. For each Deficiency, the Audit Team's recommendations for improvement are also provided. Section 6.4 of the AWP further discusses HDOT's response to these Deficiencies, as required by CD Appendix A Section E.2.

3.2 Best Practices and Opportunities (CD Appendix A Section D.7.d.)

As required in CD Appendix A Section D.7.d., this section includes an identification of best practices and opportunities for information/technology transfer to be applied across the Divisions.

During the MS4 Permit Audit, the Audit Team noted several areas where best practices and technologies may be considered across the Divisions. Findings include the following five (5) items:

1. HDOT may consider exploring whether their various construction BMP manuals, which provide guidance on the installation and maintenance of construction BMPs, could be harmonized. At present, Harbors Division has adopted City and County of Honolulu's BMP Manual, while Airports Division and Highways Oahu District have developed their own customized manuals. While the Audit Team acknowledges that each Division oversees different types of construction projects, the use of a single consolidated manual or several more harmonized Division-specific manuals could lead to more streamlined training, inspection, and compliance throughout HDOT. Contractors working with different Divisions may find the resulting manual(s) easier to reference and HDOT may find them easier to maintain and update as changes occur to federal, state, and local BMP standards and technology.

2. HDOT may consider exploring whether harmonizing the Divisions' various construction Stormwater Pollution Prevention Plan (SWPPP) templates would be prudent. This could help ensure that all projects overseen by HDOT are held to a minimum standard of disclosure and may lead to more consistency for contractors working with multiple Divisions.

3. HDOT has begun consolidating required construction-related training of HDOT staff, consultants, and contractors through the annual Protect Our Water Conference. HDOT should explore whether continuing to consolidate training may be beneficial. At present, each Division has customized training programs based on their own permits and program requirements. The Audit Team found similar training requirements in the various permits. Common HDOT training sessions could reduce department-wide costs and lead to greater consistency.

4. HDOT should continue using the valuable data tracked in their respective construction stormwater databases to analyze trends and areas for improvement. For example, Highways Oahu District undertakes an annual review of inspection data to assess what kinds of deficiencies were common in the preceding year. That information is then used to revise their annual training materials. Harbors Division uses its Construction Site Runoff Control program database for analysis and improvement. Airports Division uses its Monthly Construction Inspection Summary Table to identify common types of deficiencies. Additional steps could involve identifying those contractors who are consistently deficient so that HDOT can provide them with additional training and oversight. The Audit Team is aware that the City and County of Honolulu is performing this kind of tracking and analysis; HDOT may consider reaching out to City and County of Honolulu staff to explore areas of collaboration and information sharing.

5. The Audit Team found the use of mobile devices such as tablets to be effective as they allow inspectors to connect to each Divisions' asset management system in real time. Inspectors can quickly pull up past inspection findings and photographs, simplifying their pre-inspection preparations and making their time on-site more effective. The Audit Team anticipates that the use of mobile devices will become even more useful as HDOT's asset management systems evolve.

3.3 Retrospective Analysis (CD Appendix A Section D.7.b.)

As required in CD Appendix A Section D.7.b., this section includes a retrospective analysis of activities that maybe outmoded, ineffective, insufficient, or excessively burdensome, and recommendations to modify, streamline, or expand them in accordance with what has been learned. Findings include the following four (4) items:

1. HDOT may consider requiring construction stormwater inspectors be certified in one or more of the following programs: Certified Inspector of Sediment and Erosion Control (CISEC), Certified Professional in Erosion and Sediment Control (CPESC), Certified Erosion, Sediment & Stormwater Inspector (CESSWI), and/or Certified Professional in

Stormwater Quality (CPSWQ)[1]. The Audit Team acknowledges that this would involve an initial investment/cost to register, annual fees, and continuing education units, as well as changes in position description and/or classification which may need approval by Department of Human Resources Development, Department of Budget and Finance, and participating Union(s). Nonetheless, the Audit Team believes that requiring inspectors to hold these kinds of certifications would help HDOT maintain a consistent level of expertise amongst its many inspectors.

2. HDOT may consider establishing a policy prohibiting ground disturbing activity before the initial BMP inspection. This policy would apply for those construction projects that fall under the purview of HDOT's six MS4 permits. This requirement is already included in the individual permits for Daniel K. Inouye International Airport and Highways Oahu District, as well as in the Harbors Division's CD. However, Kahului Airport and Highways Maui District do not have this requirement. Such a Department-wide policy would set a clear expectation that all contractors working under HDOT's purview must install BMPs in advance of ground disturbance.

3. HDOT may consider assessing whether a single 3rd party inspection frequency for the entire Department would be appropriate. At present, Daniel K. Inouye International Airport and Highways Oahu District individual permits call for monthly 3rd party inspections, with the ability to reduce that frequency to quarterly following satisfactory inspection results. Harbors Division's CD calls for biweekly inspections in the wet season and bimonthly inspections in the dry season. Kahului Airport and Highways Maui District permits do not specify an inspection frequency. Implementing a Department-wide policy may help increase consistency amongst the permittees and ensure a minimum level of HDOT oversight.

4. The Audit Team reviewed Airports Division Review Comments forms where responses and closed comments were not completed. HI S000005 Part D.1.d.(2)(iv) states that "[a] system shall be implemented to ensure all comments, identified during the review process has been properly addressed." Airports Division has already implemented associated corrective actions in response to PEAR 1 Deficiency #14.

3.4 Implementation (CD Appendix A Section D.7.e)

As required in CD Appendix A Section D.7.e., this section includes an analysis of the practices implemented for each Division's program elements and a determination as to whether identified best practices can be universally implemented across all three Divisions. If best practices cannot be universally implemented, this section describes identified impediments.

Several recommendations for universally implementing best practices have been identified in Sections 3.2 and 3.3. For HDOT staff to champion such implementation from within the organization, the Audit Team believes that a compelling case must be made for why the proposed changes will lead to improvements in compliance. Absent that compelling case, HDOT staff may understandably maintain that their time and attention should remain focused on

[1] CISEC certification is offered by CISEC, Inc. (https://www.cisecinc.org/). CPESC, CESSWI, and CPSWQ certifications are offered by EnviroCert International, Inc. (http://www.envirocertintl.org/).

implementing their current programs. The Audit Team has concluded that this represents the greatest impediment to universally implementing these recommendations.

3.5 Positive Program Elements

HDOT staff were helpful and cooperative in responding to requests for information, scheduling and coordinating the On-Site Evaluation, etc. HDOT staff were receptive to MS4 Permit Audit findings shared to date and interested in improving their MS4 programs. Findings include the following 11 items:

1. Though not mandated by their permits, Airports Division and Harbors Division have developed program requirements for projects that disturb less than 1 acre. They require that project proponents fill out a notification form describing their approach to erosion and sediment control. Highways Oahu District also requires all contract construction projects with land disturbing activities regardless of size to implement BMPs, develop SWPPPs, and conduct BMP inspections.

2. Highways Division maintains a publicly-available online map of current and future construction projects.

3. All three Divisions collaborate on the annual Protect Our Waters Conference, including initial planning stages, identifying relevant presenters and topics, and sharing in the conference's expenses. This shows increased collaboration amongst the various HDOT stormwater programs.

4. Highways Oahu District’s ERP Table 2-1 is an effective presentation of the timeframes required for contractors to address specific instances of non-compliance.

5. Highways Oahu District’s construction stormwater independent inspection form allows for a high level of specificity regarding the exact location of particular BMPs (such as reference to mileposts).

6. Highways Oahu District’s asset management system (Maximo) prompts inspectors to specify a date when deficiency follow-up is expected from a contractor. This allows program staff to easily generate a list of those deficiencies which are still outstanding and take appropriate follow-up action.

7. Through their asset management system (Maximo), Highways Oahu District can dynamically add and track site-specific BMPs. For example, if a contractor submitted a revised SWPPP indicating that they have installed additional BMPs, Highways Oahu District could add those BMPs to the database of site-specific inspection questions. Since the inspection questions are stored within the database, the questions are automatically added to the next inspection form, which prompts that inspector to check that BMP. The list of BMPs is not constrained by a physical paper form, which allows Highways Oahu District to be very specific in their referencing (i.e., inspecting Stockpiles 1, 2, and 3 individually, instead of a single line item: “Stockpiles”). This leads to a very effective and granular tracking of compliance at a given site.

8. Several of the construction sites visited during the MS4 Permit Audit utilized “live” BMP plans which were updated daily or weekly. For example, at the Daniel K. Inouye International Airport’s CONRAC project, the contractor used a large magnetic white board in a highly trafficked area. The board used magnetic BMPs that could be moved around based on the construction activities that day. The Audit Team commends this approach, as it leads to high-visibility and frequently-updated BMP plans.

9. The Audit Team observed that HDOT inspectors communicate well with contractors during the inspections. We found examples of inspectors using the inspection time as an opportunity to educate contractors. For example, during an inspection, Airports Division’s MS4 Permit Coordinator effectively fielded questions from contractor staff regarding overall stormwater regulations and compliance.

10. The Audit Team understands that Airports Division will soon be exercising the option afforded in their permit to reduce inspection frequency at sites with few deficiencies. This may allow Airports Division to focus their inspection and enforcement resources towards projects that have a greater need for oversight.

11. Airports Division has been receiving additional resources and consulting support for its program, which the Audit Team believes will help address several of the items identified in PEAR 1 and PEAR 2.

Appendix A

Project Milestones and Deadlines

Appendix A: PEAR 2 Project Milestones and Deadlines

Appendix A of the Consent Decree (CD) defines various project milestones and deadlines, described for ease of reference below:

Program Element	Evaluation Complete: [(a)]	Draft PEAR to HDOT: [(b)]	HDOT Review of Draft PEAR: [(c)]	Final PEAR to HDOT: [(d)]
PEAR 2: Construction Runoff Control	9 Months (270 Days)[(e)] After AWPC[(f)] 10 December 2017	315 Days After AWPC 24 January 2018	345 Days After AWPC 23 February 2018	390 Days After AWPC 9 April 2018

Notes:

(a) "Evaluation" as referenced in CD Appendix A Section B.5. is defined to represent the conclusion of the Post-On-Site Evaluation Review Period.
(b) Pursuant to CD Appendix A Section D.2., Kennedy/Jenks Consultants completed a draft audit report and transmitted it to State of Hawaii Department of Transportation (HDOT) within 45 days of completing the audit of this program element [defined as the conclusion of "evaluation", as discussed in Note (a)].
(c) Pursuant to CD Appendix A Section D.3., HDOT reviewed the draft PEAR to correct any factual inaccuracies within 30 days of receipt.
(d) Pursuant to CD Appendix A Section D.4., Kennedy/Jenks Consultants completed a final PEAR within 120 days of completing the audit of the program element [defined as the conclusion of "evaluation", as discussed in Note (a)].
(e) "Months" are based on 30-day month.
(f) AWPC = Audit Work Plan Commencement (15 March 2017)

Milestone	Date Completed
Notice of Audit	21 September 2017
Records Request	28 September 2017
Response to Records Request	27 October 2017
Completion of Records Review	9 November 2017
Attendance at HDOT Protect Our Water Conference (Construction Program Training)	15 November 2017
Pre-On-Site Evaluation Conference Call	16 November 2017 and 20 November 2017
On-Site Evaluation	27 November 2017 to 4 December 2017
End of Post-On-Site Evaluation Review Period	8 December 2017
Draft Potential Violations to HDOT PM	22 January 2018
Notice of Corrective Action to EPA/DOH	5 February 2018
Draft PEAR to HDOT PM	22 January 2018
MS4 Permit Coordinator Comments to HDOT PM	16 February 2018
HDOT PM Comments to Audit Team	20 February 2018
Final PEAR to HDOT PM	12 March 2018

Notes:

PM = project manager
TBD = to be determined

Appendix B1

Permit-Specific Information – Kahului Airport

Appendix B1: Permit-Specific Information – Kahului Airport

1. Key Documents

Permit / Document	1. Kahului Airport Small MS4 Permit HI 14KE349
2016 Annual Report	20170127.Contents of CD for Compliance Submission of Reports and Documents-HI14KE349.PDF
Construction Activities BMP Manual	Page 47 of OGG-Construction-and-Post-Construction-SW-Management-Plan-v2.0-Final-201709.pdf
Construction Site Inventory	Current Projects under construction: AM1032-13 OGG ConRAC AM1049-14 Wash Rack
DOH Comments on 2016 Annual Report	None received.
Enforcement Response Plan	Pages 23 and 24 of OGG-Construction-and-Post-Construction-SW-Management-Plan-v2.0-Final-201709.pdf
Organizational charts	Page 7 of OGG-Construction-and-Post-Construction-SW-Management-Plan-v2.0-Final-201709.pdf
Permit	OGG-MS4-permit-20140721.14KE349.FNL_.14.pdf
Construction Plan Design Review	App-C-Design-Review-Checklist_20140317.pdf 20171009.Construction-Plan-Design-Review-SOP-V1-7-2017 DOTA_SOP_ConstructionPlanReview.pdf
Previous Audit Findings	Not applicable to this permit
SWMPP	OGG-SWMPP_20141023.pdf
Website	http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/ogg-storm-water-program/

Permit / Document	1. Kahului Airport Small MS4 Permit HI 14KE349
Training and Education Materials	• 2017 Construction Inspector Training Quiz • DOTA Construction Training Slides.pdf • 2017 Construction Handout.pdf • Construction Program Information Sheet.pdf • OGG Storm Water Training Invitation Letter v1 (1).pdf • SW Training 2017_web version 2017_ with script.pdf • PPT Library Construction Documents Review Form.pdf • PPT Library HNL NPDES Permit Design and Construction Requirements.pdf • PPT Library Airports Division Specification Guideline Fed.pdf • PPT Library PM Process Pre-Con Meeting Minutes.pdf • PPT Library Procedure for notification of cont soil.pdf • PPT Library Procedure for notification of cont soil.pdf • PPT Library Tenant Improvement Approval Forms.pdf • 2017 Construction Inspector Training Survey.pdf • DOT Airports Construction Training_v5_20151021.pdf • DOTA_SOP_ConstructionPlanReview.pdf • 20160926.Transmittal and Contents of CD for Compliance Submission of Other-Updated Training-HIS000005.pdf • 20160909.Compliance Submission of Other-Updated Training-HIS000005.pdf

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
Construction and Post- Construction Storm Water Management Plan (September 2017) *(5.-OGG-Construction-and-Post-Construction-SW-Management-Plan-v2.0-Final-201709.pdf)*	Sections 1-6 Appendix A (Construction Process Flow Chart) Appendix B (Form for Projects < 1 Acre) Appendix C (Design Review Checklist) Appendix E (Construction Inspection Checklist)
2016 Annual Compliance Report - Stormwater Management Program *(20170127.Contents of CD for Compliance Submission of Reports and Documents-HI14KE349.PDF)*	Part I (page 1) Part II (page 7) Part III (pages 15- 17) Part V (pages 20, 22,23, 25) Attachment 1 (Photo Documentation) Attachment 9 (Construction Plan Review Log) Attachment 9 (Construction Inspection and Enforcement Log)
Kahului Airport Storm Water Management Program Plan (October 2014) (*OGG-SWMPP_20141023.pdf*)	In entirety
HDOT- Airports Standard Operating Procedures- Construction Plan Design and Review (*DOTA_SOP_ConstructionPlanReview.pdf)*	In entirety
Construction Activities BMP Manual *(Page 47 of Construction-and-Post-Construction-SW-Management-Plan-v2.0-Final-201709.pdf)*	In entirety
Permit *(OGG-MS4-permit-20140721.14KE349.FNL_.14.pdf)*	In entirety
Design Review Checklist *(App-C-Design-Review-Checklist_20140317.pdf)*	In entirety
Construction Plan Design Review Standard Operating Procedure *(20171009.Construction-Plan-Design-Review-SOP-V1-7-2017)*	In entirety
Website *(http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/ogg-storm-water-program/)*	In entirety
Training and Education Materials *(2017 Construction Inspector Training Quiz.pdf)*	In entirety

3. On-Site Evaluation

27 November 2017

On 27 November 2017, the Audit Team held a kickoff meeting at Kahului Airport with Airports Division staff and consultants. Photographs taken during the On-Site Evaluation can be found in Section 4.

Construction Site 1.1 Consolidated Rental Car (CONRAC) Facility

Next, the Audit Team walked to the CONRAC facility and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Airports Division staff and consultants as they conducted an inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

Construction Site 1.2 Wash Rack

This site was not under active construction on the day of the on-site evaluation, and was not yet ready for final inspection. Therefore, it was removed from the scope of the On-Site Evaluation.

4. On-Site Evaluation Photos

Photographs are provided on the subsequent pages below.

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.1
Records Review and Safety Meeting

Construction Site 1.1 Photo 1.1.2
Records Review and Safety Meeting

Construction Site 1.1 Photo 1.1.3
Records Review and Safety Meeting

Construction Site 1.1 Photo 1.1.4
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.5
Material Stockpiles

Construction Site 1.1 Photo 1.1.6
Material Stockpiles

Construction Site 1.1 Photo 1.1.7
Material Stockpiles

Construction Site 1.1 Photo 1.1.8
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.9
Material Stockpiles

Construction Site 1.1 Photo 1.1.10
Material Stockpiles

Construction Site 1.1 Photo 1.1.11
Material Stockpiles

Construction Site 1.1 Photo 1.1.12
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.13
Construction Site

Construction Site 1.1 Photo 1.1.14
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.15
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.16
Vehicle Tire Wash Rack

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.17
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.18
Construction Staging Area

Construction Site 1.1 Photo 1.1.19
Material Stockpiles

Construction Site 1.1 Photo 1.1.20
Construction Staging Area

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.21
Material Stockpiles

Construction Site 1.1 Photo 1.1.22
Material Stockpiles

Construction Site 1.1 Photo 1.1.23
Construction Site Vehicle Access

Construction Site 1.1 Photo 1.1.24
Construction Site Vehicle Access

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.25
Construction Site Vehicle Access

Construction Site 1.1 Photo 1.1.26
Construction Site Vehicle Access

Construction Site 1.1 Photo 1.1.27
Material Stockpiles

Construction Site 1.1 Photo 1.1.28
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.29
Material Stockpiles

Construction Site 1.1 Photo 1.1.30
Material Stockpiles

Construction Site 1.1 Photo 1.1.31
Construction Site Vehicle Access

Construction Site 1.1 Photo 1.1.32
Construction Site Vehicle Access

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.33
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.34
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.35
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.36
Vehicle Tire Wash Rack

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.37
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.38
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.39
Material Waste Bins

Construction Site 1.1 Photo 1.1.40
Material Waste Bins

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.41
Material Waste Bins

Construction Site 1.1 Photo 1.1.42
Material Waste Bins

Construction Site 1.1 Photo 1.1.43
Material Waste Bins

Construction Site 1.1 Photo 1.1.44
Vehicle Tire Wash Rack

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.45
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.46
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.47
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.48
Material Waste Bins

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.49
Material Waste Bins

Construction Site 1.1 Photo 1.1.50
Material Waste Bins

Construction Site 1.1 Photo 1.1.51
Material Waste Bins

Construction Site 1.1 Photo 1.1.52
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.53
Erosion Control Berms

Construction Site 1.1 Photo 1.1.54
Erosion Control Berms

Construction Site 1.1 Photo 1.1.55
Erosion Control Berms

Construction Site 1.1 Photo 1.1.56
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.57
Erosion Control Berms

Construction Site 1.1 Photo 1.1.58
Erosion Control Berms

Construction Site 1.1 Photo 1.1.59
Erosion Control Berms

Construction Site 1.1 Photo 1.1.60
Concrete Washout Bins

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.61
Concrete Washout Bins

Construction Site 1.1 Photo 1.1.62
Concrete Washout Bins

Construction Site 1.1 Photo 1.1.63
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.64
Vehicle Tire Wash Rack

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.65
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.66
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.67
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.68
Concrete Washout Bins

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.69
Erosion Control Berms

Construction Site 1.1 Photo 1.1.70
Erosion Control Berms

Construction Site 1.1 Photo 1.1.71
Vehicle Tire Wash Rack

Construction Site 1.1 Photo 1.1.72
Concrete Washout Bins

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.73
Concrete Washout Bins

Construction Site 1.1 Photo 1.1.74
Material Stockpiles

Construction Site 1.1 Photo 1.1.75
Exposed Soil

Construction Site 1.1 Photo 1.1.76
Exposed Soil

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.77
Exposed Soil

Construction Site 1.1 Photo 1.1.78
Exposed Soil

Construction Site 1.1 Photo 1.1.79
Exposed Soil

Construction Site 1.1 Photo 1.1.80
Exposed Soil

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.81
Exposed Soil

Construction Site 1.1 Photo 1.1.82
Exposed Soil

Construction Site 1.1 Photo 1.1.83
Exposed Soil

Construction Site 1.1 Photo 1.1.84
Exposed Soil

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.85
Erosion Control Berms

Construction Site 1.1 Photo 1.1.86
Material Stockpiles

Construction Site 1.1 Photo 1.1.87
Erosion Control Berms

Construction Site 1.1 Photo 1.1.88
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.89
Material Stockpiles

Construction Site 1.1 Photo 1.1.90
Construction Site

Construction Site 1.1 Photo 1.1.91
Material Stockpiles

Construction Site 1.1 Photo 1.1.92
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.93
Material Stockpiles

Construction Site 1.1 Photo 1.1.94
Material Stockpiles

Construction Site 1.1 Photo 1.1.95
Material Storage Area

Construction Site 1.1 Photo 1.1.96
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.97
Erosion Control Berms

Construction Site 1.1 Photo 1.1.98
Erosion Control Berms

Construction Site 1.1 Photo 1.1.99
Erosion Control Berms

Construction Site 1.1 Photo 1.1.100
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.101
Site Inspection

Construction Site 1.1 Photo 1.1.102
Material Storage Area

Construction Site 1.1 Photo 1.1.103
Leaking Equipment

Construction Site 1.1 Photo 1.1.104
Leaking Equipment

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.105
Erosion Control Berms

Construction Site 1.1 Photo 1.1.106
Erosion Control Berms

Construction Site 1.1 Photo 1.1.107
Exposed Sediment

Construction Site 1.1 Photo 1.1.108
Exposed Sediment

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.109
Material Storage Area

Construction Site 1.1 Photo 1.1.110
Construction Site

Construction Site 1.1 Photo 1.1.111
Construction Site

Construction Site 1.1 Photo 1.1.112
Dust Control Fence

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.113
Erosion Control Berms

Construction Site 1.1 Photo 1.1.114
Material Storage Area

Construction Site 1.1 Photo 1.1.115
Material Storage Area

Construction Site 1.1 Photo 1.1.116
Material Storage Area

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.117
Material Storage Area

Construction Site 1.1 Photo 1.1.118
Construction Site

Construction Site 1.1 Photo 1.1.119
Pedestrian Accessway

Construction Site 1.1 Photo 1.1.120
Drain Inlet Protection

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.121
Site Inspection

Construction Site 1.1 Photo 1.1.122
Erosion Control Berms

Construction Site 1.1 Photo 1.1.123
Material Stockpiles

Construction Site 1.1 Photo 1.1.124
Construction Employee Restroom

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.125
Storm Drain Manhole

Construction Site 1.1 Photo 1.1.126
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.127
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.128
Drain Inlet Protection

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.129
Pedestrian Accessway

Construction Site 1.1 Photo 1.1.130
Pedestrian Accessway

Construction Site 1.1 Photo 1.1.131
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.132
Concrete Material Waste Bin

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.133
Concrete Material Waste Bin

Construction Site 1.1 Photo 1.1.134
Dust Control

Construction Site 1.1 Photo 1.1.135
Material Stockpiles

Construction Site 1.1 Photo 1.1.136
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 1.1 Photo 1.1.137
Material Storage Area

Construction Site 1.1 Photo 1.1.138
Construction Employee Restroom

Construction Site 1.1 Photo 1.1.139
Material Stockpiles

Construction Site 1.1 Photo 1.1.140
Material Storage Area

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.141
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.142
Concrete Washout Bin

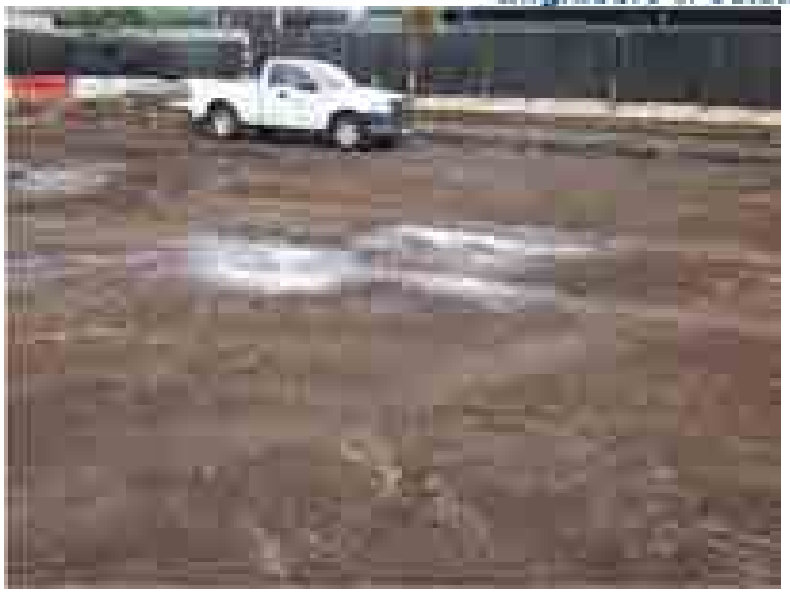
Construction Site 1.1 Photo 1.1.143
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.144
Concrete Washout Bin

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.145
Concrete Washout Bin



Construction Site 1.1 Photo 1.1.146
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.147
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.148
Concrete Washout Bin

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.149
Corner of Construction Site

Construction Site 1.1 Photo 1.1.150
Corner of Construction Site

Construction Site 1.1 Photo 1.1.151
Corner of Construction Site

Construction Site 1.1 Photo 1.1.152
Concrete Washout Bin

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.153
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.154
Erosion Control Berms

Construction Site 1.1 Photo 1.1.155
Erosion Control Berms

Construction Site 1.1 Photo 1.1.156
Erosion Control Berms

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.157
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.158
Chemicals Stored on Construction Vehicle

Construction Site 1.1 Photo 1.1.159
Exposed Sediment

Construction Site 1.1 Photo 1.1.160
Material Storage Area

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.161
Construction Site

Construction Site 1.1 Photo 1.1.162
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.163
Concrete Washout Bin

Construction Site 1.1 Photo 1.1.164
Drain Inlet

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.165
Drain Inlet

Construction Site 1.1 Photo 1.1.166
Material Storage Area

Construction Site 1.1 Photo 1.1.167
Soil Stabilization

Construction Site 1.1 Photo 1.1.168
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.169
Soil Stabilization

Construction Site 1.1 Photo 1.1.170
Soil Stabilization

Construction Site 1.1 Photo 1.1.171
Soil Stabilization

Construction Site 1.1 Photo 1.1.172
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.173
Soil Stabilization

Construction Site 1.1 Photo 1.1.174
Soil Stabilization

Construction Site 1.1 Photo 1.1.175
Material Storage Area and Dust Control Fence

Construction Site 1.1 Photo 1.1.176
Chemical Spill

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.177
Chemical Spill

Construction Site 1.1 Photo 1.1.178
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.179
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.180
Drain Inlet Protection

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.181
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.182
Soil Stabilization

Construction Site 1.1 Photo 1.1.183
Soil Stabilization

Construction Site 1.1 Photo 1.1.184
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.185
Soil Stabilization

Construction Site 1.1 Photo 1.1.186
Soil Stabilization

Construction Site 1.1 Photo 1.1.187
Soil Stabilization

Construction Site 1.1 Photo 1.1.188
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.189
Soil Stabilization

Construction Site 1.1 Photo 1.1.190
Soil Stabilization

Construction Site 1.1 Photo 1.1.191
Soil Stabilization

Construction Site 1.1 Photo 1.1.192
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.193
Soil Stabilization

Construction Site 1.1 Photo 1.1.194
Soil Stabilization

Construction Site 1.1 Photo 1.1.195
Soil Stabilization

Construction Site 1.1 Photo 1.1.196
Construction Ingress/Egress Location

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.197
Construction Ingress/Egress Location

Construction Site 1.1 Photo 1.1.198
Construction Ingress/Egress Location

Construction Site 1.1 Photo 1.1.199
Construction Ingress/Egress Location

Construction Site 1.1 Photo 1.1.200
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.201
Soil Stabilization

Construction Site 1.1 Photo 1.1.202
Soil Stabilization

Construction Site 1.1 Photo 1.1.203
Construction Site

Construction Site 1.1 Photo 1.1.204
Soil Stabilization

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.205
Soil Stabilization

Construction Site 1.1 Photo 1.1.206
Underground Storage Tanks

Construction Site 1.1 Photo 1.1.207
Material Stockpiles

Construction Site 1.1 Photo 1.1.208
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.209
Material Stockpiles

Construction Site 1.1 Photo 1.1.210
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.211
Drain Inlet Protection

Construction Site 1.1 Photo 1.1.212
Drain Inlet Protection

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.213
Underground Storage Tanks

Construction Site 1.1 Photo 1.1.214
Material Stockpiles

Construction Site 1.1 Photo 1.1.215
Underground Storage Tanks

Construction Site 1.1 Photo 1.1.216
Material Stockpiles

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.217
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.218
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.219
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.220
Material Stockpiles and Drain Inlet Protection

Facility: OGG CONRAC Near Hemaloa St. and Keolani Pl., Kahului, Maui
Date Photos Taken: 27 November 2017 (8:30am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 1.1 Photo 1.1.221
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.222
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.223
Material Stockpiles and Drain Inlet Protection

Construction Site 1.1 Photo 1.1.224
Material Stockpiles and Drain Inlet Protection

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

Deficiency Tracking #1 and #2 applies to this permit. Please see pages B1-8 through B1-16.

Final Notice of Deficiency

Deficiency Tracking #: 1
Related Permit(s): Kahului Airport

Deficiency Narrative Description:

The Audit Team's Records Review found that third party site inspectors may not be consistently elevating observations to the level of a deficiency, as defined in Airports Division's Construction & Post-Construction Stormwater Management Plan (September 2017, hereinafter referred to as the "Plan"). For example, the 12/28/16 inspection of the Kahului Airport washrack project identified that the project's silt fence needed to be maintained, and that nearly half of the silt fence needed to be reinstalled properly. This finding fits the definition of either a minor or major deficiency (Sections 4.3.1 and 4.3.2 of the Plan, respectively). However, the finding was not noted in the 12/28/16 inspection form as a deficiency of any kind.

Airports Division provided evidence that the inspector notified the contractor of the items of concern, the contractor implemented appropriate corrective action, and the contractor provided photographic documentation of the correction within 10 calendar days of the inspection. This issue, therefore, seems to be a simple oversight by the inspector when filling out the inspection form.

Recommendations for Improvement:

Airports Division should consider additional training of inspection staff related to this item of concern.

Description of Attachments (if applicable): Airports Division's 12/28/16 inspection of the Kahului Airport washrack project.

Applicable Regulatory References

NPDES Permit No.: n/a

SWMPP: "Construction Inspections: Conduct construction inspections as described in the Construction Site Runoff Control Plan".

Sections 4.3.1 and 4.3.2 of Construction and Post-Construction Storm Water Management Plan (September 2017):

"Minor [deficiencies] include, but are not limited to, the following examples: Linear barriers and/or perimeter controls are installed as required by the BMP Plan, but require minor maintenance. For example, a silt fence which is not anchored properly throughout the entire length…"

"Major deficiencies include, but are not limited to, the following examples: Linear barriers and/or perimeter controls in areas tributary to a water body or drain inlet that are installed as required by the BMP plan, but are not functional, such as silt fences that are not anchored properly."

Hawaii Administrative Rules (HAR): HAR 11-55 Appendix K Part 6.(a)(4)(F) "Procedures for site inspection and enforcement of control measures;"

Code of Federal Regulations (CFR): 40 CFR 122.34(b)(4)(i)(F) "At a minimum, the permit must require the permittee to develop and implement: (F) Procedures for site inspection and enforcement of control measures."

Construction Inspection Checklist

Project Name: Installation of Washrack at Kahului Airport	
Date: 12/28/16	Start / End Time: 10:30 am - 11:15 am
Project No.: AM1049-14	NPDES Permit # (if any):
Name of Inspector's Firm: EnviroServices and Training Center, LLC	
Name of Inspector: Daniel Amato	Phone Number: 808-664-1926
On-site Representative: Patty Shelton	
Weather Conditions: Partly Cloudy	
Type of Inspection (check one): ☒ Initial ☐ Weekly ☐ Monthly ☐ Final ☐ Follow-up ☐ Other:	

Inspection Items		***Yes***	***No***	***N/A***	***Comments***
1.	Are previously noted deficiencies corrected?	☐	☐	☒	This is the initial inspection
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☐	☐	☒	No MS4 changes will be made
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☐	☐	☒	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☒	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☐	☐	☒	This is the initial inspection
6.	Are spill kits available on-site and spills promptly removed?	☐	☒	☐	None on site while work was stopped.
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☒	☐	☐	
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☒	☐	Silt fence is in need of maintenance (photos 7 & 8).
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☒	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☒	☐	☐	
11.	Is the construction exit preventing sediment from being tracked into the street?	☒	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☐	☒	No dumpsters on site.
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☐	☐	☒	No washout required.
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☐	☐	☒	No materials stored onsite.
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☐	☒	☐	A fuel leak / stain was observed on the ground below a backhoe (photo 6) .
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☐	☐	☒	
17.	Was herbicide, pesticide, or fertilizer used at the site since the previous inspection?	☐	☐	☒	This is the initial inspection
17b.	If so, keep the usage log on-site and in the comments section of this form record date, quantity used, location, and BMPs used (refer to SWMPP Section E).	☐	☐	☒	This is the initial inspection

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.	Filter Socks	☒	☐	☒	☐	
2.	Silt Fence	☒	☐	☐	☒	Nearly half of the silt fence needs to be reinstalled properly (photos 7 & 8)
3.	Drain Inlet Protection	☒	☐	☒	☐	
4.	Stabilized Construction Entrance	☒	☐	☒	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
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		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	
		☐	☐	☐	☐	

Additional Comments:

*Use additional paper if the number of BMPs exceeds the space allotted.

Description of Potential Non-Compliance:

Minor Deficiencies:

1) Fuel leak/ spill detected below heavy machinery (backhoe). Heavy machinery should be stored with drip pans or other BMPs designed to contain leaks. Preventative maintenance should be taken to ensure equipment on site is not leaky. It is also recommended that a spill kit is kept onboard the equipment if possible. This must be corrected as soon as possible, but no later than **10 calendar days following the inspection**.

NOTE: Per OGG's Small MS4 Permit, HIS000412 and SWMP Section C.
Critical Deficiencies. Must be corrected by the **close of business on the day of the inspection**. Defined as those that pose an immediate threat for discharge of pollutants to a storm drain or receiving water. Examples include: non-storm water discharge, absence of perimeter controls, spills that have not been cleaned near a drain or waterway.

Major Deficiencies. Must be corrected as soon as possible, but no later than **5 calendar days following the inspection**. Defined as those that pose a significant threat for discharge of pollutants to a storm drain or receiving water. Examples include: lack of NPDES permit (if required), lack of BMP plan, perimeter BMPs are not functional, dewatering without BMPs, tracking more than 50' from ingress/egress.

Minor Deficiencies. Must be corrected by date specified by inspector. Defined as those that do not pose a threat for the discharge of pollutants; however still violate regulations or procedures.

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the OGG Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☒ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: Daniel Amato

Signature: _____ Date: 12/29/16

INSPECTION PHOTOGRAPHS

Photo 1 Description: View of project site with backhoe and washrack; view looking NW.

Photo 2 Description: View of stabilized construction entrance; view looking SW.

Photo 3 Description: Inlet # 7176 with filter sock as inlet protection; view looking SE.

Photo 4 Description: View of graded washrack; view looking NW.

INSPECTION PHOTOGRAPHS

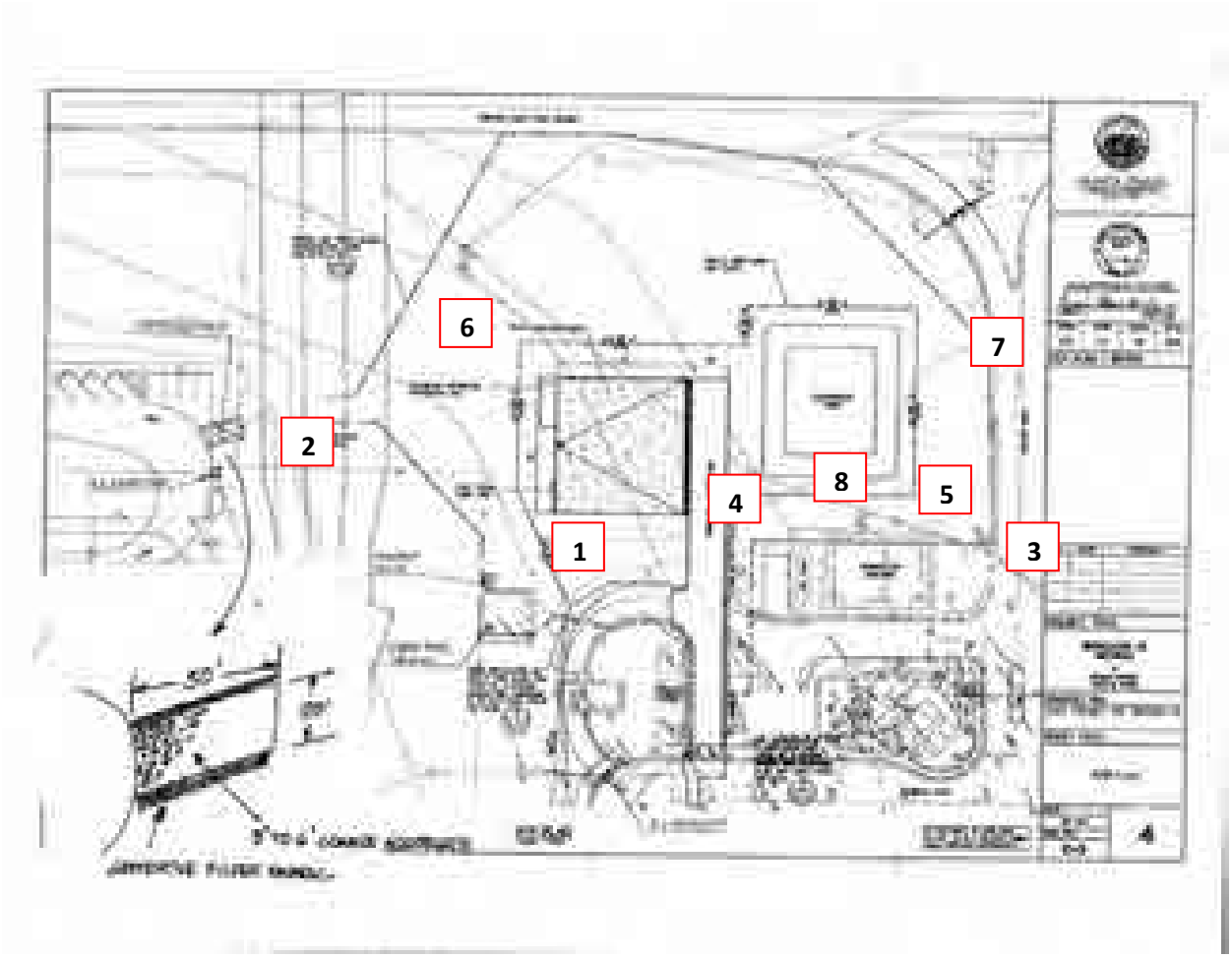
Photo 5 Description: View of graded evaporation pond; view looking NW.

Photo 6 Description: Suspected fuel spill/leak below backhoe; view looking S.

Photo 7 Description: Silt fence is no longer installed properly; view looking NE

Photo 8 Description: Northeastern section of silt fence has large tears and needs to be replaced; view looking NE.

Photo Location Map



Construction Site BMP Inspection: AM1000-14 Installation of Wastebeck at Kahului Airport.
Date: 12/28/16

Name	Organization/Position	Phone	Email
Patty Shelton	RLB- Proj. Mngr.	315-6555	patty.shelton@rlb.com
Daniel Amato	ETC / Env. Scientist	664 1926	damato@gotoetc.com

Result of HDOT PM Review:

- ☑ Confirmed Deficiency
  - o Email Notice of Corrective Action sent to EPA/DOH on: **2/12/18**
    (Due Within 21 Calendar Days of Deficiency Notification Date)
- ☐ Re-categorized as Potential Violation (see rationale below)
  - o Email Notice sent to EPA/DOH on: _____
- ☐ Summarily Dismissed (see rationale below)
  - o Email Notice sent to EPA/DOH on: _____

Rationale for Re-Categorization or Summary Dismissal: **n/a**

State of Hawaii Department of Transportation
MS4 Permit Audit
Notice of Corrective Action

Corrective Action in Response to:

☐ Potential Violation (complete Section A & C)

☒ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:____ Potential Violation Notification Date:_____
(from Notice of Potential Violation Form)

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

Deficiency Tracking #: 1 (OGG Washrack Project)

HDOT Receipt of Draft PEAR Date: 1/22/2018

Corrective Action Notification Date: 2/12/2018
(Today's Date)

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action

DOT Airport Division (DOTA) has or will implement the following corrective actions: **NOTE:** Attachments noted can be found in the enclosure titled "Corrective Action Work Plan for Deficiencies in Response to The Draft Program Element Audit Report (PEAR) No. 2: Construction Site Runoff Control" dated February 5, 2018.

1. DOTA made minor revisions to the **Construction Inspection Checklist** on January 19, 2018, to include a grid for the Description of Potential Non-Compliance section, to clearly portray deficiencies (e.g., description, photo, deficiency type, and follow-up date) found during inspections (See Enclosure - Attachments 1 and 2 for HNL and OGG respectively).

2. DOTA developed a **Construction Inspection Corrective Action Report** on November 9, 2017, to track deficiencies and implementations of corrective actions. The purpose of this report is to have a record of the status of corrective actions (if there were any) and track the date of closure for each deficiency (See Enclosure - Attachment 3) identified in the Construction Inspection Checklist.

3. DOTA developed a **Monthly Construction Inspection Summary Table** that tracks all of the active construction projects, the dates of inspection, the number of different types of deficiencies, and if the deficiencies were corrected on time (See Enclosure - Attachment 4). DOTA will implement the Monthly Construction Inspection Summary Table in HNL's and OGG's Construction Programs by February 28, 2018.

4. DOTA will develop a **Construction Inspection and Enforcement Standard Operating Procedure (SOP)** for the construction inspectors to detail tasks to conduct before, during and after inspection.

   Milestones:

Draft Construction Inspection SOP	March 30, 2018
Final Construction Inspection SOP	April 13, 2018

   Copies will be provided to inspectors, construction managers, and state project managers.

5. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors.

   Milestones:

Develop training material	March 01, 2018
Schedule training dates	March 15, 2018
Training class (on or before)	March 31, 2018

Details of the corrective actions and all attachments noted above can be found in the enclosure titled: “Corrective Action Work Plan for Deficiencies in Response to The Draft Program Element Audit Report (PEAR) No. 2: Construction Site Runoff Control”, dated February 5, 2018.

CORRECTIVE ACTION WORK PLAN
FOR DEFICIENCIES

IN RESPONSE TO THE
DRAFT PROGRAM ELEMENT AUDIT REPORT (PEAR)
NO. 2: CONSTRUCTION SITE RUNOFF CONTROL

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION, AIRPORTS DIVISION

FEBRUARY 5, 2018

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4 TIMELINE 10

FIGURES

Figure 1. DOTA PEAR #2 Corrective Action Timeline 10

ATTACHMENTS

Attachment 1. Revised Honolulu Construction Inspection Checklist
Attachment 2. Revised Kahului Construction Inspection Checklist
Attachment 3. Construction Inspection Corrective Action Report
Attachment 4. Monthly Construction Inspection Summary Table

ACRONYMS AND ABBREVIATIONS

AWP	Audit Work Plan
CM	Construction Manager
ConRAC	Consolidated Car Rental
DOTA	State of Hawaii, Department of Transportation, Airports Division
ENV	State of Hawaii, Department of Transportation, Office of Environmental Compliance
HDOT	State of Hawaii, Department of Transportation
HNL	Daniel K. Inouye International Airport
IIT	Interisland Terminal
MS4	Municipal Separate Storm Sewer System
OGG	Kahului Airport
PEAR	Program Element Audit Report
SOP	Standard Operating Procedure
SPM	State Project Manager
SWMPP	Storm Water Management Program Plan

1 INTRODUCTION

This Corrective Action Work Plan was prepared in response to the Draft Program Element Audit Report (PEAR) No. 2, Construction Site Runoff Control, dated January 2018 (Draft PEAR No. 2) and prepared for the State of Hawaii Department of Transportation, Office of Environmental Compliance (ENV). Specifically, this Corrective Action Work Plan provides a description and timelines of the corrective actions that the State of Hawaii Department of Transportation, Airports Division (DOTA) will take in response to the deficiencies described in this Work Plan.

The Draft PEAR No. 2, identified one Potential Violation and three Deficiencies relating to the DOTA's Construction Site Runoff Control Program at two airports: Daniel K. Inouye International Airport (HNL) (previously known as Honolulu International Airport) and the Kahului Airport (OGG). The findings are identified as:

- **Potential Violation #1** – OGG washrack project, concern about not elevating issues to the level of a formal deficiency
- **Deficiency #2** – OGG Consolidated Car Rental (ConRAC) project, hydraulic fluid leak
- **Deficiency #3** – HNL Interisland Terminal (IIT) Mauka project, concern about not elevating issues to the level of a formal deficiency
- **Deficiency #4** – HNL ConRAC project, possible liquid under construction vehicle

DOTA was informed of these findings on January 22, 2018. On January 24, 2018, DOTA submitted a rebuttal to the Potential Violation #1 determination. In response to this rebuttal, the determination was reduced from a Potential Violation to a Deficiency (Deficiency #1).

2 KEY FINDINGS OF DRAFT PEAR NO. 2

2.1 DETERMINATIONS

The revised Audit Work Plan (AWP) dated November 2016, and prepared for the ENV, describes Findings of Concern that may be identified by the audit team during the course of the audit. Upon evaluating a Finding of Concern, the audit team may make a determination that it is either a Deficiency or Potential Violation.

- A Deficiency is defined in the AWP, as an "item which, if not corrected, may lead to Potential Violations".
- A Potential Violation is defined in the AWP as an "area where the evaluation found the permittee not in compliance with a specific permit requirement or Stormwater Management Program Plan (SWMPP) commitment."

2.2 PEAR NO. 2 FINDINGS

The following lists the four Deficiencies and Recommendations for Improvement that were identified at Kahului Airport and Daniel K. Inouye International Airport.

- **Deficiency #1 – Kahului Airport**

  The audit team's record review found that third party site inspectors may not be consistently elevating observations to the level of a deficiency, as defined in DOTA's Construction and Post-Construction Stormwater Management Plan (September 2017), hereinafter referred to as the "Plan". For example, the December 28, 2016 inspection of the Kahului Airport washrack project identified the project's silt fence needed to be maintained, and that nearly half of the silt fence needed to be reinstalled properly. This finding fits the definition of either a minor or major deficiency (Sections 4.3.1 and 4.3.2 of the Plan, respectively). However, the finding was not noted on the December 28, 2016 inspection form as a deficiency of any kind and consequently, the contractor was not notified that the issue should be resolved in the timeframe defined in the Plan.

- **Deficiency #2 – Kahului Airport**

  During the onsite evaluation of the OGG ConRAC site on November 27, 2017, the audit team identified an item of concern not noted on DOTA's inspection report, prepared after the inspection. The SWPPP states "equipment and vehicles will be properly maintained to mitigate leaks." The audit team found an instance where construction equipment appeared to be leaking hydraulic fluid on the ground – and no effort to clean up the fluid spill. The audit team expected the DOTA inspector to note this on the inspection form. However, the inspection report notes "Yes" in response to the question "Are spill kits available onsite and spills promptly removed?"

  Recommendation for Improvement

  DOTA should consider additional training for inspection staff related to this concern.

- **Deficiency #3 – Daniel K. Inouye International Airport**

  The audit team's record review found third party site inspectors may not be consistently elevating observations to the level of a deficiency, as defined in DOTA's Construction Site Runoff Control Program (September 2017) hereinafter referred to as the "Program". For example, the February 07, 2017 inspection of the Daniel K. Inouye International Airport Mauka Extension project identified that inlet protection on drain 490 was adequately installed but needs maintenance. In another example, the April 11, 2017 inspection of the same project identified that witch's hats in inlets within recently vegetated areas had accumulated sediment and had not been maintained. These findings fit the definition of a minor deficiency (Section 4.4 of the Program). However, the findings were not noted in the February 07, 2017 or April 11, 2017 inspection forms as deficiencies of any kind; instead they were noted in the "Additional Comments" section on page two of each form. It is unclear whether items listed in the "Additional Comments" section require any formal action from the contractor or related follow-up by DOTA.

  Recommendation for Improvement

  DOTA should consider additional training of inspection staff related to this concern.

- **Deficiency #4 – Daniel K. Inouye International Airport**

  During the onsite evaluation of two sites on November 28, 2017, the audit team identified an item of concern not noted on DOTA's inspection report, prepared after the inspection.

  The SWPPP for the HNL ConRAC site states the contractor will "use drip pans and absorbents under or around leaky vehicles and equipment." The audit team saw evidence of a pool of dark-colored liquid under a construction vehicle. The audit team expected the DOTA inspector to approach this vehicle and further investigate the situation; however, the audit team did not observe the DOTA inspector performing an investigation. Furthermore, the inspection report notes "Yes" in response to the question "Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?"

  Recommendation for Improvement

  DOTA should consider additional training of inspection staff related to this item of concern.

3 CORECTIVE ACTION PLAN

DOTA prepared this Corrective Action Work Plan in response to the findings of the Draft PEAR No. 2. This Corrective Action Work Plan provides a description and timelines of the corrective actions the DOTA will take in response to the Deficiencies described in Section 2.

3.1 DEFICIENCY #1

Description:	Kahului Airport washrack project - concern about not elevating issues to the level of a formal deficiency
Related Permit:	Kahului Airport
Notification Date:	January 22, 2018

In response to the Deficiency #1, DOTA has or will implement the following corrective actions:

1. DOTA made minor revisions to the **Construction Inspection Checklist** on January 19, 2018, to include a grid for the Description of Potential Non-Compliance section, to clearly portray deficiencies (e.g., description, photo, deficiency type, and follow-up date) found during inspections (Attachments 1 and 2 for HNL and OGG respectively). The grid, along with the numbering system, will help verify the number of deficiencies identified in the first two pages of the inspection checklist with the list on page three of the inspection checklist.

2. DOTA developed a **Construction Inspection Corrective Action Report** on November 9, 2017, to track deficiencies and implementations of corrective actions. The purpose of this report is to have a record of the status of corrective actions (if there were any) and track the date of closure for each deficiency (Attachment 3) identified in the Construction Inspection Checklist. After all the deficiencies are addressed, this report is provided to the Construction Manager (CM), State Project Manager (SPM), and the contractor. The report includes before and after photos of the deficiencies and corrective actions respectively.

3. DOTA developed a **Monthly Construction Inspection Summary Table** that tracks all of the active construction projects, the dates of inspection, the number of different types of deficiencies, and if the deficiencies were corrected on time (Attachment 4). This spreadsheet will be implemented for HNL's as well as OGG's Small MS4 Construction Programs and will be updated each month. This summary table serves as a quality assurance/quality control measure to verify the number of deficiencies identified in the Construction Inspection Checklist and the Corrective Action Report; and it will serve as a tool to identify common types of deficiencies so DOTA can revise their annual training materials. This monthly construction summary table is provided to DOTA management to consider additional oversight for projects with repeat deficiencies. The Monthly Construction Inspection Summary Table will be implemented in HNL's and OGG's Construction Programs by February 28, 2018.

4. DOTA will develop a **Construction Inspection and Enforcement Standard Operating Procedure** (SOP) for the construction inspectors to detail tasks to conduct before, during and after inspection. The SOP will describe how to correctly complete the Construction Inspection Checklist, Corrective Action Report, and Monthly Construction Inspection Summary Table. It will also include instructions to add inspection information into the DOTA's Enviance database. The draft Construction Inspection SOP will be completed by March 30, 2018, and the final version will be complete by April 13, 2018. DOTA management will sign it and provide copies to inspectors, CMs, and SPMs.

5. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors regarding the above mentioned corrective actions. A focus of the training will be ensuring that findings of each inspection are correctly documented on the Construction Inspection Checklist; in particular, it will direct inspectors to write-up deficiencies in the "Description of Potential Non-Compliance" section. Training material for the construction inspector class will be developed by March 01, 2018; coordination of training dates and schedule will be completed by March 15, 2018; and a live training class will be conducted on or before March 31, 2018.

DOTA has been proactive in revamping the construction stormwater training videos to target designers and engineers. DOTA started developing training videos in 2017, prior to the PEAR No. 2 audit. Two training videos are targeted for completion by June 2018. These videos are separate from the Construction Inspector Refresher Training class that will be conducted on or before March 30, 2018.

3.2 DEFICIENCY #2

Description: Kahului Airport ConRAC project hydraulic fluid leak
Related Permit: Kahului Airport
Notification Date: January 22, 2018

In response to the Deficiency #2, DOTA has or will implement the following corrective action:

1. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors regarding the above mentioned corrective actions. A focus of the training will be ensuring that findings of each inspection are correctly documented on the Construction Inspection Checklist; in particular, it will direct inspectors to write-up deficiencies in the "Description of Potential Non-Compliance" section. Training material for the construction inspector class will be developed by March 01, 2018; coordination of training dates and schedule will be completed by March 15, 2018; and a live training class will be conducted on or before March 31, 2018.

3.3 DEFICIENCY #3

Description:	Honolulu International Airport IIT Mauka project, concern about not elevating issues to the level of a formal deficiency
Related Permit:	Daniel K. Inouye International Airport
Notification Date:	January 22, 2018

In response to the Deficiency #3, DOTA has or will implement the following corrective actions:

1. DOTA made minor revisions to the **Construction Inspection Checklist** on January 19, 2018, to include a grid for the Description of Potential Non-Compliance section, to clearly portray deficiencies (e.g., description, photo, deficiency type, and follow-up date) found during inspections (Attachments 1 and 2 for HNL and OGG respectively). The grid, along with the numbering system, will help verify the number of deficiencies identified in the first two pages of the inspection checklist with the list on page three of the inspection checklist.

2. DOTA developed a **Construction Inspection Corrective Action Report** on November 9, 2017, to track deficiencies and implementations of corrective actions. The purpose of this report is to have a record of the status of corrective actions (if there were any) and track the date of closure for each deficiency (Attachment 3) identified in the Construction Inspection Checklist. After all the deficiencies are addressed, this report is provided to the Construction Manager (CM), State Project Manager (SPM), and the contractor. The report includes before and after photos of the deficiencies and corrective actions respectively.

3. DOTA developed a **Monthly Construction Inspection Summary Table** that tracks all of the active construction projects, the dates of inspection, the number of different types of deficiencies, and if the deficiencies were corrected on time (Attachment 4). This spreadsheet will be implemented for HNL's as well as OGG's Small MS4 Construction Programs and will be updated each month. This summary table serves as a quality assurance/quality control measure to verify the number of deficiencies identified in the Construction Inspection Checklist and the Corrective Action Report; and it will serve as a tool to identify common types of deficiencies so DOTA can revise their annual training materials. This monthly construction summary table is provided to DOTA management to consider additional oversight for projects with repeat deficiencies. The Monthly Construction Inspection Summary Table will be implemented in HNL's and OGG's Construction Programs by February 28, 2018.

4. DOTA will develop a **Construction Inspection and Enforcement Standard Operating Procedure** (SOP) for the construction inspectors to detail tasks to conduct before, during and after inspection. The SOP will describe how to correctly complete the Construction Inspection Checklist, Corrective Action Report, and Monthly Construction Inspection Summary Table. It will also include instructions to add inspection information into the DOTA's Enviance database. The draft Construction Inspection SOP will be completed by

March 30, 2018, and the final version will be complete by April 13, 2018. DOTA management will sign it and provide copies to inspectors, CMs, and SPMs.

5. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors regarding the above mentioned corrective actions. A focus of the training will be ensuring that findings of each inspection are correctly documented on the Construction Inspection Checklist; in particular, it will direct inspectors to write-up deficiencies in the "Description of Potential Non-Compliance" section. Training material for the construction inspector class will be developed by March 01, 2018; coordination of training dates and schedule will be completed by March 15, 2018; and a live training class will be conducted on or before March 31, 2018.

3.4 DEFICIENCY #4

Description:	Honolulu International Airport ConRAC project possible liquid under construction vehicle
Related Permit:	Daniel K. Inouye International Airport
Notification Date:	January 22, 2018

In response to the Deficiency #4, DOTA will implement the following corrective actions:

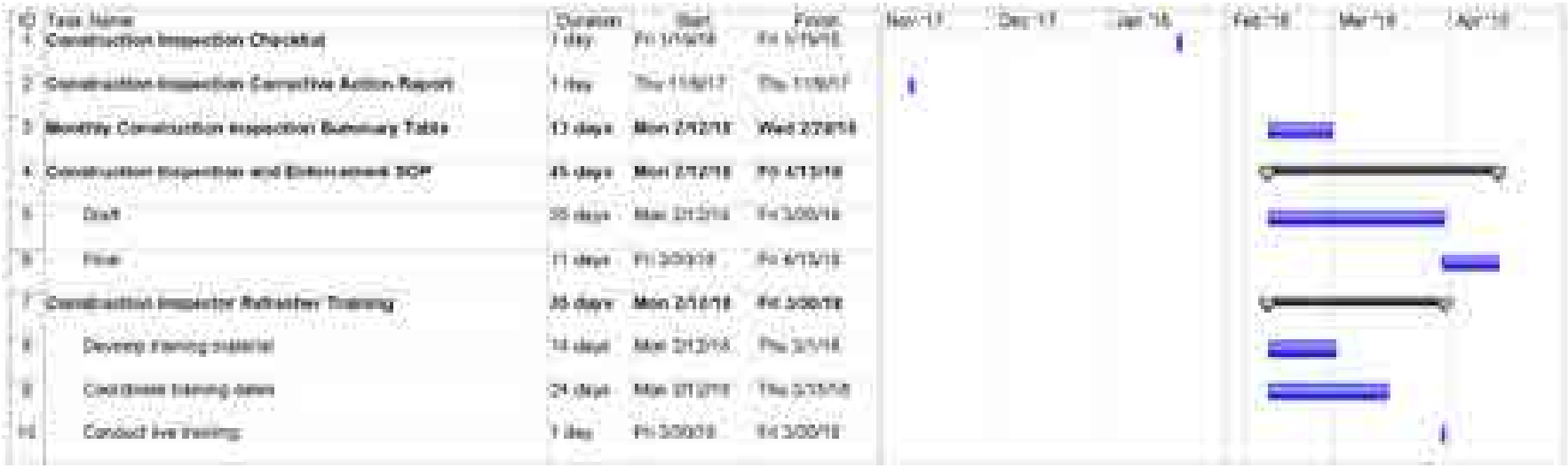
1. DOTA will develop a **Construction Inspection and Enforcement SOP** for the construction inspectors to detail tasks to conduct before, during and after inspection. The SOP will describe how to correctly complete the Construction Inspection Checklist, Corrective Action Report, and Monthly Construction Inspection Summary Table. It will also include instructions to add inspection information into the DOTA's Enviance database. The draft Construction Inspection SOP will be completed by March 30, 2018, and the final version will be complete by April 13, 2018. DOTA management will sign it and provide copies to inspectors, CMs, and SPMs.

2. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors regarding the above mentioned corrective actions. A focus of the training will be ensuring that findings of each inspection are correctly documented on the Construction Inspection Checklist; in particular, it will direct inspectors to write-up deficiencies in the "Description of Potential Non-Compliance" section. Training material for the construction inspector class will be developed by March 01, 2018; coordination of training dates and schedule will be completed by March 15, 2018; and a live training class will be conducted on or before March 31, 2018.

4 TIMELINE

The timeline for the corrective actions for the four deficiencies is presented below.

Figure 1. DOTA PEAR #2 Corrective Action Timeline



ATTACHMENTS

ATTACHMENT 1. REVISED HONOLULU CONSTRUCTION INSPECTION CHECKLIST

CONSTRUCTION INSPECTION CHECKLIST

Project Name: _____

Date: _____ Start / End Time: _____

Project No.: _____ NPDES Permit # (if any): _____

Name of Inspector's Firm: _____

Name of Inspector: _____ Phone Number: _____

On-site Representative: _____ Phone Number: _____

Weather Conditions: _____

Type of Inspection (check one): ☐ Initial ☐ Weekly ☐ Monthly ☐ Final ☐ Follow-up ☐ Other:

Inspection Items		***Yes***	***No***	***N/A***	***Comments***
1.	Are previously noted deficiencies corrected?	☐	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☐	☐	☐	
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☐	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☐	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☐	☐	☐	
6.	Are spill kits available on-site and spills promptly removed?	☐	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☐	☐	☐	
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☐	☐	
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☐	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☐	☐	☐	
11.	Is the construction exit preventing sediment from being tracked into the street?	☐	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☐	☐	
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☐	☐	☐	
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☐	☐	☐	
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☐	☐	☐	
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☐	☐	☐	

CONSTRUCTION INSPECTION CHECKLIST

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.		☐	☐	☐	☐	
2.		☐	☐	☐	☐	
3.		☐	☐	☐	☐	
4.		☐	☐	☐	☐	
5.		☐	☐	☐	☐	
6.		☐	☐	☐	☐	
7.		☐	☐	☐	☐	
8.		☐	☐	☐	☐	
9.		☐	☐	☐	☐	
10.		☐	☐	☐	☐	
11.		☐	☐	☐	☐	
12.		☐	☐	☐	☐	
13.		☐	☐	☐	☐	
14.		☐	☐	☐	☐	
15.		☐	☐	☐	☐	

Additional Comments:

*Use additional paper if the number of BMPs exceeds the space allotted.

CONSTRUCTION INSPECTION CHECKLIST

Description of Potential Non-Compliance:

No.	Description	Photo No.	Deficiency Type	Follow-up Date

NOTE: Descriptions of deficiency types may be found in Table 2 of the HNL Storm Water Management Program Plan Section C.4.4

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☐ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: _____

Signature: _____ Date: _____

ATTACHMENT 2. REVISED KAHULUI CONSTRUCTION INSPECTION CHECKLIST

CONSTRUCTION INSPECTION CHECKLIST

Project Name: _____

Date: _____ Start / End Time: _____

Project No.: _____ NPDES Permit # (if any): _____

Name of Inspector's Firm: _____

Name of Inspector: _____ Phone Number: _____

On-site Representative: _____ Phone Number: _____

Weather Conditions:

Type of Inspection (check one): ☐ Initial ☐ Weekly ☐ Monthly ☐ Final ☐ Follow-up ☐ Other:

Inspection Items		***Yes***	***No***	***N/A***	***Comments***
1.	Are previously noted deficiencies corrected?	☐	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☐	☐	☐	
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☐	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☐	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☐	☐	☐	
6.	Are spill kits available on-site and spills promptly removed?	☐	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☐	☐	☐	
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☐	☐	
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☐	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☐	☐	☐	
11.	Is the construction exit preventing sediment from being tracked into the street?	☐	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☐	☐	
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☐	☐	☐	
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☐	☐	☐	
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☐	☐	☐	
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☐	☐	☐	

CONSTRUCTION INSPECTION CHECKLIST

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.		☐	☐	☐	☐	
2.		☐	☐	☐	☐	
3.		☐	☐	☐	☐	
4.		☐	☐	☐	☐	
5.		☐	☐	☐	☐	
6.		☐	☐	☐	☐	
7.		☐	☐	☐	☐	
8.		☐	☐	☐	☐	
9.		☐	☐	☐	☐	
10.		☐	☐	☐	☐	
11.		☐	☐	☐	☐	
12.		☐	☐	☐	☐	
13.		☐	☐	☐	☐	
14.		☐	☐	☐	☐	
15.		☐	☐	☐	☐	

Additional Comments:

*Use additional paper if the number of BMPs exceeds the space allotted.

CONSTRUCTION INSPECTION CHECKLIST

Description of Potential Non-Compliance:				
No.	**Description**	**Photo No.**	**Deficiency Type**	**Follow-up Date**
NOTE: Descriptions of deficiency types may be found in the *Construction and Post-Construction Storm Water Management Plan*, Section 4.3				

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☐ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: _____

Signature: _____ Date: _____

ATTACHMENT 3. CONSTRUCTION INSPECTION CORRECTIVE ACTION REPORT

CORRECTIVE ACTION REPORT:
Date:

	Deficiencies from Inspection Dated:	Deficiency Type	Due Date	Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

CORRECTIVE ACTION REPORT:
Date:

INSPECTION AND CORRECTIVE ACTION PHOTOGRAPHS

Photo 1 Before:	**Photo 1 After:**
Photo 2 Before:	**Photo 2 Before:**

INSPECTION AND CORRECTIVE ACTION PHOTOGRAPHS

Photo 3 Before:	**Photo 3 After:**
Photo 4 Before:	**Photo 4 After:**

ATTACHMENT 4. MONTHLY CONSTRUCTION INSPECTION SUMMARY TABLE

HNL Monthly Construction Inspection Summary for MONTH, YEAR

Project No.	Project Title	NPDES#	Date of Inspection	Critical Deficiencies	Major Deficiencies	Minor Deficiencies	Total Deficiencies	Repeat Deficiencies from Last Inspection	List of Repeat Deficiencies	Date Correction Required	Date Deficiencies Corrected	Deficiencies Corrected On Time?
AO1035-17	Diamond Head Concourse Improvements	N/A										
AO1043-28	OST 2nd Level Metal Roof Replacement (MRR)	N/A										
AO1117-06	HNL Consolidated Car Rental Facility (ConRAC)	HI R10E755										
AO1121-24	NDWP Widen Taxilanes G&L	HI R10E372										
AO1123-30	Interisland Terminal Mauka Extension	HI R10F124 HI R10F306 HI R10F374										
			TOTALS	**0**	**0**	**0**	**0**	**0**				

OGG Monthly Construction Inspection Summary for MONTH, YEAR

Project No.	Project Title	NPDES#	Date of Inspection	Critical Deficiencies	Major Deficiencies	Minor Deficiencies	Total Deficiencies	Repeat Deficiencies from Last Inspection	List of Repeat Deficiencies	Date Correction Required	Date Deficiencies Corrected	Deficiencies Corrected On Time?
AM1032-13	Roadway Improvements & Consolidated Car Rental (ConRAC)	HI S000412										
			TOTALS	**0**	**0**	**0**	**0**	**0**				

Final Notice of Deficiency

Deficiency Tracking #: 2
Related Permit(s): Kahului Airport

Deficiency Narrative Description:

During the On-Site Evaluation of the OGG CONRAC site on 27 November 2017, the Audit Team identified an item of concern which was not noted on HDOT's inspection report prepared after the inspection. The SWPPP states that "equipment and vehicles will be properly maintained to mitigate leaks." The Audit Team found a piece of construction equipment that appeared to be leaking hydraulic fluid onto the ground. There appeared to be no efforts to clean up the fluid spill. The Audit Team expected that the HDOT inspector would note this on the inspection form. However, the inspection report notes "Yes" in response to the question "Are spill kits available on-site and spills promptly removed?"

Recommendations for Improvement:

Airports Division should consider additional training of inspection staff related to this item of concern.

Description of Attachments (if applicable): Photos 1 shows the item of concern. Also attached is the HDOT inspection report from 27 November 2017.

Applicable Regulatory References

NPDES Permit No.: n/a

SWMPP: n/a

Hawaii Administrative Rules (HAR): HAR 11-55 Appendix K Part 6.(a)(4)(F) "Procedures for site inspection and enforcement of control measures;"

Code of Federal Regulations (CFR): 40 CFR 122.34(b)(4)(i)(F) "At a minimum, the permit must require the permittee to develop and implement: (F) Procedures for site inspection and enforcement of control measures."

Photo #1. Construction equipment that appeared to be leaking hydraulic fluid onto the ground.

CONSTRUCTION INSPECTION CHECKLIST

Project Name: Roadway Improvements & Consolidated Car Rental (ConRAC)	
Date: 11/27/17	Start / End Time: 8:30 am - 12:30 am
Project No.: AM1032-13	NPDES Permit # (if any): HI S000412
Name of Inspector's Firm: EnviroServices & Training Center, LLC	
Name of Inspector: V. Tummala, S. Paquette, D. Nakao, C. Iannaccio, & K. Kea	Phone Number: 808-839-7222
On-site Representative: James Johnson, Jon Archambeau, Jeremy De Garcia	
Weather Conditions: Overcast/Rainy	
Type of Inspection (check one): ☐ Initial ☐ Weekly ☒ Monthly ☐ Final ☐ Follow-up ☐ Other:	

Inspection Items		***Yes***	***No***	***N/A***	***Comments***
1.	Are previously noted deficiencies corrected?	☒	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☒	☐	☐	Approval through checkbox and signature on SWPPP
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☒	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☒	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☒	☐	☐	This project has an Individual NPDES Permit for construction activities.
6.	Are spill kits available on-site and spills promptly removed?	☒	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☐	☒	☐	Slopes adjacent to the two inlets across the ConRAC Building. See deficiencies below.
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☒	☐	See deficiencies below.
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☒	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☐	☒	☐	See deficiencies below.
11.	Is the construction exit preventing sediment from being tracked into the street?	☒	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☒	☐	See deficiencies below.
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☐	☒	☐	See deficiencies below.
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☐	☒	☐	See deficiencies below.
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☐	☒	☐	See deficiencies below.
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☐	☒	☐	See deficiencies below.

CONSTRUCTION INSPECTION CHECKLIST

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.	Dust Fence	☒	☐	☐	☒	See deficiencies below.
2.	Barricades	☒	☐	☒	☐	
3.	Drain Inlet Protection	☒	☐	☐	☒	See deficiencies below.
4.	Filter Socks	☒	☐	☐	☒	See deficiencies below.
5.	Detention Basin	☒	☐	☐	☒	See notes below for the detention basin associated with the tire wash.
6.	Controlled Entrance/Exit	☒	☐	☒	☐	
7.	Spill Kits	☒	☐	☒	☐	
8.	Cover/temporary stabilization for stockpiles	☒	☐	☐	☒	See deficiencies below.
9.	Temporary stabilization for slopes	☒	☐	☐	☒	See deficiencies below.
10.		☐	☐	☐	☐	
11.		☐	☐	☐	☐	
12.		☐	☐	☐	☐	
13.		☐	☐	☐	☐	
14.		☐	☐	☐	☐	
15.		☐	☐	☐	☐	

Additional Comments:

- Observed the detention basin at the concrete washout near the Keolani Place controlled entrance/exit with a foot and half of freeboard (see photo 59). Recommend monitoring the volume of the basin to prevent overflows.
- Observed two buckets and a cone stored over a storm drain inlet near the ARFF Tank (see photo 60). The buckets were removed during the inspection. Moreover, this is a new inlet with no connection to the MS4 and therefore, not deemed a deficiency.
- Observed a new drain inlet with tears in the filter fabric protection located near the ARFF Tank. However, this is a new inlet with no connection to the MS4 and therefore, not deemed a deficiency.

*Use additional paper if the number of BMPs exceeds the space allotted.

CONSTRUCTION INSPECTION CHECKLIST

Description of Potential Non-Compliance:

No.	Description	Photo No.	Deficiency Type	Follow-up Date
1.	Observed damaged storm drain inlet with a gap between the inlet frame and the grate posing an immediate threat for the discharge of pollutants to MS4, located within the Tram Area.	**Photo 3**	**Critical**	**11/27/17**
2.	Observed fabric of the storm drain inlet protection torn posing an immediate threat for the discharge of pollutants to MS4, located within the Tram Area.	**Photo 4**	**Critical**	**11/27/17**
3.	Observed the following that pose a significant threat for the discharge of pollutants to the storm drain inlet located near concrete washout containment area at the entrance: a) Storage of metal material on top of the inlet b) Portable concrete washout collecting storm water located adjacent to the curb opening c) Sediment stockpiles within close proximity of the inlet	Photos 5-8	Major	12/1/17
4.	Observed hand washing station discharge directed to gravel instead of the sanitary sewer, located outside of the Ice Room. While no discharge was observed during the inspection, the following evidence indicated potential for non-storm water discharge: gravel beneath the hand wash area appeared wet, observed lather/suds on the station, area included soap and several brushes.	Photos 9-10	Major	12/1/17
5.	Observed an unlabeled container with possible pesticide/hazardous material stored without proper BMP measures near the Keolani Place controlled entrance/exit. Please refer to language in the SSBMP Plan Section 2.3a.	Photos 11-12	Major	12/1/17 Corrected On-site
6.	Observed metal rebar and other miscellaneous metal items stored without proper BMP measures within the following locations:			
	a) Near the Keolani Place controlled entrance/exit	Photos 13-14, 33	Minor	12/7/17
	b) Near the Tram work area	Photos 15 & 52	Minor	12/7/17
	c) Near the ConRAC Building work area	Photo 16	Minor	12/7/17
7.	Observed concrete washout bins approximately 90% and 100% filled near the Keolani Place controlled entrance/exit, these are located within secondary containment. DOT Airports Division Construction Activities BMP Field Manual, C.29 Concrete Waste Management states that when a concrete washout when it reaches 75% capacity, it shall be cleaned or a new washout shall be constructed.	Photo 17	Minor	12/7/17
8.	Observed concrete washout spills at the following locations that need cleanup:			
	a) Within the containment of the concrete washout area near the Keolani Place controlled entrance/exit	Photo 18	Minor	12/7/17
	b) Near the ConRAC Building work area, also observed concrete mix spill from the bucket at this area	Photo 19	Minor	12/7/17
	c) Near the Tram work area	Photo 20	Minor	12/7/17
9.	Observed approximately 95% filled portable concrete washout bin near the ARFF tank outside ConRAC building. DOT Airports Division Construction Activities BMP Field Manual, C.29 Concrete Waste Management states that when a concrete washout when it reaches 75% capacity, it shall be cleaned or a new washout shall be constructed.	Photo 21	Minor	12/7/17
10.	Observed concrete material storage inside the ConRAC Building work area without proper BMP measures.	Photo 22	Minor	12/7/17
11.	Observed storage of saw cutting slurry at two locations: at the ARFF tank and the ConRAC Building work area.	Photos 23-24	Minor	12/7/17

CONSTRUCTION INSPECTION CHECKLIST

12.	Observed several miscellaneous liquid containers without proper BMP measures at the following locations:			
	a) Two 55-gallon drums containing diesel and 5-gallon container of unknown liquids located near the Keolani Place controlled entrance/exit	Photo 25	Minor	12/7/17
	b) Concrete sprayer stored near the Keolani Place controlled entrance/exit	Photo 26	Minor	12/7/17
	c) Concrete compound sprayer and 5-gallon container containing liquid with sheen stored near the Tram Area	Photo 27	Minor	12/7/17
	d) 5-gallon hydraulic oil container stored near the Tram Area	Photo 28	Minor	12/7/17
	e) Unknown containers stored without proper BMP measures at ConRAC Building	Photo 29	Minor	12/7/17
13.	Observed several stockpiles without proper BMP measures at the following locations:			
	a) A stockpile containing sediment and green waste stored without proper BMP measures located near the Keolani Place controlled entrance/exit	Photo 30	Minor	12/7/17
	b) Only partial stabilization of the sediment stockpile near the Keolani Place controlled entrance/exit	Photo 31	Minor	12/7/17
	c) Stockpile containing sediment and rock stored without proper BMP measures near the Keolani Place controlled entrance/exit	Photo 32	Minor	12/7/17
	d) Only partial stabilization of the sediment stockpiles near the Keolani Place controlled entrance/exit (has metal storage)	Photo 33	Minor	12/7/17
	e) Sediment stockpiles without proper BMP measures along the fence near the Keolani Place controlled entrance/exit	Photo 34	Minor	12/7/17
	f) Stockpile containing sediment and rock stored without proper BMP measures near the Tram Area	Photo 35	Minor	12/7/17
	Please refer to language in the SSBMP Plan Section 3.2. Additionally, DOT Airports Division Construction Activities BMP Field Manual, C.25 Protection of Stockpiles requires provision of BMPs at the toe of the stockpiles and provision of cover, grass or other stabilization measures. While several active stockpiles were observed on-site during the inspection and were not found to be deficient, all stockpiles containing sediment susceptible to erosion (by water and wind) shall be protected using proper BMP measures in accordance with the Construction Activities BMP Field Manual.			
14.	Observed unstabilized steep slopes of the stockpiles surrounding the new inlets located across from the ARFF Tank. Please refer to language in the SSBMP Plan Section 2.3a.	Photos 36-37	Minor	12/7/17
15.	Observed several areas where the compost filter sock was torn with exposed mulch at the following locations:			
	a) Discarded compost filter sock without proper BMP measures located near the Aalele Street construction entrance/exit, needs to be disposed	Photo 38	Minor	12/7/17
	b) Broken compost filter socks located near the Tram Area	Photos 39-40	Minor	12/7/17
	c) Broken compost filter sock encompassing storm drain inlets located near the Tram Area	Photos 41-42	Minor	12/7/17
16.	Observed several areas where the compost filter sock was not installed in accordance with the detail provided in Attachment A12 Erosion Control Details. All compost filter socks shall have an overlap of minimum 6 inches and be staked (spacing detail based on slope). Some of these areas are (not a comprehensive list):			
	a) No overlap of the compost filter sock at two spots located near the Tram Area, these were corrected on-site	Photos 43-44 & Photos 47-48	Minor	12/7/17 Corrected On-site
	b) No overlap of the compost filter sock located near the Tram Area	Photos 45-46	Minor	12/7/17
	c) No overlap of the compost filter sock surrounding a stockpile located at the staging area at the end of the Tram Area	Photo 49	Minor	12/7/17
17.	Observed two unsecured portable toilets at the Tram Area.	Photos 50-51	Minor	12/7/17
18.	Observed several areas where the dust fence was not installed properly.	Photos 14, 33 & 53	Minor	12/7/17

CONSTRUCTION INSPECTION CHECKLIST

19.	Observed miscellaneous trash and debris at several areas throughout the site: a) A metal can at the staging area at the end of the Tram Area, this was corrected on-site b) Miscellaneous trash located near the ConRAC Building c) Miscellaneous trash located near the Tram Area d) Miscellaneous metal debris and trash located near the Tram Area	 Photo 54 Photo 55 Photo 56 Photo 57	 Minor Minor Minor Minor	 12/7/17 Corrected on-site 12/7/17 12/7/17 12/7/17
20.	Live BMP Plan does not reflect the on-site conditions as follows: a) Stockpiles BMP measures were not indicated on the Live BMP Plan. b) Newly installed drain inlets/catch basins and associated BMPs were not indicated on the Live BMP Plan at three locations: i. One inlet near Keolani Place controlled entrance/exit ii. Three inlets in the vicinity of ConRAC Building and ARFF Tank iii. One inlet by the Tram Area c) The second tower crane spill kit was not indicated on the Live BMP Plan d) Portable concrete washouts were not indicated on the Live BMP Plan *SSBMP Plan referred above dated 11-20-2017 (However, the date on the first page was wrong) *Live BMP Plan referred above dated 11-24-2017	N/A	Minor	12/7/17

NOTE: Descriptions of deficiency types may be found in the *Construction and Post-Construction Storm Water Management Plan*, Section 4.3

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☒ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: Vijaya Tummala

Signature: _____ Date: 11/30/2017

INSPECTION PHOTOGRAPHS

Photo 1 Description: View of project site; view looking S.

Photo 2 Description: View of project site; view looking SE.

Photo 3 Description: Damaged storm drain inlet, observed a gap between the inlet frame and the grate as shown; located within the Tram Area near the crosswalk.

Photo 4 Description: Fabric of the storm drain inlet protection torn; located within the Tram Area.

INSPECTION PHOTOGRAPHS

Photo 5 Description: View of metal material stored above the curb inlet located near Keolani Place controlled entrance/exit; view looking W.

Photo 6 Description: View of portable concrete washout bin and sediment stockpiles within close proximity of protected curb inlet; view looking NW.

Photo 7 Description: View of portable concrete washout bin and additional sediment stockpiles within close proximity of protected curb inlet; view looking S.

Photo 8 Description: Storm water mingling with trash inside the portable concrete washout bin.

INSPECTION PHOTOGRAPHS

Photo 9 Description: Potential non-storm water discharge from hand washing station located outside of the Ice Room; view looking N.

Photo 10 Description: Lather/suds at the hand washing station located outside of the Ice Room; view looking N.

Photo 11 Description: Unlabeled container with possible pesticide/hazardous material stored without proper BMP measures near the Keolani Place controlled entrance/exit.

Photo 12 Description: View of the unlabeled container removed and placed in secondary containment.

INSPECTION PHOTOGRAPHS

Photo 13 Description: Metal material stored without proper BMP measures located near the Keolani Place entrance/exit; view looking NE.

Photo 14 Description: Metal material stored without proper BMP measures located near the Keolani Place entrance/exit; view looking N. Dust fence not overlapped.

Photo 15 Description: Metal material stored without proper BMP measures located near the Tram Area; view looking E.

Photo 16 Description: Metal material stored without proper BMP measures located near the ConRAC Building work area; view looking N.

INSPECTION PHOTOGRAPHS

Photo 17 Description: Concrete washout bins approximately 90% and 100% filled near the Keolani Place controlled entrance/exit, located within secondary containment; view looking N.

Photo 18 Description: Concrete spill located near the concrete washout area within secondary containment; view looking N.

Photo 19 Description: Concrete mix spill and concrete washout spill(s) located near the ConRAC Building work area.

Photo 20 Description: Concrete washout spill located near the Tram Area; view looking S.

INSPECTION PHOTOGRAPHS

Photo 21 Description: Portable concrete washout bin approximately 95% filled near the ARFF tank; view looking SW.	**Photo 22 Description:** Concrete stockpile inside the ConRAC Building.
Photo 23 Description: Slurry storage without proper BMP measures near the ARFF tank; view looking N.	**Photo 24 Description:** Slurry storage without proper BMP measures inside the ConRAC Building.

INSPECTION PHOTOGRAPHS

Photo 25 Description: Two 55-gallon drums and a 5-gallon container of unknown liquids stored without proper BMP measures near the Keolani Place controlled entrance/exit.

Photo 26 Description: Concrete sprayer stored without proper BMP measures near the Keolani Place controlled entrance/exit.

Photo 27 Description: Concrete sprayer and 5-gallon container containing liquid with sheen stored without proper BMP measures near the Tram Area.

Photo 28 Description: 5-gallon hydraulic oil container stored without proper BMP measures near the Tram Area. This deficiency was **addressed on-site.**

INSPECTION PHOTOGRAPHS

Photo 29 Description: Unknown containers stored without proper BMP measures at ConRAC Building.

Photo 30 Description: Stockpile containing sediment and green waste stored without proper BMP measures near the Keolani Place controlled entrance/exit; view looking S.

Photo 31 Description: Partial stabilization of the sediment stockpile near the Keolani Place controlled entrance/exit; view looking E.

Photo 32 Description: Stockpile containing sediment and rock stored without proper BMP measures near the Keolani Place controlled entrance/exit; view looking NE.

INSPECTION PHOTOGRAPHS

Photo 33 Description: Partial stabilization of the sediment stockpiles near the Keolani Place controlled entrance/exit; view looking NE. Notice the metal stockpile stored without proper BMPs and dust fence overlap issues.

Photo 34 Description: Sediment stockpiles without proper BMP measures along the fence near the Keolani Place controlled entrance/exit; view looking S.

Photo 35 Description: Stockpile containing sediment and rock stored without proper BMP measures near the Tram Area; view looking NE.

Photo 36 Description: Unstabilized steep slopes of the stockpiles surrounding the new inlets located across from the ARFF Tank.

INSPECTION PHOTOGRAPHS

Photo 37 Description: Unstabilized steep slopes of the stockpiles surrounding the new inlets located across from the ARFF Tank.

Photo 38 Description: Discarded compost filter sock without proper BMP measures located near the Aalele Street construction entrance/exit, needs to be disposed.

Photo 39 Description: Broken compost filter sock located near the Tram Area.

Photo 40 Description: Broken compost filter sock located near the Tram Area.

INSPECTION PHOTOGRAPHS

Photo 41 Description: Broken compost filter sock encompassing a storm drain inlet located near the Tram Area.

Photo 42 Description: Broken compost filter sock encompassing a storm drain inlet located near the Tram Area.

Photo 43 Description: No overlap of the compost filter sock located near the Tram Area.

Photo 44 Description: Overlap of the compost filter sock located near the Tram Area, **corrected on-site**.

INSPECTION PHOTOGRAPHS

Photo 45 Description: No overlap of the compost filter sock located near the Tram Area.

Photo 46 Description: No overlap of the compost filter sock located near the Tram Area.

Photo 47 Description: No overlap of the compost filter sock located near the Tram Area.

Photo 48 Description: Overlap of the compost filter sock located near the Tram Area, **corrected on-site**.

INSPECTION PHOTOGRAPHS

Photo 49 Description: No overlap of the compost filter sock surrounding a stockpile located at the staging area at the end of the Tram Area.

Photo 50 Description: Unsecured portable toilets located at the Tram Area.

Photo 51 Description: Unsecured portable toilets located at the Tram Area.

Photo 52 Description: Metal material stored without proper BMP measures located near the Tram Area.

INSPECTION PHOTOGRAPHS

Photo 53 Description: No overlap of the dust fence located east of the concrete washout.

Photo 54 Description: Miscellaneous metal can at the staging area at the end of the Tram Area, **corrected on-site.**

Photo 55 Description: Miscellaneous trash located outside the ConRAC Building.

Photo 56 Description: Miscellaneous trash located near the Tram Area.

INSPECTION PHOTOGRAPHS

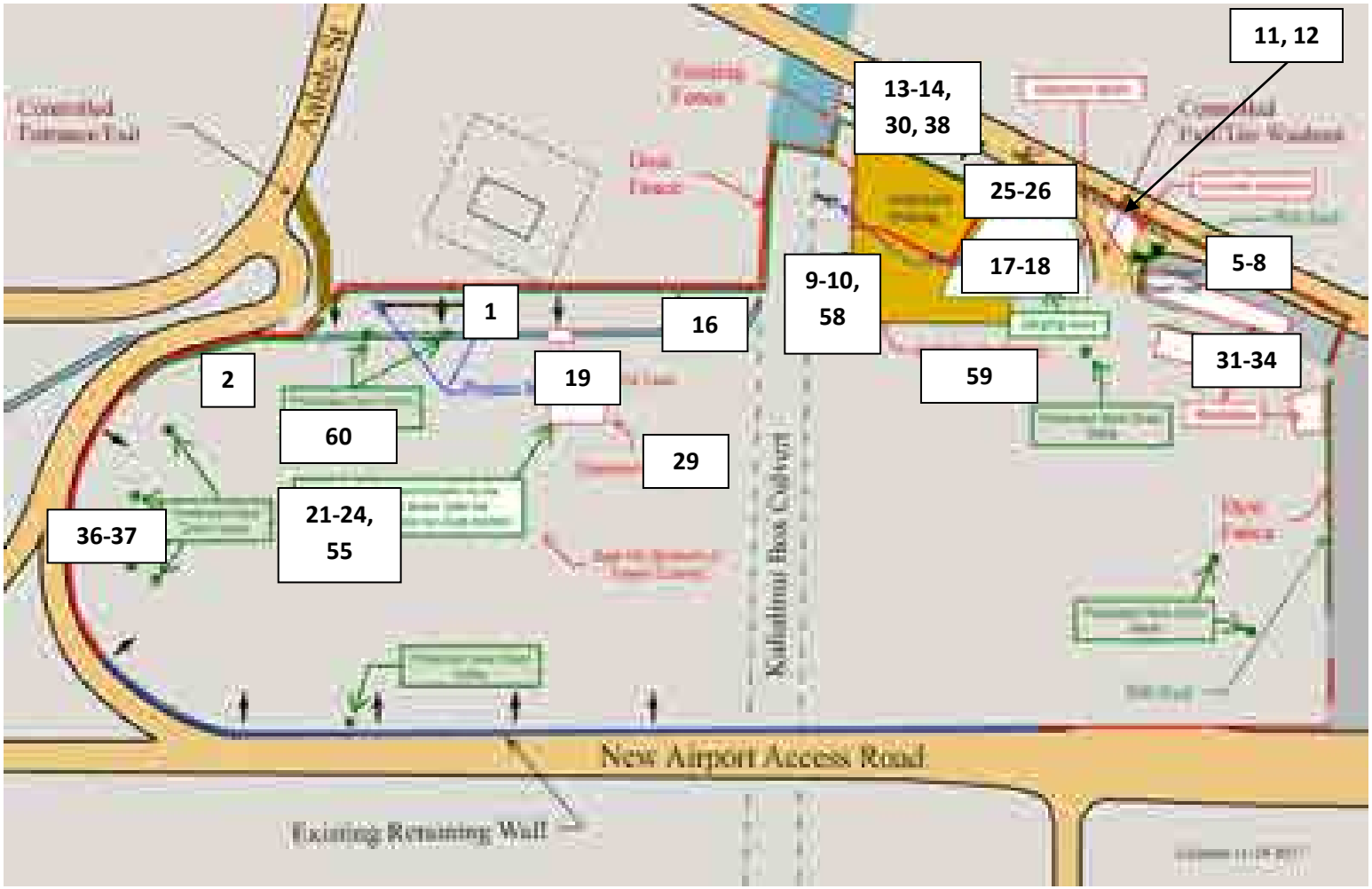
Photo 57 Description: Miscellaneous metal debris and trash located near the Tram Area.

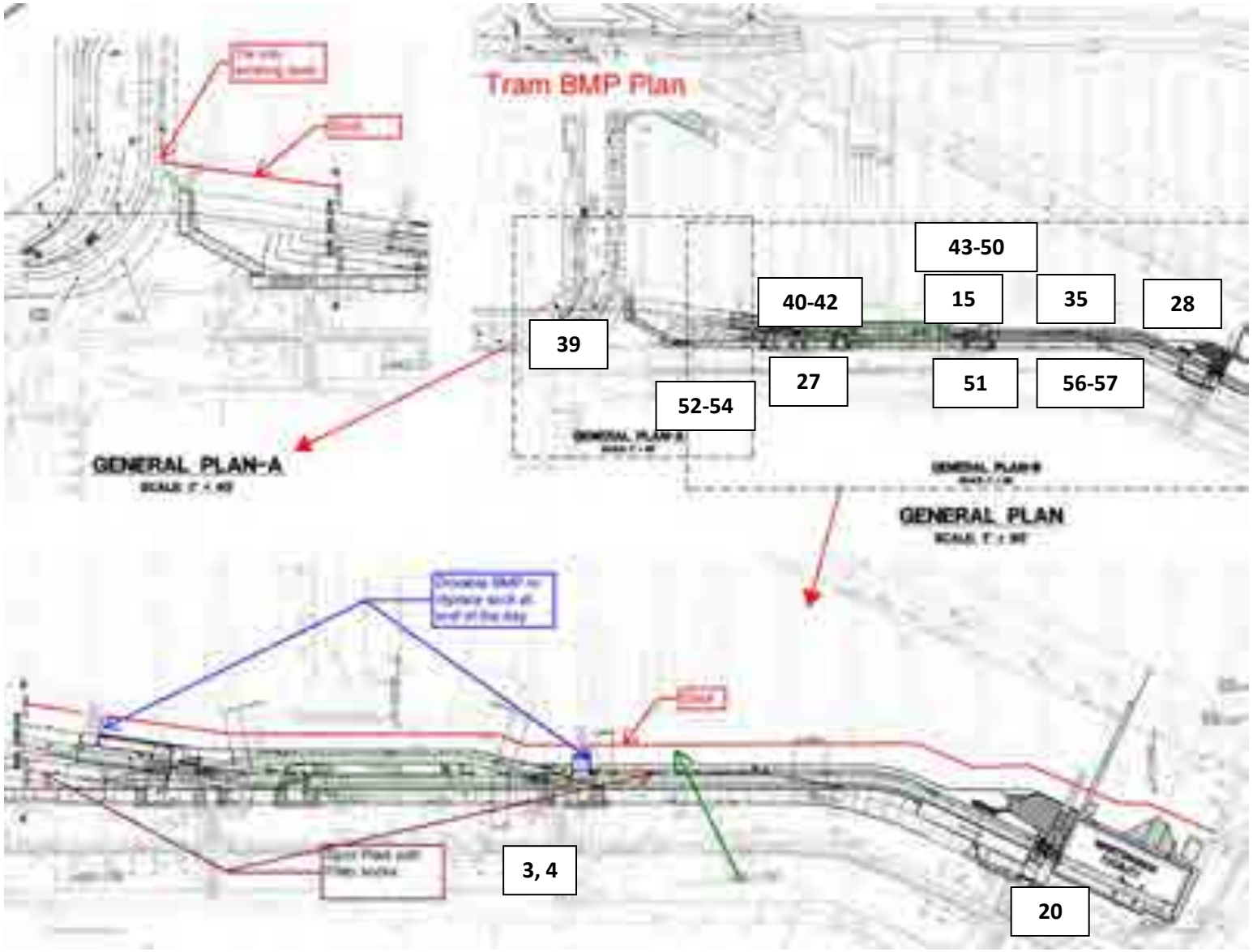
Photo 58 Description: Spill kit on-site.

Photo 59 Description: Detention basin at the concrete washout near the Keolani Place controlled entrance/exit with 1.5 feet freeboard.

Photo 60 Description: Two buckets and a cone stored on top of the storm drain inlet near the ARFF Tank. This is a new inlet with no connections to the MS4 and the buckets were removed and therefore, not deemed a deficiency.

Photo Location Map




Tram BMP Plan
43-50
40-42
15
35
28
39
27
51
56-57
52-54
GENERAL PLAN-A
GENERAL PLAN
3, 4
20

enviro SERVICES & TRAINING CENTER, LLC

Construction Site BMP Inspection: AM1022-13 OGG CoolRAC Facility
Date: 11/27/17

Name	Initial	Organization/Position	Phone	Email
Chris Takano	CT	State DOT – Airport		Chris.Takano@hawaii.gov
Stacy Paquette	SP	State DOT – Airport	(808) 838-8656	Stacy.a.paquette@hawaii.gov
Dwight Nakao	DN	State DOT – Airport	(808) 872-3420	Dwight.t.nakao@hawaii.gov
Vijaya Tammala	VT	EnviroServices& Training Center, LLC / Inspector	(808) 839-7222	vtammala@gotoetc.com
Chelsea Iannaccio	CI	EnviroServices& Training Center, LLC / Inspector	(808) 839-7222	ciannaccio@gotoetc.com
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Jill Uyeda	JU	HDCC	(808)6301340	juyeda@hdcc.com
Johnnie Clark	JC	HDCC	808 870 4461	JCLARK@hdcc.com

Result of HDOT PM Review:

- ☑ Confirmed Deficiency
  - o Email Notice of Corrective Action sent to EPA/DOH on: **2/12/18**
    (Due Within 21 Calendar Days of Deficiency Notification Date)
- ☐ Re-categorized as Potential Violation (see rationale below)
  - o Email Notice sent to EPA/DOH on: _____
- ☐ Summarily Dismissed (see rationale below)
  - o Email Notice sent to EPA/DOH on: _____

Rationale for Re-Categorization or Summary Dismissal: **n/a**

State of Hawaii Department of Transportation
MS4 Permit Audit
Notice of Corrective Action

Corrective Action in Response to:

☐ Potential Violation (complete Section A & C)

☒ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:____ Potential Violation Notification Date:_____
(from Notice of Potential Violation Form)

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

Deficiency Tracking #: 2 (OGG ConRAC Project)

HDOT Receipt of Draft PEAR Date: 1/22/2018

Corrective Action Notification Date: 2/12/2018
(Today's Date)

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action

DOT Airport Division (DOTA) will implement the following corrective action:

1. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors.

   Milestones:

Develop training material	March 1, 2018
Schedule training dates	March 15, 2018
Training class (on or before)	March 31, 2018

Details of the corrective action noted above can be found in the enclosure titled: "Corrective Action Work Plan for Deficiencies in Response to The Draft Program Element Audit Report (PEAR) No. 2: Construction Site Runoff Control", dated February 5, 2018.

Appendix B2

Permit-Specific Information – Daniel K. Inouye International Airport

Appendix B2: Permit-Specific Information – Daniel K. Inouye International Airport

1. Key Documents

Permit / Document	2. Honolulu International Airport Individual Permit HI S000005
2016 Annual Report	20160909.Contents of CD for Compliance Submission of Reports and Documents-HIS000005.pdf
2017 Annual Report	20170901.Transmittal-Certification for Reports and Documents-HI S000005.pdf
Construction Activities BMP Manual	Attachment C7 of HNL SWMPP Section C_Draft 20170927_Final. pdf
Construction Site Inventory	See Wiki Wiki Newsletter for all construction projects at HNL
DOH Comments on 2016 Annual Report	None received.
DOH Comments on 2017 Annual Report	None received.
Enforcement Response Plan	Section 5 of HNL SWMPP (June 2015).pdf
Organizational charts	Page 12 of 198 SWMPP Introduction.pdf
Permit	HNL MS4 Permit.pdf
Permitting Authority Correspondence with Permittee Regarding Construction Programs	20140314.Final Permit Response to Comments - HI S000005 - 03025PRM.14b.pdf
Plan Review	a. Design-Review-Checklist-Greater-Than_One-Acre.pdf b. Design-Review-Checklist-Less-Than_One-Acre.pdf c. Construction-Inspection-SOP-Final.pdf d. Construction-Inspection-Checklist-Version-7.0.pdf e. Construction-Plan-Review-Comment-Sheet-20140318-blank.pdf f. 20171009.Construction-Plan-Design-Review-SOP-V1-7-2017.pdf
SWMPP	HNL SWMPP (June 2015).pdf

Permit / Document	2. Honolulu International Airport Individual Permit HI S000005
Training and Education Materials	• 2017 Construction Inspector Training Quiz • DOTA Construction Training Slides.pdf • 2017 Construction Handout.pdf • Construction Program Information Sheet.pdf • OGG Storm Water Training Invatation Letter v1 (1).pdf • SW Training 2017_web version 2017_ with script.pdf • PPT Library Construction Documents Review Form.pdf • PPT Library HNL NPDES Permit Design and Construction Requirements.pdf • PPT Library Airports Division Specification Guideline Fed.pdf • PPT Library PM Process Pre-Con Meeting Minutes.pdf • PPT Library Procedure for notification of cont soil.pdf • PPT Library Procedure for notification of cont soil.pdf • PPT Library Tenant Improvement Approval Forms.pdf • 2017 Construction Inspector Training Survey.pdf • DOT Airports Construction Training_v5_20151021.pdf • DOTA_SOP_ConstructionPlanReview.pdf • 20160926.Transmittal and Contents of CD for Compliance Submission of Other-Updated Training-HIS000005.pdf • 20160909.Compliance Submission of Other-Updated Training-HIS000005.pdf
Websites	a. http://hidot.hawaii.gov/airports/doingbusiness/engineering/environmental/constructionsiterunoffcontrolprogram/ b. http://hidot.hawaii.gov/airports/doingbusiness/engineering/environmental/hnlstormwaterprogram/

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name *(Original File Name)*	**Sections/Pages Relevant to PEAR 2**
2016 Annual Report *(20160909.Contents of CD for Compliance Submission of Reports and Documents-HIS000005.pdf)*	Section 2.0 Section 3.4 Section 4.0 Section 5.1 Section 5.2 Section 5.4 Attachment 4 (Training Summary) Attachment 10 (Active Construction Inventory) Attachment 11 (Construction Plan Review) Attachment 12 (Construction Site Inspections)
2017 Annual Report *(20170901.Transmittal-Certification for Reports and Documents-HI S000005.pdf)*	Sections 2.0-4.0 Section 3.4 Sections 5.1-5.2 Section 5.4
Construction BMP Field Manual *(HNL SWMPP Section C_Draft 20170927_Final. pdf)*	Attachment C7
Construction Site Inventory *(Wiki Wiki Newsletter)*	In entirety
Enforcement Response Plan *(HNL SWMPP (June 2015).pdf)*	Section 5.0
Organizational Chart *(Page 12 of 198 SWMPP Introduction.pdf)*	In entirety
Permit *(HNL MS4 Permit.pdf)*	Section D.1.d.
Permitting Authority Correspondence with Permittee Regarding Construction Programs *(20140314.Final Permit Response to Comments - HI S000005 - 03025PRM.14b.pdf)*	Section 2 Section 7
Standard Operating Procedures, Construction Inspections (February 2013) (*Construction-Inspection-SOP-Final.pdf*)	Section 3.0 Section 4.0
Plan Review Comment sheet *(Construction-Plan-Review-Comment-Sheet-20140318-blank.pdf)*	In entirety
Design Review Checklist >1 acre *(Design-Review-Checklist-Greater-Than_One-Acre.pdf)*	In entirety

Appendix B2: Permit-Specific Information – Daniel K. Inouye International Airport

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
Design Review Checklist <1 acre *(Design-Review-Checklist-Less-Than_One-Acre.pdf)*	In entirety
Construction Inspection Checklist *(Construction-Inspection-Checklist-Version-7.0.pdf)*	In entirety
Storm Water Management Program Plan, Honolulu International Airport (June 2015) (*HNL SWMPP (June 2015).pdf*)	SWMPP Section C, in entirety
Construction Plan Design Review Standard Operating Procedures *(20171009.Construction-Plan-Design-Review-SOP-V1-7-2017.pdf)*	In entirety
Website *(http://hidot.hawaii.gov/airports/doingbusiness engineering/environmental/ constructionsiterunoffcontrolprogram/)*	In entirety
(http://hidot.hawaii.gov/airports/doingbusiness/ engineering/environmental/ hnlstormwaterprogram/)	In entirety
Training and Education *(2017 Construction Inspector Training Quiz.pdf)*	In entirety

3. On-Site Evaluation

28 November 2017

On 28 November 2017, the Audit Team held a kickoff meeting at Daniel K. Inouye International Airport (HNL) with Airports Division staff and consultants. Photographs taken during the On-Site Evaluation can be found in Section 4 below.

Construction Site 2.1 Mauka Extension Project

Next, the Audit Team drove to the Mauka Extension project and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Airports Division staff and consultants as they conducted an inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

Construction Site 2.2 Consolidated Rental Car (CONRAC) Facility

Finally, the Audit Team drove to the CONRAC facility and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Airports Division staff and consultants as they conducted an inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

4. On-Site Evaluation Photos

Photographs are provided on the subsequent pages below.

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.1
Records Review and Safety Meeting

Construction Site 2.1 Photo 2.1.2
Construction Site Entrance

Construction Site 2.1 Photo 2.1.3
Erosion Control Berm

Construction Site 2.1 Photo 2.1.4
Erosion Control Berm

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.5
Erosion Control Berm

Construction Site 2.1 Photo 2.1.6
Erosion Control Berm

Construction Site 2.1 Photo 2.1.7
Erosion Control Berm

Construction Site 2.1 Photo 2.1.8
Concrete Construction

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.9
Concrete Waste Bin

Construction Site 2.1 Photo 2.1.10
Material Stockpile

Construction Site 2.1 Photo 2.1.11
Erosion Control Berm

Construction Site 2.1 Photo 2.1.12
Erosion Control Berm

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.13
Wash Area

Construction Site 2.1 Photo 2.1.14
Flowing Site Runoff

Construction Site 2.1 Photo 2.1.15
Erosion Control Berm

Construction Site 2.1 Photo 2.1.16
Spill Kit

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.17
Erosion Control Berm

Construction Site 2.1 Photo 2.1.18
Erosion Control Berm

Construction Site 2.1 Photo 2.1.19
Erosion Control Berm

Construction Site 2.1 Photo 2.1.20
Erosion Control Berm

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.21
Erosion Control Berm

Construction Site 2.1 Photo 2.1.22
Material Stockpile

Construction Site 2.1 Photo 2.1.23
Material Stockpile

Construction Site 2.1 Photo 2.1.24
Material Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.25
Material Stockpile

Construction Site 2.1 Photo 2.1.26
Drain Inlet Protection

Construction Site 2.1 Photo 2.1.27
Construction Waste Stockpile

Construction Site 2.1 Photo 2.1.28
Construction Waste Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.29
Material Stockpile

Construction Site 2.1 Photo 2.1.30
Construction Storage Area

Construction Site 2.1 Photo 2.1.31
Construction Waste Bin

Construction Site 2.1 Photo 2.1.32
Construction Storage Area

Construction Site 2.1 Photo 2.1.33
Temporary Construction Restrooms

Construction Site 2.1 Photo 2.1.34
Temporary Construction Restrooms

Construction Site 2.1 Photo 2.1.35
Construction Staging Area (Material Storage Stockpiles)

Construction Site 2.1 Photo 2.1.36
Concrete Washout Bin

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.37
Dust Fence and Erosion Control Berm

Construction Site 2.1 Photo 2.1.38
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.39
Construction Site Entrance

Construction Site 2.1 Photo 2.1.40
Construction Ingress/Egress Location

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.41
Material Stockpile

Construction Site 2.1 Photo 2.1.42
Erosion Control Berm

Construction Site 2.1 Photo 2.1.43
Erosion Control Berm

Construction Site 2.1 Photo 2.1.44
Material Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.45
Material Stockpile

Construction Site 2.1 Photo 2.1.46
Material Stockpile

Construction Site 2.1 Photo 2.1.47
Material Stockpile

Construction Site 2.1 Photo 2.1.48
Construction Ingress/Egress Location

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.49
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.50
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.51
Material Stockpile

Construction Site 2.1 Photo 2.1.52
Material Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.53
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.54
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.55
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.56
Construction Ingress/Egress Location

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.57
Erosion Control Berms

Construction Site 2.1 Photo 2.1.58
Erosion Control Berms

Construction Site 2.1 Photo 2.1.59
Erosion Control Berms

Construction Site 2.1 Photo 2.1.60
Erosion Control Berms

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.61
Erosion Control Berms

Construction Site 2.1 Photo 2.1.62
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.63
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.64
Construction Ingress/Egress Location

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.65
Plugged Drain Inlet

Construction Site 2.1 Photo 2.1.66
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.67
Silt Fence

Construction Site 2.1 Photo 2.1.68
Silt Fence

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.69
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.70
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.71
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.72
Construction Ingress/Egress Location

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.73
Dust Fence and Silt Fence

Construction Site 2.1 Photo 2.1.74
Water Truck Applying Dust Control

Construction Site 2.1 Photo 2.1.75
Water Truck Applying Dust Control

Construction Site 2.1 Photo 2.1.76
Water Truck Applying Dust Control

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.77
Dust Control Fence

Construction Site 2.1 Photo 2.1.78
Dust Control Fence

Construction Site 2.1 Photo 2.1.79
Construction Site Entrance

Construction Site 2.1 Photo 2.1.80
Construction Site Entrance

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.81
Construction Site Entrance

Construction Site 2.1 Photo 2.1.82
Construction Site Entrance

Construction Site 2.1 Photo 2.1.83
Construction Site Entrance

Construction Site 2.1 Photo 2.1.84
Construction Site Entrance

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.85
Construction Ingress/Egress Location

Construction Site 2.1 Photo 2.1.86
Construction Staging Area

Construction Site 2.1 Photo 2.1.87
Erosion Control Berm

Construction Site 2.1 Photo 2.1.88
Drain Inlet

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.89
Erosion Control Berm

Construction Site 2.1 Photo 2.1.90
Erosion Control Berm (Discovered Existing Oil Water Separator)

Construction Site 2.1 Photo 2.1.91
Material Stockpile

Construction Site 2.1 Photo 2.1.92
Material Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.93
Exposed Soil

Construction Site 2.1 Photo 2.1.94
Exposed Soil

Construction Site 2.1 Photo 2.1.95
Exposed Soil

Construction Site 2.1 Photo 2.1.96
Erosion Control Berms and Dust Fence

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.97
Erosion Control Berms and Dust Fence

Construction Site 2.1 Photo 2.1.98
Equipment Storage

Construction Site 2.1 Photo 2.1.99
Exposed Soil

Construction Site 2.1 Photo 2.1.100
Material Stockpile

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

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Engineers & Scientists

Construction Site 2.1 Photo 2.1.101
Vehicle Tracking

Construction Site 2.1 Photo 2.1.102
Vehicle Tracking

Construction Site 2.1 Photo 2.1.103
Construction Site Entrance

Construction Site 2.1 Photo 2.1.104
Construction Site Entrance

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.1 Photo 2.1.105
Paint Residue

Construction Site 2.1 Photo 2.1.106
Paint Residue

Construction Site 2.1 Photo 2.1.107
Vehicle Tracking

Construction Site 2.1 Photo 2.1.108
Vehicle Tracking

Facility: HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal
Date Photos Taken: 28 November 2017 (8:30am – 10:45am)
Photographer: Kennedy/Jenks Consultants

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Engineers & Scientists

Construction Site 2.1 Photo 2.1.109
Vehicle Tracking

Construction Site 2.1 Photo 2.1.110
Vehicle Tracking

Construction Site 2.1 Photo 2.1.111
Site Inspection Debrief

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.1
Construction Site Entrance

Construction Site 2.2 Photo 2.2.2
Records Review and Safety Meeting

Construction Site 2.2 Photo 2.2.3
Drain Inlet

Construction Site 2.2 Photo 2.2.4
Drain Inlet

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.5
Drain Inlet

Construction Site 2.2 Photo 2.2.6
Erosion Control Berms

Construction Site 2.2 Photo 2.2.7
Erosion Control Berms

Construction Site 2.2 Photo 2.2.8
Erosion Control Berms

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.9
Erosion Control Berms

Construction Site 2.2 Photo 2.2.10
Erosion Control Berms

Construction Site 2.2 Photo 2.2.11
Erosion Control Berms

Construction Site 2.2 Photo 2.2.12
Erosion Control Berms

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.13
Erosion Control Berms

Construction Site 2.2 Photo 2.2.14
Erosion Control Berms

Construction Site 2.2 Photo 2.2.15
Erosion Control Berms

Construction Site 2.2 Photo 2.2.16
Erosion Control Berms

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.17
Erosion Control Berms and Drain Inlet Protection

Construction Site 2.2 Photo 2.2.18
Erosion Control Berms and Drain Inlet Protection

Construction Site 2.2 Photo 2.2.19
Drain Inlet Protection

Construction Site 2.2 Photo 2.2.20
Erosion Control Berms and Drain Inlet Protection

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.21
Construction Ingress/Egress Location (Truck Tire Wash Rack)

Construction Site 2.2 Photo 2.2.22
Construction Ingress/Egress Location (Truck Tire Wash Rack)

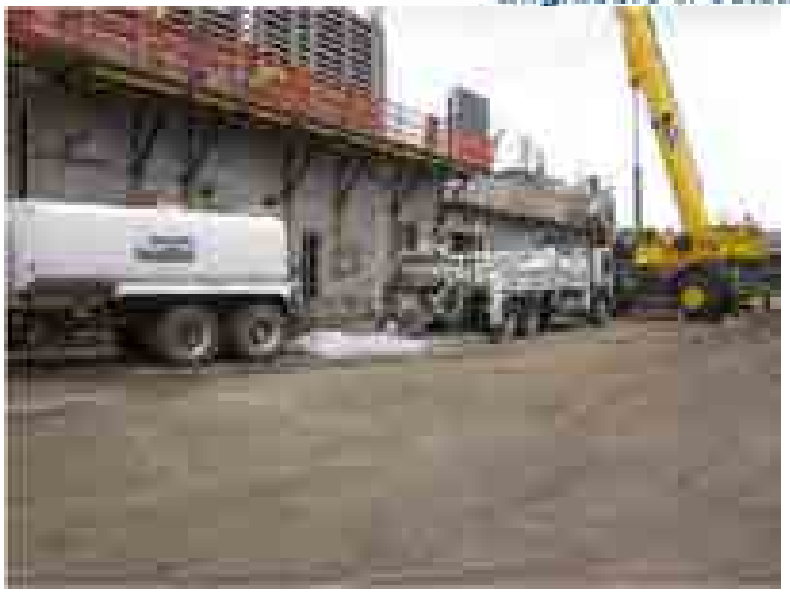
Construction Site 2.2 Photo 2.2.23
Construction Ingress/Egress Location (Truck Tire Wash Rack)

Construction Site 2.2 Photo 2.2.24
Construction Ingress/Egress Location (Truck Tire Wash Rack)

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.25
Construction Ingress/Egress Location (Truck Tire Wash Rack)



Construction Site 2.2 Photo 2.2.26
Concrete Washout

Construction Site 2.2 Photo 2.2.27
Concrete Washout

Construction Site 2.2 Photo 2.2.28
Concrete Washout

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.29
Concrete Washout Bins

Construction Site 2.2 Photo 2.2.30
Concrete Washout Bins

Construction Site 2.2 Photo 2.2.31
Concrete Washout Bins

Construction Site 2.2 Photo 2.2.32
Vehicle Accessway

Facility: HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Honolulu, HI
Date Photos Taken: 28 November 2017 (11:00am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 2.2 Photo 2.2.33
Inspection Debrief Meeting

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

Deficiency Tracking #3 and #4 applies to this permit. Please see pages B2-8 through B2-11.

Final Notice of Deficiency

Deficiency Tracking #: 3
Related Permit(s): Daniel K. Inouye International Airport

Deficiency Narrative Description:

The Audit Team's Records Review found that third party site inspectors may not be consistently elevating observations to the level of a deficiency, as defined in Airports Division's Construction Site Runoff Control Program (September 2017, hereinafter referred to as the "Program"). For example, the 2/7/17 inspection of the Daniel K. Inouye International Airport Mauka Extension project identified that inlet protection on drain 7490 was adequately installed but needs maintenance. In another example, the 4/11/17 inspection of the same project identified that witch's hats in inlets within recently vegetated areas have accumulated sediment and have not been maintained. These findings fit the definition of a minor deficiency (Section 4.4 of the Program). However, the findings were not noted in the 2/7/17 or 4/11/17 inspection forms as deficiencies of any kind; instead they were noted in the "Additional Comments" section on Page 2 of each form. It is unclear whether items listed in the "Additional Comments" section require any formal action from the contractor, or related follow-up by Airports Division.

Recommendations for Improvement:

Airports Division should consider additional training of inspection staff related to this item of concern.

Description of Attachments (if applicable): Airports Divisions' 2/7/17 and 4/11/17 inspections of the Daniel K. Inouye International Airport Mauka Extension project.

Applicable Regulatory References

NPDES Permit No.: HI S000005 Part D.1.d.(3)(ii): The Permittee shall further develop and implement written procedures for appropriate corrective actions and follow-up inspections when deficiencies had been identified at an inspected project.

SWMPP:

Section 4.4 of the Construction Site Runoff Control Program (September 2017)

"Examples [of minor deficiencies] include … BMPs are implemented but require maintenance…"

Hawaii Administrative Rules (HAR): n/a

Code of Federal Regulations (CFR): n/a

Construction Inspection Checklist

Project Name: HNL NDWP IIT Mauka Extension	
Date: 2-7-17	Start / End Time: 10:10 -11:00 am
Project No.: AO1123-30	NPDES Permit # (if any): HIR10F124
Name of Inspector's Firm: EnviroServices and Training Center, LLC	
Name of Inspector: Daniel Amato & Michelle Kwock	Phone Number: 808-664-1926
On-site Representative: Jake Beeney	
Weather Conditions: Sunny	
Type of Inspection (check one): ☐ Initial ☐ Weekly ☒ Monthly ☐ Final ☐ Follow-up ☐ Other:	

	Inspection Items	*Yes*	*No*	*N/A*	*Comments*
1.	Are previously noted deficiencies corrected?	☒	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☒	☐	☐	
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☒	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☒	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☒	☐	☐	
6.	Are spill kits available on-site and spills promptly removed?	☒	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☒	☐	☐	
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☒	☐	Some compost socks were not properly installed (Photo 5)
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☒	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☒	☐	☐	
11.	Is the construction exit preventing sediment from being tracked into the street?	☒	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☒	☐	☐	Dumpster is under cover (Photo 2)
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☒	☐	☐	
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☒	☐	☐	
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☒	☐	☐	
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☒	☐	☐	
17.	Was herbicide, pesticide, or fertilizer used at the site since the previous inspection?	☐	☒	☐	
17b.	If so, keep the usage log on-site and in the comments section of this form record date, quantity used, location, and BMPs used (refer to SWMPP Section E).	☐	☐	☒	

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.	Compost Filter Socks	☒	☐	☐	☒	Compost filter socks were improperly overlapped (Photo 5)
2.	Inlet Protection	☒	☐	☒	☐	Inlet # 836 was properly protected (Photo 16). Inlet protection on drain 7490 was adequately installed but needs maintenance (Photo 13).
3.	Covered Material Storage Area	☒	☐	☒	☐	The ramp over the storage area provides cover for materials, dumpster, and some of the construction work.
4.		☐	☐	☐	☐	
5.		☐	☐	☐	☐	
6.		☐	☐	☐	☐	
7.		☐	☐	☐	☐	
8.		☐	☐	☐	☐	

Additional Comments:

1) Update BMP Plan to reflect the staging area under the ramp (Photos 3 & 7) .

2) Maintain debris accumulation at/in inlet protection.

3) Install inlet protection on new drain inlets (Photo 8-10) when connection to MS4 is live or when pavement reaches inlet grate area (whichever comes first).

*Use additional paper if the number of BMPs exceeds the space allotted.

Description of Potential Non-Compliance:

Minor Deficiencies:

1) Compost socks not properly installed (Photo 5). Please correct within 7 days of inspection date.

2) Update BMP plan to include material storage area (Photo 3) and vehicle parking area. Please correct within 14 days of inspection date.

NOTE: Per HNL's Small MS4 Permit, HIS000005 and SWMP Section C.
Critical Deficiencies. Must be corrected by the **close of business on the day of the inspection**. Defined as those that pose an immediate threat for discharge of pollutants to a storm drain or receiving water. Examples include: non-storm water discharge, absence of perimeter controls, spills that have not been cleaned near a drain or waterway.

Major Deficiencies. Must be corrected as soon as possible, but no later than **5 calendar days following the inspection**. Defined as those that pose a significant threat for discharge of pollutants to a storm drain or receiving water. Examples include: lack of NPDES permit (if required), lack of BMP plan, perimeter BMPs are not functional, dewatering without BMPs, tracking more than 50' from ingress/egress.

Minor Deficiencies. Must be corrected by date specified by inspector. Defined as those that do not pose a threat for the discharge of pollutants; however still violate regulations or procedures.

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the HNL Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☒ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: Daniel Amato

Signature: _____ Date: 2/8/2017

INSPECTION PHOTOGRAPHS

Photo 1 Description: View of project site under ramp; view looking NW.	**Photo 2 Description:** Dumpster placed under cover of ramp; view looking NE.
Photo 3 Description: Storage area under ramp that is not included in BMP plan; view looking NW.	**Photo 4 Description:** Compost filter sock and filter fabric installed on drain inlet; view looking E.

INSPECTION PHOTOGRAPHS

Photo 5 Description: Green compost filter socks are not installed properly with 6" horizontal overlap; view looking SW.

Photo 6 Description: Installation of a new pedestrian path near lei stands; view looking NE.

Photo 7 Description: Safety information posted clearly on bulletin board at project site storage area that is not on BMP plan; view looking N.

Photo 8 Description: A new drain inlet under the ramp; view looking W.

INSPECTION PHOTOGRAPHS

Photo 9 Description: View of another new drain inlet installed below the ramp; view looking S.	**Photo 10 Description:** Partially completed drain inlet under ramp; view looking SE.
Photo 11 Description: Dirt stockpile covered and surrounded by compost socks; view looking N.	**Photo 12 Description:** Ongoing construction work on pedestrian sidewalk at project site behind lei stands; view looking SW.

INSPECTION PHOTOGRAPHS

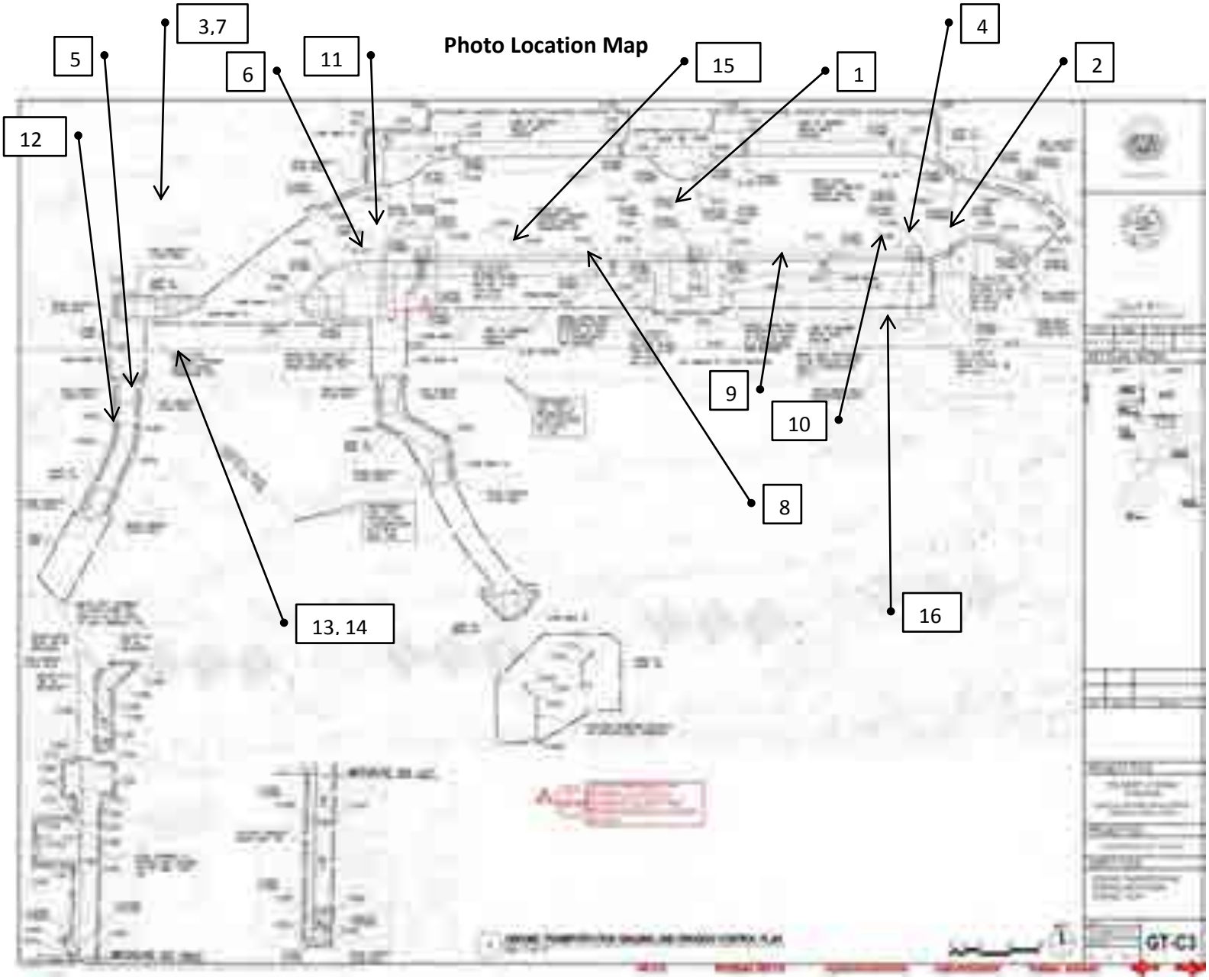
Photo 13 Description: Compost filter sock and witch's hat protect a main drain inlet (# 7420) near the project area at lei stands; view looking E.

Photo 14 Description: Debris accumulation inside witch's hat from photo #13.

Photo 15 Description: Chemical toilets secured to the ground with stakes under ramp; view looking NW.

Photo 16 Description: Curb Inlet # 836 with inlet protection near project site; view looking N.

Photo Location Map



Construction Site BMP Inspection: STATE PROJECT NO: AO1123-30 HNL NDWP BT MAUKA EXTENSION

Date: 2/7/2017

Name	Organization/Position	Phone	Email
Daniel Amato	ETC / 3rd Party Insp	664-1966	damato@gotoetc.com
Michelle Kwock	" "	" "	mkwock@gotoetc.com
Mark Schipper	AECOM / Construction Inspector	321-8801	mark.schipper@aecom.com
Jane Beeney	HPCC DC Mgr	260 5960	jbeeney@hensel/phelp.com

Construction Inspection Checklist

Project Name: HNL NDWP IIT Mauka Extension	
Date: 4-11-17	Start / End Time: 10:00 -11:00 am
Project No.: AO1123-30	NPDES Permit # (if any): HIR10F124
Name of Inspector's Firm: EnviroServices and Training Center, LLC	
Name of Inspector: Daniel Amato	Phone Number: 808-664-1926
On-site Representative: Jake Beeney	
Weather Conditions: Sunny	
Type of Inspection (check one): ☐ Initial ☐ Weekly ☒ Monthly ☐ Final ☐ Follow-up ☐ Other:	

	Inspection Items	*Yes*	*No*	*N/A*	*Comments*
1.	Are previously noted deficiencies corrected?	☒	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☒	☐	☐	
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☒	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☒	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☒	☐	☐	
6.	Are spill kits available on-site and spills promptly removed?	☒	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☒	☐	☐	
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☒	☐	☐	
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☒	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☒	☐	☐	
11.	Is the construction exit preventing sediment from being tracked into the street?	☒	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☐	☒	Dumpster removed
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☐	☐	☒	No washout onsite
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☒	☐	☐	
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☒	☐	☐	
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☒	☐	☐	
17.	Was herbicide, pesticide, or fertilizer used at the site since the previous inspection?	☐	☒	☐	
17b.	If so, keep the usage log on-site and in the comments section of this form record date, quantity used, location, and BMPs used (refer to SWMPP Section E).	☐	☐	☒	

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.	Compost Filter Socks	☒	☐	☒	☐	Reposition filter socks to accommodate soil stabilization/ vegetation if needed (photos 12-15)
2.	Inlet Protection	☒	☐	☐	☒	Witch's hats in inlets within recently vegetated areas have accumulated sediment (photos 4, 7, & 8)
3.	Covered Material Storage Area	☒	☐	☒	☐	The ramp over the storage area provides cover for materials.
4.		☐	☐	☐	☐	
5.		☐	☐	☐	☐	
6.		☐	☐	☐	☐	
7.		☐	☐	☐	☐	
8.		☐	☐	☐	☐	

Additional Comments:

1) Remove the following BMPs immediately in completed project areas as discussed during the inspection:
a) Filter socks along N perimeter of ground transportation lot area (including filter socks at E gate) (photos 5 & 6).
b) Witch's hats in new drain inlets in parking area of transportation lot (make sure to clean debris near inlets) (photo 2).

2) Ensure water flowing from ramp downspout flows to the inlet in the vegetated area rather than running offsite to the road. Maintain inlet protection at this inlet and the inlet at the E gate until soil stabilization is complete (photos 7 & 8).

3) Reinstall filter socks along concrete walkways so that socks line the edges of the curb/walkway to accommodate soil stabilization/vegetation (photos 13-15).

4) Increase vegetation density near inlets in vegetated areas to accelerate stabilization of soil near inlets. Recommended that vines plugs are placed 6" apart up to 2' from inlet (photos 4, 7, & 8).

5) Final inspection will occur in a few weeks after vegetation and installation of safety railing are installed.

*Use additional paper if the number of BMPs exceeds the space allotted.

Description of Potential Non-Compliance:

Minor Deficiencies: Please correct within 7 days of inspection date and send a photo to damato@gotoetc.com.

1) Liquid chemicals in staging area need secondary containment (photo 16).

NOTE: Per HNL's Small MS4 Permit, HIS000005 and SWMP Section C.
Critical Deficiencies. Must be corrected by the **close of business on the day of the inspection**. Defined as those that pose an immediate threat for discharge of pollutants to a storm drain or receiving water. Examples include: non-storm water discharge, absence of perimeter controls, spills that have not been cleaned near a drain or waterway.

Major Deficiencies. Must be corrected as soon as possible, but no later than **5 calendar days following the inspection**. Defined as those that pose a significant threat for discharge of pollutants to a storm drain or receiving water. Examples include: lack of NPDES permit (if required), lack of BMP plan, perimeter BMPs are not functional, dewatering without BMPs, tracking more than 50' from ingress/egress.

Minor Deficiencies. Must be corrected by date specified by inspector. Defined as those that do not pose a threat for the discharge of pollutants; however still violate regulations or procedures.

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the HNL Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☒ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: Daniel Amato

Signature: _____ Date: 4/13/2017

INSPECTION PHOTOGRAPHS

Photo 1 Description: View of ground transportation lot area with new vegetation; view looking E.	**Photo 2 Description:** Witch's hat to be removed in new drain inlet at ground transportation area lot; view looking E.
Photo 3 Description: View of completed project area; view looking NW.	**Photo 4 Description:** Inlet with protection in recently vegetated area near E gate; view looking W.

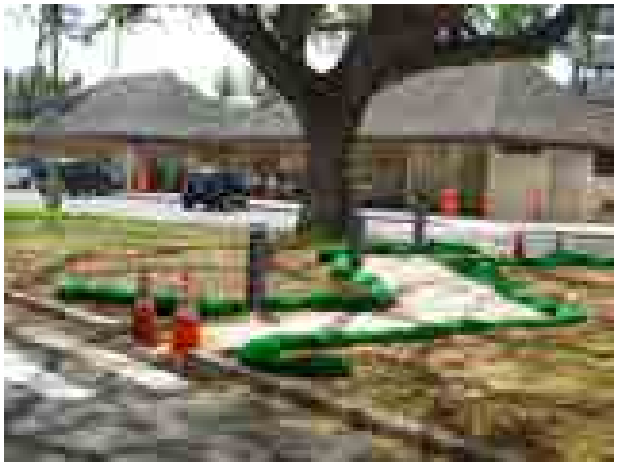
INSPECTION PHOTOGRAPHS

Photo 5 Description: View of E gate. Filter socks should be removed; view looking S.	**Photo 6 Description:** Compost filter socks at N perimeter of ground transportation site. Socks should be removed; view looking N.
Photo 7 Description: Storm water spillway from ramp downspout to gavel and inlet in vegetated area under ramp by W gate; view looking S.	**Photo 8 Description:** Inlet in photo 7 showing sediment accumulation.

INSPECTION PHOTOGRAPHS

Photo 9 Description: Staging area under ramp; view looking N.	**Photo 10 Description:** Curb inlet repair at lei stands complete; view looking NW.
Photo 11 Description: Pedestrian walkway near completion; view looking S.	**Photo 12 Description:** Rear view of new pedestrian walkway awaiting installation of protective railing on roadside; view looking S.

INSPECTION PHOTOGRAPHS

	
Photo 13 Description: Pedestrian path under ramp to ground transportation lot; view looking N.	**Photo 14 Description:** Additional pedestrian foot path in between lei stands and ground transportation lot; view looking S.

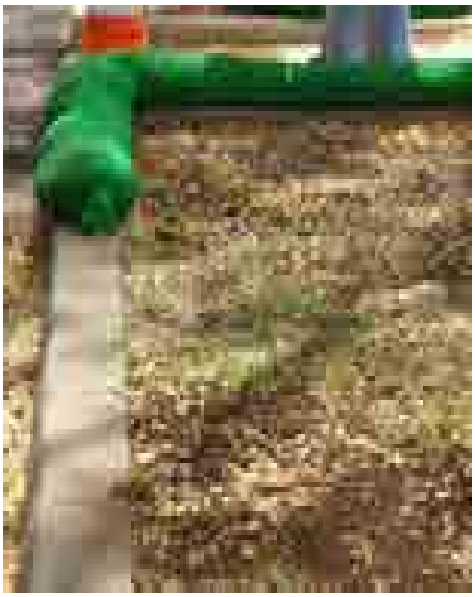
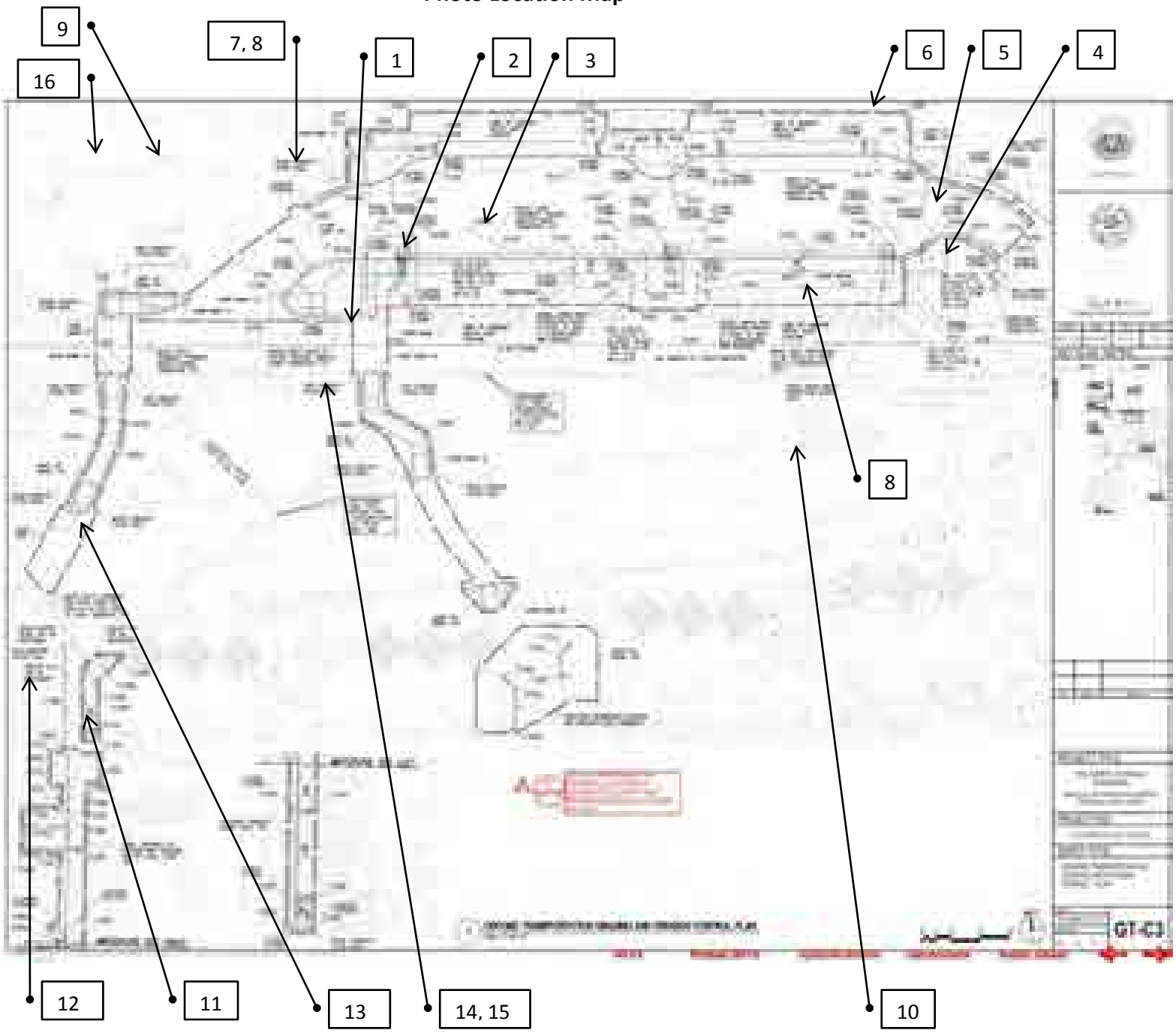



Photo 15 Description: Example of new position of filter socks to accommodate stabilization/vegetation of area next to foot path in photo 14; view looking E.	**Photo 16 Description:** Liquid chemicals at staging area under ramp need proper storage; view looking N.

Photo Location Map



Construction Site BMP Inspection: STATE PROJECT NO: AO1123-30 --HNL NDWP IIT MAUKA EXTENSION
Final Inspection:
Date: 4/11/2017

Name	Organization/Position	Phone	Email
Jake Beeney	Hensel Phelps / QC	260-5960	jbeeney@henselphelps.com
Mark Schipper	AECOM / Inspector	224-8901	[illegible]
Daniel Amato	ETC / Inspector	664-1936	damato@getcetc.com

Appendix B2: Permit-Specific Information – Daniel K. Inouye International Airport

Result of HDOT PM Review:

- ☑ Confirmed Deficiency
  - o Email Notice of Corrective Action sent to EPA/DOH on: **2/12/18** (Due Within 21 Calendar Days of Deficiency Notification Date)
- ☐ Re-categorized as Potential Violation (see rationale below)
  - o Email Notice sent to EPA/DOH on: _____
- ☐ Summarily Dismissed (see rationale below)
  - o Email Notice sent to EPA/DOH on: _____

Rationale for Re-Categorization or Summary Dismissal: **n/a**

State of Hawaii Department of Transportation
MS4 Permit Audit
Notice of Corrective Action

Corrective Action in Response to:

☐ Potential Violation (complete Section A & C)

☒ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:____ Potential Violation Notification Date:_____
(from Notice of Potential Violation Form)

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

Deficiency Tracking #: 3 (HNL Mauka Extension Project)

HDOT Receipt of Draft PEAR Date: 1/22/2018

Corrective Action Notification Date: 2/12/2018
(Today's Date)

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action

DOT Airport Division (DOTA) has or will implement the following corrective actions: **NOTE:** Attachments noted can be found in the enclosure titled "Corrective Action Work Plan for Deficiencies in Response to The Draft Program Element Audit Report (PEAR) No. 2: Construction Site Runoff Control" dated February 5, 2018.

1. DOTA made minor revisions to the **Construction Inspection Checklist** on January 19, 2018, to include a grid for the Description of Potential Non-Compliance section, to clearly portray deficiencies (e.g., description, photo, deficiency type, and follow-up date) found during inspections (See Enclosure - Attachments 1 and 2 for HNL and OGG respectively).

2. DOTA developed a **Construction Inspection Corrective Action Report** on November 9, 2017, to track deficiencies and implementations of corrective actions. The purpose of this report is to have a record of the status of corrective actions (if there were any) and track the date of closure for each deficiency (See Enclosure - Attachment 3) identified in the Construction Inspection Checklist.

3. DOTA developed a **Monthly Construction Inspection Summary Table** that tracks all of the active construction projects, the dates of inspection, the number of different types of deficiencies, and if the deficiencies were corrected on time (See Enclosure - Attachment 4). DOTA will implement the Monthly Construction Inspection Summary Table in HNL's and OGG's Construction Programs by February 28, 2018.

4. DOTA will develop a **Construction Inspection and Enforcement Standard Operating Procedure (SOP)** for the construction inspectors to detail tasks to conduct before, during and after inspection.

   Milestones:

Draft Construction Inspection SOP	March 30, 2018
Final Construction Inspection SOP	April 13, 2018

   Copies will be provided to inspectors, construction managers, and state project managers.

5. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors.

   Milestones:

Develop training material	March 1, 2018
Schedule training dates	March 15, 2018
Training class (on or before)	March 31, 2018

Details of the corrective actions and all attachments noted above can be found in the enclosure titled: “Corrective Action Work Plan for Deficiencies in Response to The Draft Program Element Audit Report (PEAR) No. 2: Construction Site Runoff Control”, dated February 5, 2018.

CORRECTIVE ACTION WORK PLAN
FOR DEFICIENCIES

IN RESPONSE TO THE
DRAFT PROGRAM ELEMENT AUDIT REPORT (PEAR)
NO. 2: CONSTRUCTION SITE RUNOFF CONTROL

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION, AIRPORTS DIVISION

FEBRUARY 5, 2018

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4 TIMELINE 10

FIGURES

Figure 1. DOTA PEAR #2 Corrective Action Timeline 10

ATTACHMENTS

Attachment 1. Revised Honolulu Construction Inspection Checklist
Attachment 2. Revised Kahului Construction Inspection Checklist
Attachment 3. Construction Inspection Corrective Action Report
Attachment 4. Monthly Construction Inspection Summary Table

ACRONYMS AND ABBREVIATIONS

AWP	Audit Work Plan
CM	Construction Manager
ConRAC	Consolidated Car Rental
DOTA	State of Hawaii, Department of Transportation, Airports Division
ENV	State of Hawaii, Department of Transportation, Office of Environmental Compliance
HDOT	State of Hawaii, Department of Transportation
HNL	Daniel K. Inouye International Airport
IIT	Interisland Terminal
MS4	Municipal Separate Storm Sewer System
OGG	Kahului Airport
PEAR	Program Element Audit Report
SOP	Standard Operating Procedure
SPM	State Project Manager
SWMPP	Storm Water Management Program Plan

1 INTRODUCTION

This Corrective Action Work Plan was prepared in response to the Draft Program Element Audit Report (PEAR) No. 2, Construction Site Runoff Control, dated January 2018 (Draft PEAR No. 2) and prepared for the State of Hawaii Department of Transportation, Office of Environmental Compliance (ENV). Specifically, this Corrective Action Work Plan provides a description and timelines of the corrective actions that the State of Hawaii Department of Transportation, Airports Division (DOTA) will take in response to the deficiencies described in this Work Plan.

The Draft PEAR No. 2, identified one Potential Violation and three Deficiencies relating to the DOTA's Construction Site Runoff Control Program at two airports: Daniel K. Inouye International Airport (HNL) (previously known as Honolulu International Airport) and the Kahului Airport (OGG). The findings are identified as:

- **Potential Violation #1** – OGG washrack project, concern about not elevating issues to the level of a formal deficiency
- **Deficiency #2** – OGG Consolidated Car Rental (ConRAC) project, hydraulic fluid leak
- **Deficiency #3** – HNL Interisland Terminal (IIT) Mauka project, concern about not elevating issues to the level of a formal deficiency
- **Deficiency #4** – HNL ConRAC project, possible liquid under construction vehicle

DOTA was informed of these findings on January 22, 2018. On January 24, 2018, DOTA submitted a rebuttal to the Potential Violation #1 determination. In response to this rebuttal, the determination was reduced from a Potential Violation to a Deficiency (Deficiency #1).

2 KEY FINDINGS OF DRAFT PEAR NO. 2

2.1 DETERMINATIONS

The revised Audit Work Plan (AWP) dated November 2016, and prepared for the ENV, describes Findings of Concern that may be identified by the audit team during the course of the audit. Upon evaluating a Finding of Concern, the audit team may make a determination that it is either a Deficiency or Potential Violation.

- A Deficiency is defined in the AWP, as an "item which, if not corrected, may lead to Potential Violations".
- A Potential Violation is defined in the AWP as an "area where the evaluation found the permittee not in compliance with a specific permit requirement or Stormwater Management Program Plan (SWMPP) commitment."

2.2 PEAR NO. 2 FINDINGS

The following lists the four Deficiencies and Recommendations for Improvement that were identified at Kahului Airport and Daniel K. Inouye International Airport.

- **Deficiency #1 – Kahului Airport**

  The audit team's record review found that third party site inspectors may not be consistently elevating observations to the level of a deficiency, as defined in DOTA's Construction and Post-Construction Stormwater Management Plan (September 2017), hereinafter referred to as the "Plan". For example, the December 28, 2016 inspection of the Kahului Airport washrack project identified the project's silt fence needed to be maintained, and that nearly half of the silt fence needed to be reinstalled properly. This finding fits the definition of either a minor or major deficiency (Sections 4.3.1 and 4.3.2 of the Plan, respectively). However, the finding was not noted on the December 28, 2016 inspection form as a deficiency of any kind and consequently, the contractor was not notified that the issue should be resolved in the timeframe defined in the Plan.

- **Deficiency #2 – Kahului Airport**

  During the onsite evaluation of the OGG ConRAC site on November 27, 2017, the audit team identified an item of concern not noted on DOTA's inspection report, prepared after the inspection. The SWPPP states "equipment and vehicles will be properly maintained to mitigate leaks." The audit team found an instance where construction equipment appeared to be leaking hydraulic fluid on the ground – and no effort to clean up the fluid spill. The audit team expected the DOTA inspector to note this on the inspection form. However, the inspection report notes "Yes" in response to the question "Are spill kits available onsite and spills promptly removed?"

  Recommendation for Improvement

  DOTA should consider additional training for inspection staff related to this concern.

- **Deficiency #3 – Daniel K. Inouye International Airport**

  The audit team's record review found third party site inspectors may not be consistently elevating observations to the level of a deficiency, as defined in DOTA's Construction Site Runoff Control Program (September 2017) hereinafter referred to as the "Program". For example, the February 07, 2017 inspection of the Daniel K. Inouye International Airport Mauka Extension project identified that inlet protection on drain 490 was adequately installed but needs maintenance. In another example, the April 11, 2017 inspection of the same project identified that witch's hats in inlets within recently vegetated areas had accumulated sediment and had not been maintained. These findings fit the definition of a minor deficiency (Section 4.4 of the Program). However, the findings were not noted in the February 07, 2017 or April 11, 2017 inspection forms as deficiencies of any kind; instead they were noted in the "Additional Comments" section on page two of each form. It is unclear whether items listed in the "Additional Comments" section require any formal action from the contractor or related follow-up by DOTA.

  Recommendation for Improvement

  DOTA should consider additional training of inspection staff related to this concern.

- **Deficiency #4 – Daniel K. Inouye International Airport**

  During the onsite evaluation of two sites on November 28, 2017, the audit team identified an item of concern not noted on DOTA's inspection report, prepared after the inspection.

  The SWPPP for the HNL ConRAC site states the contractor will "use drip pans and absorbents under or around leaky vehicles and equipment." The audit team saw evidence of a pool of dark-colored liquid under a construction vehicle. The audit team expected the DOTA inspector to approach this vehicle and further investigate the situation; however, the audit team did not observe the DOTA inspector performing an investigation. Furthermore, the inspection report notes "Yes" in response to the question "Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?"

  Recommendation for Improvement

  DOTA should consider additional training of inspection staff related to this item of concern.

3 CORECTIVE ACTION PLAN

DOTA prepared this Corrective Action Work Plan in response to the findings of the Draft PEAR No. 2. This Corrective Action Work Plan provides a description and timelines of the corrective actions the DOTA will take in response to the Deficiencies described in Section 2.

3.1 DEFICIENCY #1

Description:	Kahului Airport washrack project - concern about not elevating issues to the level of a formal deficiency
Related Permit:	Kahului Airport
Notification Date:	January 22, 2018

In response to the Deficiency #1, DOTA has or will implement the following corrective actions:

1. DOTA made minor revisions to the **Construction Inspection Checklist** on January 19, 2018, to include a grid for the Description of Potential Non-Compliance section, to clearly portray deficiencies (e.g., description, photo, deficiency type, and follow-up date) found during inspections (Attachments 1 and 2 for HNL and OGG respectively). The grid, along with the numbering system, will help verify the number of deficiencies identified in the first two pages of the inspection checklist with the list on page three of the inspection checklist.

2. DOTA developed a **Construction Inspection Corrective Action Report** on November 9, 2017, to track deficiencies and implementations of corrective actions. The purpose of this report is to have a record of the status of corrective actions (if there were any) and track the date of closure for each deficiency (Attachment 3) identified in the Construction Inspection Checklist. After all the deficiencies are addressed, this report is provided to the Construction Manager (CM), State Project Manager (SPM), and the contractor. The report includes before and after photos of the deficiencies and corrective actions respectively.

3. DOTA developed a **Monthly Construction Inspection Summary Table** that tracks all of the active construction projects, the dates of inspection, the number of different types of deficiencies, and if the deficiencies were corrected on time (Attachment 4). This spreadsheet will be implemented for HNL's as well as OGG's Small MS4 Construction Programs and will be updated each month. This summary table serves as a quality assurance/quality control measure to verify the number of deficiencies identified in the Construction Inspection Checklist and the Corrective Action Report; and it will serve as a tool to identify common types of deficiencies so DOTA can revise their annual training materials. This monthly construction summary table is provided to DOTA management to consider additional oversight for projects with repeat deficiencies. The Monthly Construction Inspection Summary Table will be implemented in HNL's and OGG's Construction Programs by February 28, 2018.

4. DOTA will develop a **Construction Inspection and Enforcement Standard Operating Procedure** (SOP) for the construction inspectors to detail tasks to conduct before, during and after inspection. The SOP will describe how to correctly complete the Construction Inspection Checklist, Corrective Action Report, and Monthly Construction Inspection Summary Table. It will also include instructions to add inspection information into the DOTA's Enviance database. The draft Construction Inspection SOP will be completed by March 30, 2018, and the final version will be complete by April 13, 2018. DOTA management will sign it and provide copies to inspectors, CMs, and SPMs.

5. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors regarding the above mentioned corrective actions. A focus of the training will be ensuring that findings of each inspection are correctly documented on the Construction Inspection Checklist; in particular, it will direct inspectors to write-up deficiencies in the "Description of Potential Non-Compliance" section. Training material for the construction inspector class will be developed by March 01, 2018; coordination of training dates and schedule will be completed by March 15, 2018; and a live training class will be conducted on or before March 31, 2018.

DOTA has been proactive in revamping the construction stormwater training videos to target designers and engineers. DOTA started developing training videos in 2017, prior to the PEAR No. 2 audit. Two training videos are targeted for completion by June 2018. These videos are separate from the Construction Inspector Refresher Training class that will be conducted on or before March 30, 2018.

3.2 DEFICIENCY #2

Description: Kahului Airport ConRAC project hydraulic fluid leak
Related Permit: Kahului Airport
Notification Date: January 22, 2018

In response to the Deficiency #2, DOTA has or will implement the following corrective action:

1. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors regarding the above mentioned corrective actions. A focus of the training will be ensuring that findings of each inspection are correctly documented on the Construction Inspection Checklist; in particular, it will direct inspectors to write-up deficiencies in the "Description of Potential Non-Compliance" section. Training material for the construction inspector class will be developed by March 01, 2018; coordination of training dates and schedule will be completed by March 15, 2018; and a live training class will be conducted on or before March 31, 2018.

3.3 DEFICIENCY #3

Description:	Honolulu International Airport IIT Mauka project, concern about not elevating issues to the level of a formal deficiency
Related Permit:	Daniel K. Inouye International Airport
Notification Date:	January 22, 2018

In response to the Deficiency #3, DOTA has or will implement the following corrective actions:

1. DOTA made minor revisions to the **Construction Inspection Checklist** on January 19, 2018, to include a grid for the Description of Potential Non-Compliance section, to clearly portray deficiencies (e.g., description, photo, deficiency type, and follow-up date) found during inspections (Attachments 1 and 2 for HNL and OGG respectively). The grid, along with the numbering system, will help verify the number of deficiencies identified in the first two pages of the inspection checklist with the list on page three of the inspection checklist.

2. DOTA developed a **Construction Inspection Corrective Action Report** on November 9, 2017, to track deficiencies and implementations of corrective actions. The purpose of this report is to have a record of the status of corrective actions (if there were any) and track the date of closure for each deficiency (Attachment 3) identified in the Construction Inspection Checklist. After all the deficiencies are addressed, this report is provided to the Construction Manager (CM), State Project Manager (SPM), and the contractor. The report includes before and after photos of the deficiencies and corrective actions respectively.

3. DOTA developed a **Monthly Construction Inspection Summary Table** that tracks all of the active construction projects, the dates of inspection, the number of different types of deficiencies, and if the deficiencies were corrected on time (Attachment 4). This spreadsheet will be implemented for HNL's as well as OGG's Small MS4 Construction Programs and will be updated each month. This summary table serves as a quality assurance/quality control measure to verify the number of deficiencies identified in the Construction Inspection Checklist and the Corrective Action Report; and it will serve as a tool to identify common types of deficiencies so DOTA can revise their annual training materials. This monthly construction summary table is provided to DOTA management to consider additional oversight for projects with repeat deficiencies. The Monthly Construction Inspection Summary Table will be implemented in HNL's and OGG's Construction Programs by February 28, 2018.

4. DOTA will develop a **Construction Inspection and Enforcement Standard Operating Procedure** (SOP) for the construction inspectors to detail tasks to conduct before, during and after inspection. The SOP will describe how to correctly complete the Construction Inspection Checklist, Corrective Action Report, and Monthly Construction Inspection Summary Table. It will also include instructions to add inspection information into the DOTA's Enviance database. The draft Construction Inspection SOP will be completed by

March 30, 2018, and the final version will be complete by April 13, 2018. DOTA management will sign it and provide copies to inspectors, CMs, and SPMs.

5. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors regarding the above mentioned corrective actions. A focus of the training will be ensuring that findings of each inspection are correctly documented on the Construction Inspection Checklist; in particular, it will direct inspectors to write-up deficiencies in the "Description of Potential Non-Compliance" section. Training material for the construction inspector class will be developed by March 01, 2018; coordination of training dates and schedule will be completed by March 15, 2018; and a live training class will be conducted on or before March 31, 2018.

3.4 DEFICIENCY #4

Description:	Honolulu International Airport ConRAC project possible liquid under construction vehicle
Related Permit:	Daniel K. Inouye International Airport
Notification Date:	January 22, 2018

In response to the Deficiency #4, DOTA will implement the following corrective actions:

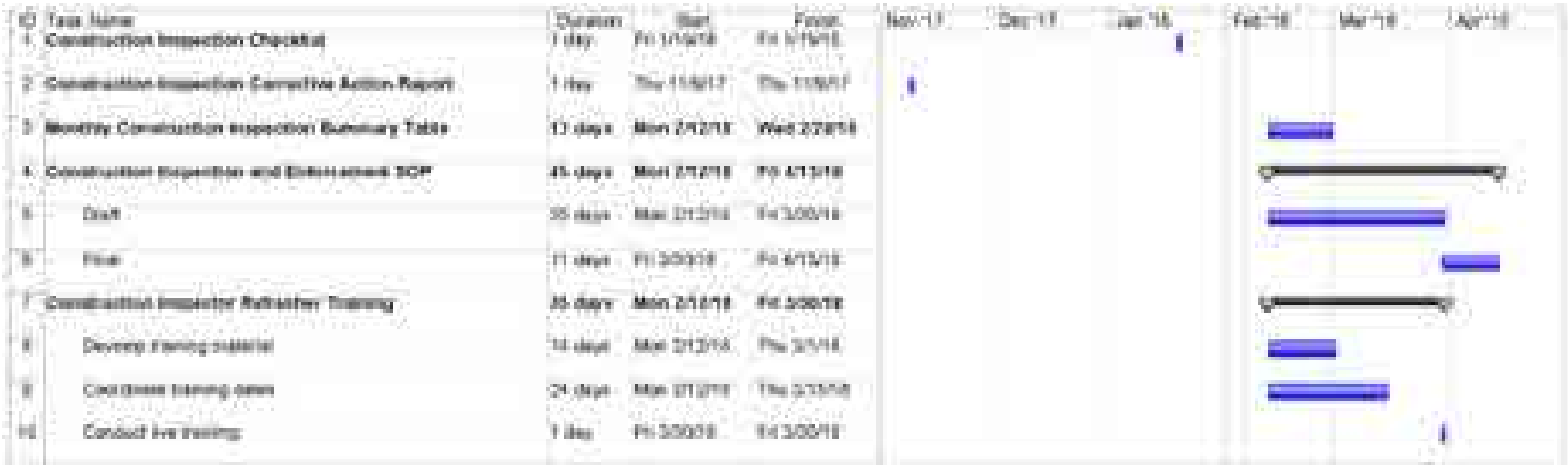
1. DOTA will develop a **Construction Inspection and Enforcement SOP** for the construction inspectors to detail tasks to conduct before, during and after inspection. The SOP will describe how to correctly complete the Construction Inspection Checklist, Corrective Action Report, and Monthly Construction Inspection Summary Table. It will also include instructions to add inspection information into the DOTA's Enviance database. The draft Construction Inspection SOP will be completed by March 30, 2018, and the final version will be complete by April 13, 2018. DOTA management will sign it and provide copies to inspectors, CMs, and SPMs.

2. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors regarding the above mentioned corrective actions. A focus of the training will be ensuring that findings of each inspection are correctly documented on the Construction Inspection Checklist; in particular, it will direct inspectors to write-up deficiencies in the "Description of Potential Non-Compliance" section. Training material for the construction inspector class will be developed by March 01, 2018; coordination of training dates and schedule will be completed by March 15, 2018; and a live training class will be conducted on or before March 31, 2018.

4 TIMELINE

The timeline for the corrective actions for the four deficiencies is presented below.

Figure 1. DOTA PEAR #2 Corrective Action Timeline



ATTACHMENTS

ATTACHMENT 1. REVISED HONOLULU CONSTRUCTION INSPECTION CHECKLIST

CONSTRUCTION INSPECTION CHECKLIST

Project Name: _____

Date: _____ Start / End Time: _____

Project No.: _____ NPDES Permit # (if any): _____

Name of Inspector's Firm: _____

Name of Inspector: _____ Phone Number: _____

On-site Representative: _____ Phone Number: _____

Weather Conditions: _____

Type of Inspection (check one): ☐ Initial ☐ Weekly ☐ Monthly ☐ Final ☐ Follow-up ☐ Other:

Inspection Items		***Yes***	***No***	***N/A***	***Comments***
1.	Are previously noted deficiencies corrected?	☐	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☐	☐	☐	
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☐	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☐	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☐	☐	☐	
6.	Are spill kits available on-site and spills promptly removed?	☐	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☐	☐	☐	
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☐	☐	
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☐	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☐	☐	☐	
11.	Is the construction exit preventing sediment from being tracked into the street?	☐	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☐	☐	
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☐	☐	☐	
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☐	☐	☐	
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☐	☐	☐	
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☐	☐	☐	

CONSTRUCTION INSPECTION CHECKLIST

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.		☐	☐	☐	☐	
2.		☐	☐	☐	☐	
3.		☐	☐	☐	☐	
4.		☐	☐	☐	☐	
5.		☐	☐	☐	☐	
6.		☐	☐	☐	☐	
7.		☐	☐	☐	☐	
8.		☐	☐	☐	☐	
9.		☐	☐	☐	☐	
10.		☐	☐	☐	☐	
11.		☐	☐	☐	☐	
12.		☐	☐	☐	☐	
13.		☐	☐	☐	☐	
14.		☐	☐	☐	☐	
15.		☐	☐	☐	☐	

Additional Comments:

*Use additional paper if the number of BMPs exceeds the space allotted.

CONSTRUCTION INSPECTION CHECKLIST

Description of Potential Non-Compliance:

No.	Description	Photo No.	Deficiency Type	Follow-up Date

NOTE: Descriptions of deficiency types may be found in Table 2 of the HNL Storm Water Management Program Plan Section C.4.4

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☐ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: _____

Signature: _____ Date: _____

ATTACHMENT 2. REVISED KAHULUI CONSTRUCTION INSPECTION CHECKLIST

CONSTRUCTION INSPECTION CHECKLIST

Project Name: _____

Date: _____ Start / End Time: _____

Project No.: _____ NPDES Permit # (if any): _____

Name of Inspector's Firm: _____

Name of Inspector: _____ Phone Number: _____

On-site Representative: _____ Phone Number: _____

Weather Conditions:

Type of Inspection (check one): ☐ Initial ☐ Weekly ☐ Monthly ☐ Final ☐ Follow-up ☐ Other:

Inspection Items		***Yes***	***No***	***N/A***	***Comments***
1.	Are previously noted deficiencies corrected?	☐	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☐	☐	☐	
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☐	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☐	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☐	☐	☐	
6.	Are spill kits available on-site and spills promptly removed?	☐	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☐	☐	☐	
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☐	☐	
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☐	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☐	☐	☐	
11.	Is the construction exit preventing sediment from being tracked into the street?	☐	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☐	☐	
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☐	☐	☐	
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☐	☐	☐	
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☐	☐	☐	
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☐	☐	☐	

CONSTRUCTION INSPECTION CHECKLIST

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.		☐	☐	☐	☐	
2.		☐	☐	☐	☐	
3.		☐	☐	☐	☐	
4.		☐	☐	☐	☐	
5.		☐	☐	☐	☐	
6.		☐	☐	☐	☐	
7.		☐	☐	☐	☐	
8.		☐	☐	☐	☐	
9.		☐	☐	☐	☐	
10.		☐	☐	☐	☐	
11.		☐	☐	☐	☐	
12.		☐	☐	☐	☐	
13.		☐	☐	☐	☐	
14.		☐	☐	☐	☐	
15.		☐	☐	☐	☐	

Additional Comments:

*Use additional paper if the number of BMPs exceeds the space allotted.

CONSTRUCTION INSPECTION CHECKLIST

Description of Potential Non-Compliance:				
No.	**Description**	**Photo No.**	**Deficiency Type**	**Follow-up Date**
NOTE: Descriptions of deficiency types may be found in the *Construction and Post-Construction Storm Water Management Plan*, Section 4.3				

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☐ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name: _____

Signature: _____ Date: _____

ATTACHMENT 3. CONSTRUCTION INSPECTION CORRECTIVE ACTION REPORT

CORRECTIVE ACTION REPORT:
Date:

	Deficiencies from Inspection Dated:	Deficiency Type	Due Date	Status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

CORRECTIVE ACTION REPORT:
Date:

INSPECTION AND CORRECTIVE ACTION PHOTOGRAPHS

Photo 1 Before:	**Photo 1 After:**
Photo 2 Before:	**Photo 2 Before:**

INSPECTION AND CORRECTIVE ACTION PHOTOGRAPHS

Photo 3 Before:	**Photo 3 After:**
Photo 4 Before:	**Photo 4 After:**

ATTACHMENT 4. MONTHLY CONSTRUCTION INSPECTION SUMMARY TABLE

HNL Monthly Construction Inspection Summary for MONTH, YEAR

Project No.	Project Title	NPDES#	Date of Inspection	Critical Deficiencies	Major Deficiencies	Minor Deficiencies	Total Deficiencies	Repeat Deficiencies from Last Inspection	List of Repeat Deficiencies	Date Correction Required	Date Deficiencies Corrected	Deficiencies Corrected On Time?
AO1035-17	Diamond Head Concourse Improvements	N/A										
AO1043-28	OST 2nd Level Metal Roof Replacement (MRR)	N/A										
AO1117-06	HNL Consolidated Car Rental Facility (ConRAC)	HI R10E755										
AO1121-24	NDWP Widen Taxilanes G&L	HI R10E372										
AO1123-30	Interisland Terminal Mauka Extension	HI R10F124 HI R10F306 HI R10F374										
			TOTALS	**0**	**0**	**0**	**0**	**0**				

OGG Monthly Construction Inspection Summary for MONTH, YEAR

Project No.	Project Title	NPDES#	Date of Inspection	Critical Deficiencies	Major Deficiencies	Minor Deficiencies	Total Deficiencies	Repeat Deficiencies from Last Inspection	List of Repeat Deficiencies	Date Correction Required	Date Deficiencies Corrected	Deficiencies Corrected On Time?
AM1032-13	Roadway Improvements & Consolidated Car Rental (ConRAC)	HI S000412										
			TOTALS	**0**	**0**	**0**	**0**	**0**				

Final Notice of Deficiency

Deficiency Tracking #: 4
Related Permit(s): Daniel K. Inouye International Airport

Deficiency Narrative Description:

During the On-Site Evaluation of the two sites on 28 November 2017, the Audit Team identified an item of concern which was not noted on HDOT's inspection report prepared after the inspection.

The SWPPP for the HNL CONRAC site states that the contractor will "us[e] drip pans and absorbents under or around leaky vehicles and equipment." The Audit Team saw evidence of a pool of dark-colored liquid under a construction vehicle. The Audit Team expected that the HDOT inspector would approach this vehicle and further investigate; however, the Audit Team did not observe the HDOT inspector performing an investigation. Furthermore, the inspection report notes "Yes" in response to the question "Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?"

Recommendations for Improvement:

Airports Division should consider additional training of inspection staff related to this item of concern.

Description of Attachments (if applicable): Photograph shows the item of concern. Also attached is the HDOT inspection report from 28 November 2017.

Applicable Regulatory References

NPDES Permit No.: HI S000005 Part D.1.d.(3)(ii): The Permittee shall further develop and implement written procedures for appropriate corrective actions and follow-up inspections when deficiencies had been identified at an inspected project.

SWMPP:

Section 4.4 of the Construction Site Runoff Control Program (September 2017)

Hawaii Administrative Rules (HAR): n/a

Code of Federal Regulations (CFR): n/a

Photo #1. Pool of dark-colored liquid under a construction vehicle which was not investigated by inspectors.

CONSTRUCTION INSPECTION CHECKLIST

Project Name: HNL Consolidated Car Rental Facility (ConRAC)	
Date: 11-28-17	Start / End Time: 10:00 am – 12:00 pm
Project No.: AO1117-06	NPDES Permit # (if any): HI R10E755
Name of Inspector's Firm: EnviroServices & Training Center, LLC	
Name of Inspector: V. Tummala, S. Paquette, C. Iannaccio & K. Kea	Phone Number: 808-839-7222
On-site Representative: James Franks, Jacqui Kuniyuki, Alden Baligad & James Sabado	
Weather Conditions: Sunny	
Type of Inspection (check one): ☐ Initial ☐ Weekly ☒ Monthly ☐ Final ☐ Follow-up ☐ Other:	

Inspection Items		***Yes***	***No***	***N/A***	***Comments***
1.	Are previously noted deficiencies corrected?	☒	☐	☐	
2.	Is there approval to connect to the MS4 and/or make changes to the storm drain system?	☒	☐	☐	
3.	Are the applicable regulatory permits and updated SWPPP available on-site?	☒	☐	☐	
4.	Are personnel at the site aware of applicable BMPs and the location of the BMP Plan?	☒	☐	☐	
5.	Are contractor self-inspections performed as required in HAR 11-55, App C or at least every 7 days?	☒	☐	☐	
6.	Are spill kits available on-site and spills promptly removed?	☒	☐	☐	
7.	Are all slopes and disturbed areas not actively being worked properly stabilized?	☐	☒	☐	See deficiencies below.
8.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	☐	☒	☐	See deficiencies below.
9.	Are discharge points and receiving waters free of any sediment deposits or other signs of illicit discharge?	☒	☐	☐	
10.	Are storm drain inlets and waterways properly protected?	☐	☒	☐	See deficiencies below.
11.	Is the construction exit preventing sediment from being tracked into the street?	☒	☐	☐	
12.	Is trash/litter from work areas collected and placed in covered dumpsters?	☐	☒	☐	See deficiencies below.
13.	Are proper washout facilities (i.e. paint, concrete) available, clearly marked, and maintained?	☒	☐	☐	
14.	Are materials that are potential storm water contaminants stored inside or under cover?	☐	☒	☐	See deficiencies below.
15.	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or other deleterious material?	☒	☐	☐	
16.	Are non-storm water discharges (i.e. wash water, dewatering) properly controlled?	☒	☐	☐	

CONSTRUCTION INSPECTION CHECKLIST

List BMPs from the SWPPP and whether they are properly implemented and maintained.

BMP		Implemented		Maintained		Comments
		Yes	No	Yes	No	
1.	Dust Fence	☒	☐	☐	☒	See deficiencies below.
2.	Construction Barricade	☒	☐	☒	☐	
3.	Filter Socks	☒	☐	☐	☒	See deficiencies below.
4.	Drain Inlet Protection	☒	☐	☐	☒	See deficiencies below.
5.	Catch Basin Protection	☒	☐	☐	☒	See deficiencies below.
6.	Construction Entrance/Exit	☒	☐	☒	☐	
7.	Tire Wash Area	☒	☐	☒	☐	
8.	Concrete Washout	☒	☐	☒	☐	
9.	Spill Kits	☒	☐	☒	☐	
10.		☐	☐	☐	☐	
11.		☐	☐	☐	☐	
12.		☐	☐	☐	☐	
13.		☐	☐	☐	☐	
14.		☐	☐	☐	☐	
15.		☐	☐	☐	☐	

Additional Comments:

- Recommend evaluation of whether the existing inlet protection at the drain inlet 5233 is appropriate for this site.
- Contractor indicated that they plan to use a "BMP Site Plan" located in the Trailer to update their site usage plan since the site operations are dynamic. This plan was reflective of their site conditions.
- Step "a" is the active phase of the project.
- Observed an air compressor on-site. It was noted that the fluids were drained out of this compressor and it was placed within secondary containment and under cover, therefore, not deemed a deficiency (Photo 15).
- Miscellaneous trash was observed on-site. However, the contractor conducts cleaning at the end of each work day, therefore not deemed a deficiency.

*Use additional paper if the number of BMPs exceeds the space allotted.

CONSTRUCTION INSPECTION CHECKLIST

Description of Potential Non-Compliance:

No.	Description	Photo No.	Deficiency Type	Follow-up Date
1.	Observed drain inlet 5233 with a gap between the sand bags securing the edge of the filter fabric protection and the inlet posing a significant threat for the discharge of pollutants to the storm drain inlet. This was corrected on-site. Drain inlet 5233 is located under the H-1 freeway ramp, along the outside perimeter of the site.	Photos 2-4	Major	12/3/17 Corrected On-site
2.	Observed drain inlet 7411 containing rocks and sediment that could potentially damage the inlet protection posing a significant threat for the discharge of pollutants to the storm drain inlet. Drain inlet 7411 is located along the outside perimeter of the site at the northeast corner. This inlet was identified as CB#7411 on the Step "a" Erosion Control Plan. However, it was marked on-site as drain inlet 4711.	Photos 5-6	Major	12/3/17
3.	Observed curb inlet 7537 has debris adjacent to the inlet posing a significant threat for the discharge of pollutants to the storm drain inlet. Curb inlet 7537 is located along the inside perimeter of the site at the northeast corner.	Photos 7-8	Major	12/3/17
4.	Observed several areas where the compost filter sock was torn with exposed mulch at the following locations: a) Near the office trailer entrance b) Along the outside perimeter of the site parallel to Rodgers Blvd c) Along the inside perimeter of the site near the Aolele St. entrance	Photos 9-11	Minor	12/8/17
5.	Observed two locations along the outside perimeter of the site parallel from Rodgers Blvd to the Aolele St. intersection where the compost filter sock was not installed in accordance with the detail provided in Step "a" Erosion Control Details. All compost filter socks shall have an overlap of minimum 6 inches and be staked (spacing and staking detail based on slope).	Photo 12	Minor	12/8/17
6.	Observed no overlap silt fence support located along the inside perimeter of the site at the south end. Please refer to the language in the Part III of the SWPPP. Additionally, DOT Airports Division Construction Activities BMP Field Manual, C.14 Silt Fence requires 6-inch overlap or wrap sections to create a strong bond.	Photo 13	Minor	12/8/17
7.	Observed pipe joint lubricant containers stored on-site without proper BMP measures. These containers are located under the ramp to the H-1 freeway near the tire wash area.	Photo 14	Minor	12/8/17
8.	Observed concrete rubble and sediment stockpile stored on-site without proper BMP measures. Stockpile is located along the inside perimeter of the site at the south end.	Photo 16	Minor	12/8/17
9.	Observed miscellaneous metal material stored on-site without proper BMP measures. Material is located along the inside perimeter of the site at the east end. This was corrected on-site.	Photos 17-18	Minor	12/8/17 Corrected On-site
10.	Observed miscellaneous debris within the active work area.	Photo 19	Minor	12/8/17
11.	Observed unstabilized area with fine sediment surrounding the drain inlet 5217.	Photo 20	Minor	12/8/17
12.	Observed drain inlet 5217 inlet protection contains sediment and one of the rock bags surrounding the inlet is slightly damaged. Drain inlet 5217 is located along the inside perimeter of the site at the northeast corner.	Photos 21-22	Minor	12/8/17

CONSTRUCTION INSPECTION CHECKLIST

13.	Observed one of the rock bags surrounding the drain inlet 5233 is slightly damaged. Drain inlet 5233 is located under the H-1 freeway ramp, along the outside perimeter of the site.	Photo 4	Minor	12/8/17
NOTE: Descriptions of deficiency types may be found in Table 2 of the HNL Storm Water Management Program Plan Section C.4.4				

Check box if:

☐ No incidents of potential non-compliance were found, and I certify that this inspection found this site to be in full compliance with both the Storm Water Management Program Plan and applicable permits. All items must be checked "Yes" to be considered in full compliance.

☒ Incidents of potential non-compliance were found and discussed with Site Manager. If any items were checked "No" then this box must be checked. Document any incidences of non-compliance with photograph(s) and description of the non-compliance(s).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

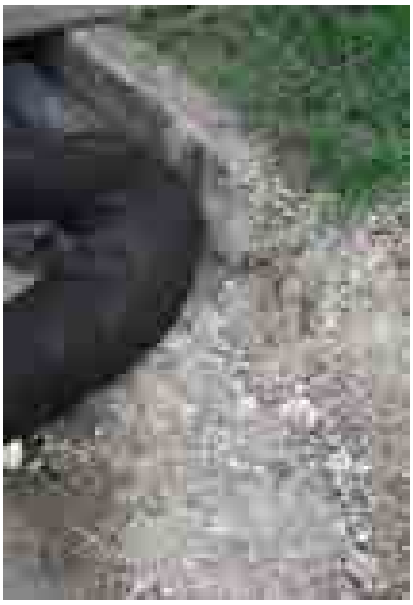
Print Name: Vijaya Tummala

Signature: Date: 12/1/2017

INSPECTION PHOTOGRAPHS

Photo 1 Description: View of ConRAC site from the Aolele St. construction traffic entrance; view looking S.	**Photo 2 Description:** Drain inlet 5233 with gap between sand bags securing the edge of the filter fabric protection and the inlet.
Photo 3 Description: View showing the gap at the drain inlet 5233.	**Photo 4 Description:** Drain inlet 5233 corrected on-site during the inspection by securing the filter fabric protection with the sand bags.

INSPECTION PHOTOGRAPHS

Photo 5 Description: Drain inlet 7411 contains debris that could potentially damage the inlet protection; view looking W.	**Photo 6 Description:** Drain inlet 7411 with rock and sediment buildup within the inlet protection.
	
Photo 7 Description: Curb inlet 7537 with inlet protection; view looking E.	**Photo 8 Description:** Curb inlet 7537 with rubble and aggregate buildup surrounding the inlet protection; view looking E.

INSPECTION PHOTOGRAPHS

Photo 9 Description: Broken compost filter sock with exposed mulch near the office trailer entrance of the site; view looking S.

Photo 10 Description: Broken compost filter sock with exposed mulch along the outside perimeter of the site near Rodgers Blvd; view looking E.

Photo 11 Description: Broken compost filter sock with exposed mulch located along the inside perimeter of the site near the Aolele St. construction traffic entrance; view looking N.

Photo 12 Description: No overlap of the compost filter socks along the outside perimeter from Rodgers Blvd to the Aoele St. intersection.

INSPECTION PHOTOGRAPHS

Photo 13 Description: No overlap of the silt fence near the south end of the project site; view looking S.	**Photo 14 Description:** Twelve 1-quart pipe joint lubricant containers stored on-site without proper BMP measures; view looking S.
Photo 15 Description: Used air compressor within secondary containment; view looking S.	**Photo 16 Description:** Concrete rubble and sediment stockpile stored on-site without proper BMP measures; view looking W.

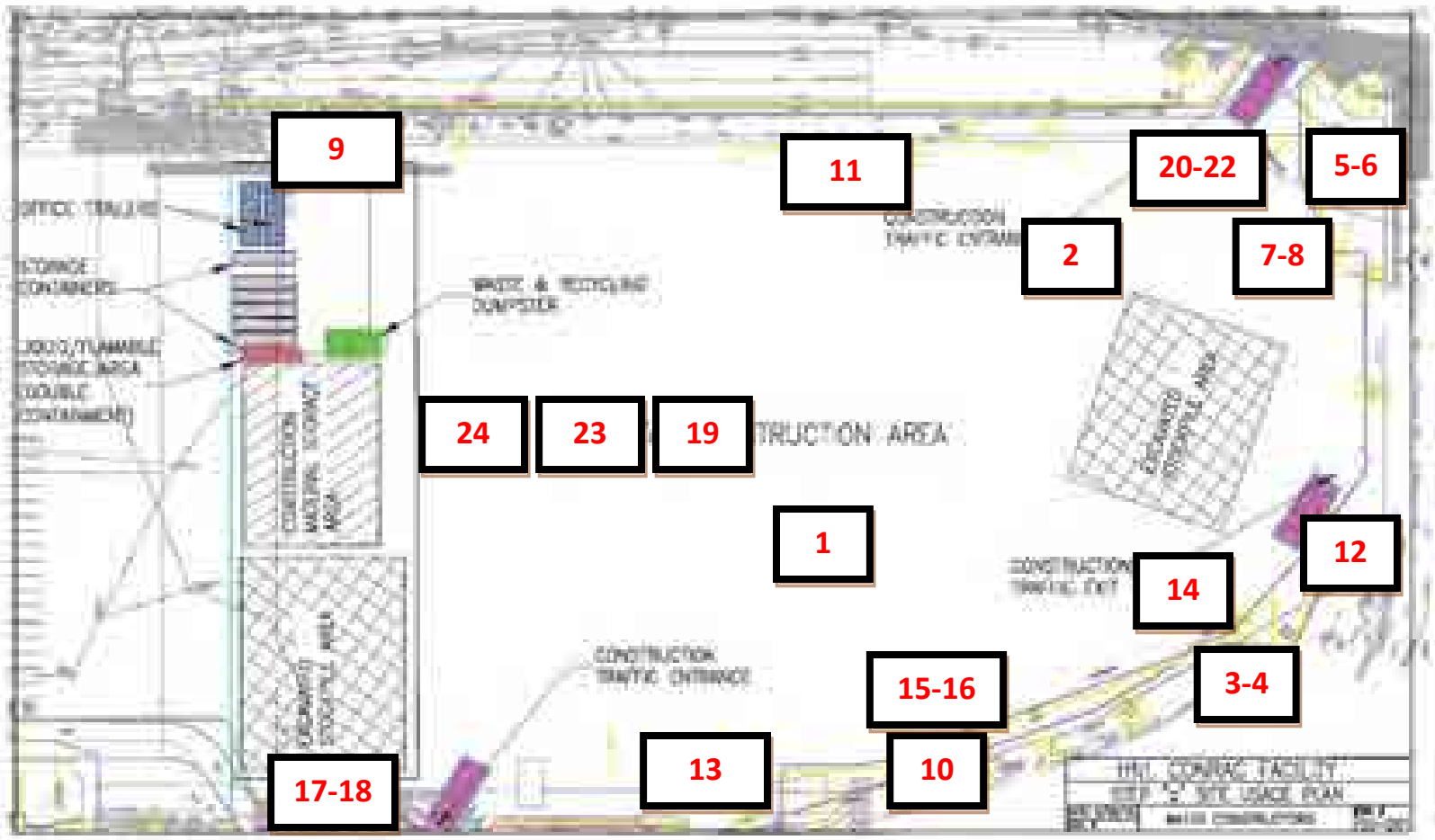
INSPECTION PHOTOGRAPHS

Photo 17 Description: Miscellaneous metal material stored on-site without proper BMP measures; view looking W.	**Photo 18 Description:** Miscellaneous metal material deficiency corrected on-site during the inspection by moving material above ground; view looking W.
Photo 19 Description: Miscellaneous debris (rebar ties) located at the active work area; view looking W. Contractor noted that the site is cleaned daily.	**Photo 20 Description:** Unstabilized area with fine sediment surrounding the drain inlet 5217; view looking E.

INSPECTION PHOTOGRAPHS

Photo 21 Description: Drain inlet 5217 contains sediment and debris within inlet protection. One of the rock bags surrounding the inlet is lightly damaged.	**Photo 22 Description:** Drain inlet 5217 contains debris and sediment within filter fabric protection continued.
Photo 23 Description: Spill kit and flammable storage locker rooms stored on-site; view looking NE.	**Photo 24 Description:** Miscellaneous liquid containers stored on-site with proper BMP measures; view looking W.

Photograph Location Map



enviro SERVICES & TRAINING CENTER LLC

Construction Site BMP Inspection: AO1120-30 HSL NDWP IIT MAUKA EXTENSION
Date: 11/28/17

Name	Initial	Organization/Position	Phone	Email
Nathan Kanodrigo		State DOT – Airport	(808) 838-8868	Nathan.c.kanodrigo@hawaii.gov
Stacy Paquette	SP	State DOT – Airport	(808) 838-8656	Stacy.a.paquette@hawaii.gov
Robert Lee		State DOT		
Vijaya Tamanala	VT	EnviroServices& Training Center, LLC / Inspector	(808) 839-7222	vtamanala@gotoetc.com
Chelsea Iannaccio	CI	EnviroServices& Training Center, LLC / Inspector	(808) 839-7222	ciannaccio@gotoetc.com
Kassel Kea	KK	EnviroServices& Training Center, LLC / Inspector	(808) 839-7222	kkea@gotoetc.com
Phil Potter	PP	Kennedy/Jenks Consultants	808 218 6034	philpotter@kennedyjenks.com
Cale Yamada	CY	Kennedy/Jenks Consultants	(808) 218 6030	caleyamada@kennedyjenks.com
Sheuli Molla	SM	Kennedy/Jenks Consultants	808 218 6055	sheulimolla@kennedyjenks.com
Mark Schipper		AECOM	(808) 224-8901	Mark.schipper@aecom.com
Jacob Berney	JB	Hensel Phelps	(808) 260-5960	Jberney@henselphelps.com
Miguel Lewis		Hensel Phelps	(808) 722-9031	Mlewis@henselphelps.com
Chris Takeno	CT	State DOT	808 586-2424	Chris.takeno@hawaii.gov
Chad Hogan	CH	Hensel Phelps - Superintendent	(808) 220-0658	chogan@henselphelps.com
Mark Schipper		AECOM / CM Inspector	(808) 224-8901	mark.schipper@aecom.com

enviro SERVICES & TRAINING CENTER, LLC

Construction Site BMP Inspection: AO1120-30 HAL NDWP IIT MAUKA EXTENSION
Date: 11/28/17

Name	Initial	Organization/Position	Phone	Email
Nathan Kaneshige		State DOT – Airport	(808) 834-8868	Nathan.c.kaneshige@hawaii.gov
Stacy Paquette		State DOT – Airport	(808) 838-8656	Stacy.a.paquette@hawaii.gov
Robert Lee		State DOT		
Vijaya Tummala		EnviroServices& Training Center, LLC / Inspector	(808) 838-7222	vtummala@gotoetc.com
Chelsea Iannaccio		EnviroServices& Training Center, LLC / Inspector	(808) 838-7222	[illegible]@gotoetc.com
Kimmi Kea		EnviroServices& Training Center, LLC / Inspector	(808) 838-7222	[illegible]@gotoetc.com
Phil Potter		Kennedy/Jenks Consultants		
Cale Yamada		Kennedy/Jenks Consultants		
Sheali Molla		Kennedy/Jenks Consultants		
Mark Schapper		AECOM	(808) 224-8901	Mark.schapper@aecom.com
Jacob Bonney		Hensel Phelps	(808) 260-5960	Jbonney@henselphelps.com
Miguel Lewis		Hensel Phelps	(808) 722-9631	Mlewis@henselphelps.com
Mark Kaminiwae		AECOM/Bowers+Kubota	808.474.0767	[illegible]
VALERIE Sasuga		DOT Airports Division	(808)838-8824	valerie.sh.sasuga@hawaii.gov

Appendix B2: Permit-Specific Information – Daniel K. Inouye International Airport

Result of HDOT PM Review:

- ☑ Confirmed Deficiency
  - o Email Notice of Corrective Action sent to EPA/DOH on: **2/12/18** (Due Within 21 Calendar Days of Deficiency Notification Date)
- ☐ Re-categorized as Potential Violation (see rationale below)
  - o Email Notice sent to EPA/DOH on: _____
- ☐ Summarily Dismissed (see rationale below)
  - o Email Notice sent to EPA/DOH on: _____

Rationale for Re-Categorization or Summary Dismissal: **n/a**

State of Hawaii Department of Transportation
MS4 Permit Audit
Notice of Corrective Action

Corrective Action in Response to:

☐ Potential Violation (complete Section A & C)

☒ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:____ Potential Violation Notification Date:_____
(from Notice of Potential Violation Form)

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

Deficiency Tracking #: 4 (HNL ConRAC Project)

HDOT Receipt of Draft PEAR Date: 1/22/2018

Corrective Action Notification Date: 2/12/2018
(Today's Date)

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action

DOT Airport Division (DOTA) will implement the following corrective actions:

1. DOTA will develop a **Construction Inspection and Enforcement Standard Operating Procedure (SOP)** for the construction inspectors to detail tasks to conduct before, during and after inspection.

   Milestones:
   Draft Construction Inspection SOP March 30, 2018
   Final Construction Inspection SOP April 13, 2018
   Copies will be provided to inspectors, construction managers, and state project managers.

2. DOTA will conduct a **Construction Inspector Refresher Training** class for third-party construction inspectors.

   Milestones:
   Develop training material March 1, 2018
   Schedule training dates March 15, 2018
   Training class (on or before) March 31, 2018

Details of the corrective actions noted above can be found in the Enclosure titled: "Corrective Action Work Plan for Deficiencies in Response to The Draft Program Element Audit Report (PEAR) No. 2: Construction Site Runoff Control", dated February 5, 2018.

Appendix B3

Permit-Specific Information – Honolulu Harbor

Appendix B3: Permit-Specific Information – Honolulu Harbor

1. Key Documents

Permit / Document	3. Honolulu Harbor Small MS4 Permit HI 03KB482
2016 Annual Report	20170127.Compliance Submission of Reports and Documents-HI03KB482.pdf
Construction Site Inventory	Inventory of New Development and Redevelopment Projects (Revised 5-1-15).pdf
Construction Activities BMP Manual	Appx D.3.B CCH Construction BMP Manual 2011-11.pdf
Consent Decree	Consent Decree.pdf
DOH Comments on 2016 Annual Report	None received.
Enforcement Response Plan	Final HDOT Harbors SWMP-150325.pdf Enforcement Response Plan from 2015 SWMP.pdf
Memoranda of Understanding or Agreement	MOA- Harbors.pdf
Organizational charts	Page 21 of Final HDOT Harbors SWMP-150325.pdf
Permit	20161202.03KB482.EXT.16.pdf
Permitting Authority Correspondence with Permittee Regarding Construction Programs	HDOT-HarbordsAO.pdf
Plan Review Checklist	a. Construction Site Design Review Checklist.pdf b. Construction Site BMP Inspection Checklist_20150722.pdf
Previous Audit Findings	HDOT Harbors Audit 2009.pdf
SWMPP	Final HDOT Harbors SWMP-150325.pdf
Training and Education Materials	a. Construction Brochure.pdf b. 2016-Tenant-Presentation-Final.pdf c. 2016-SW-Construction-Quiz.pdf d. 11-BMP-Storm-Drain-20140828.pdf e. 07_BMP_BuildingRemodeling_20140828.pdf.
Website	http://hidot.hawaii.gov/harbors/library/storm-water-management/
Other Program Checklists and Forms	a. Construction Process Flow Chart for Harbors Project final.pdf b. Permit for Connection to Harbors.pdf c. Permit to Discharge into Harbors.pdf

Permit / Document	3. Honolulu Harbor Small MS4 Permit HI 03KB482
Other Plans Related to Construction Program	a. Pre-Final SSS OMP 201606022.pdf b. 20160729.Storm Sewer System Operation and Maintenance Program.pdf c. 20170228.Contents of CD for Storm Sewer System Operation and Maintenance Plan Manual-HI03KB482-HI03KB488.pdf d. 2014-Tenant-Inspection-Manual_Final1.pdf e. Harbors SOW - 20150508_final_SD.pdf f. 11-3 Appendix C.pdf

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name *(Original File Name)*	**Sections/Pages Relevant to PEAR 2**
2016 Annual Compliance Report *(20170127.Compliance Submission of Reports and Documents-HI03KB482.pdf)*	Pages: 44,65,173, and 180-204
2015 Stormwater Management Plan (March 2015) (*Final HDOT Harbors SWMP-150325.pdf*)	Section 2.1 Section 2.2 Section 2.4 BMP Table 2-4 Section 3.2.4 Section B, Attachment 1 Section C, in entirety
Memorandum of Understanding Between Department of Transportation, Harbors Division, State of Hawaii and Department of Health, State of Hawaii (April/May 2015) *(MOA-Harbors.pdf)*	No discussion of PEAR 2 topics
Construction Site Inventory *(Inventory of New Development and Redevelopment Projects (Revised 5-1-15).pdf)*	In entirety
Construction Activity BMP Manual *(Appx D.3.B CCH Construction BMP Manual 2011-11.pdf)*	In entirety
Consent Decree *(Consent Decree.pdf)*	Pages: 5-8, 20,22, and 26-30
Enforcement Response Plan *(Final HDOT Harbors SWMP-150325.pdf)*	Section 5 in entirety
(Enforcement Response Plan from 2015 SWMP.pdf)	In entirety
Organizational Charts *(Final HDOT Harbors SWMP-150325.pdf)*	Page 21
Permit (20161202.03KB482.EXT.16.pdf)	No discussion of PEAR 2 topics
Permitting Authority Correspondence with Permittee Regarding Construction Programs *(HDOT-HarbordsAO.pdf)*	Pages 6-13 and 21-24
Plan Review Checklists *(Construction Site Design Review Checklist.pdf)*	In entirety
(Construction Site BMP Inspection Checklist_20150722.pdf)	In entirety
Previous Audit Findings (HDOT Harbors Audit 2009.pdf)	Pages 17 and 22
Training and Education Materials *(Construction Brochure.pdf)*	In entirety
(2016-Tenant-Presentation-Final.pdf)	Pages 6, 50, 55
(2016-SW-Construction-Quiz.pdf)	In entirety
(11-BMP-Storm-Drain-20140828.pdf)(07_BMP_BuildingRemodeling_20140828.pdf)	In entirety
Website *(http://hidot.hawaii.gov/harbors/library/storm-water-management/)*	In entirety

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
Other Program Checklists and Forms *(Construction Process Flow Chart for Harbors Project final.pdf)*	In entirety
(Permit for Connection to Harbors.pdf)	In entirety
(Permit to Discharge into Harbors.pdf)	In entirety
Other Plans Related to Construction Program *(Pre-Final SSS OMP 201606022.pdf)*	Sections 3.2 and 4
(20160729.Storm Sewer System Operation and Maintenance Program.pdf)	Sections 3.2 and 4
(20170228.Contents of CD for Storm Sewer System Operation and Maintenance Plan Manual-HI03KB482-HI03KB488.pdf)	Sections 3.2 and 4
(2014-Tenant-Inspection-Manual_Final1.pdf (Harbors SOW - 20150508_final_SD.pdf)	Sections 3.2 and 4
(11-3 Appendix C.pdf)	Sections 3.2, 3.4, 4, and 4.3

3. On-Site Evaluation

As of the time of the On-Site Audit (late November 2017), there was only one project at Honolulu Harbor which was eligible for review. That project (the New Kapalama Container Yard) had not yet broken ground by date of the On-Site Audit (30 November 2017). Therefore, the Audit Team only reviewed records related to that one project; no field effort could be completed.

4. On-Site Evaluation Photos

See Section 3; no photographs were taken, as no On-Site Audit was performed.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

FINAL Program Element Audit Report (PEAR) No. 2

Construction Site Runoff Control
Part 2 of 2

State Project No. OSC-15-01

March 2018

Prepared by

Kennedy/Jenks Consultants

Prepared for

State of Hawaii
Department of Transportation
Office of Environmental Compliance
869 Punchbowl Street
Honolulu, Hawaii 96813

K/J Project No. 1696025*00

Appendix B4

Permit-Specific Information – Kalaeloa Barbers Point Harbor

Appendix B4: Permit-Specific Information – Kalaeloa Barbers Point Harbor

1. Key Documents

Permit / Document	4. Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB482
2016 Annual Report	20170127.Compliance Submission of Reports and Documents-HI03KB482.pdf
Construction Site Inventory	Inventory of New Development and Redevelopment Projects (Revised 5-1-15).pdf
Construction Activities BMP Manual	Appx D.3.B CCH Construction BMP Manual 2011-11.pdf
Consent Decree	Consent Decree.pdf
DOH Comments on 2016 Annual Report	None received.
Enforcement Response Plan	Final HDOT Harbors SWMP-150325.pdf Enforcement Response Plan from 2015 SWMP.pdf
Memoranda of Understanding or Agreement	MOA- Harbors.pdf
Organizational charts	Page 21 of Final HDOT Harbors SWMP-150325.pdf
Permit	20161202.03KB488.EXT.16.pdf
Permitting Authority Correspondence with Permittee Regarding Construction Programs	HDOT-HarbordsAO.pdf
Plan Review Checklist	a. Construction Site Design Review Checklist.pdf b. Construction Site BMP Inspection Checklist_20150722.pdf
Previous Audit Findings	HDOT Harbors Audit 2009.pdf
SWMPP	Final HDOT Harbors SWMP-150325.pdf
Training and Education Materials	a. Construction Brochure.pdf b. 2016-Tenant-Presentation-Final.pdf c. 2016-SW-Construction-Quiz.pdf d. 11-BMP-Storm-Drain-20140828.pdf e. 07_BMP_BuildingRemodeling_20140828.pdf.
Website	http://hidot.hawaii.gov/harbors/library/storm-water-management/
Other Program Checklists and Forms	a. Construction Process Flow Chart for Harbors Project final.pdf b. Permit for Connection to Harbors.pdf c. Permit to Discharge into Harbors.pdf

Permit / Document	4. Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB482
Other Plans Related to Construction Program	a. Pre-Final SSS OMP 201606022.pdf b. 20160729.Storm Sewer System Operation and Maintenance Program.pdf c. 20170228.Contents of CD for Storm Sewer System Operation and Maintenance Plan Manual-HI03KB482-HI03KB488.pdf d. 2014-Tenant-Inspection-Manual_Final1.pdf e. Harbors SOW - 20150508_final_SD.pdf f. 11-3 Appendix C.pdf

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
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2015 Stormwater Management Plan (March 2015) (*Final HDOT Harbors SWMP-150325.pdf*)	Section 2.1 Section 2.2 Section 2.4 BMP Table 2-4 Section 3.2.4 Section B, Attachment 1 Section C, in entirety
Memorandum of Understanding Between Department of Transportation, Harbors Division, State of Hawaii and Department of Health, State of Hawaii (April/May 2015) *(MOA- Harbors.pdf)*	No discussion of PEAR 2 topics
Construction Site Inventory *(Inventory of New Development and Redevelopment Projects (Revised 5-1-15).pdf)*	In entirety
Construction Activity BMP Manual *(Appx D.3.B CCH Construction BMP Manual 2011-11.pdf)*	In entirety
Consent Decree *(Consent Decree.pdf)*	Pages: 5-8, 20, 22, and 26-30
Enforcement Response Plan *(Final HDOT Harbors SWMP-150325.pdf)*	Section 5
(Enforcement Response Plan from 2015 SWMP.pdf)	In entirety
Organizational Charts *(Final HDOT Harbors SWMP-150325.pdf)*	Page 21
Permit (20161202.03KB482.EXT.16.pdf)	No discussion of PEAR 2 topics
Permitting Authority Correspondence with Permittee Regarding Construction Programs *(HDOT-HarbordsAO.pdf)*	Pages 6-13 and 21-24
Plan Review Checklists *(Construction Site Design Review Checklist.pdf)*	In entirety
(Construction Site BMP Inspection Checklist_20150722.pdf)	In entirety
Previous Audit Findings *(HDOT Harbors Audit 2009.pdf)*	Pages 17 and 22
Training and Education Materials *(Construction Brochure.pdf)*	In entirety
(2016-Tenant-Presentation-Final.pdf)	Pages 6, 50, 55
(2016-SW-Construction-Quiz.pdf)	In entirety

Appendix B4: Permit-Specific Information – Kalaeloa Barbers Point Harbor

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
(11-BMP-Storm-Drain-20140828.pdf)	In entirety
(07_BMP_BuildingRemodeling_20140828.pdf)	In entirety
Website *(http://hidot.hawaii.gov/harbors/library/storm-water-management/)*	In entirety
Other Program Checklists and Forms *(Construction Process Flow Chart for Harbors Project final.pdf)*	In entirety
(Permit for Connection to Harbors.pdf)	In entirety
(Permit to Discharge into Harbors.pdf)	In entirety
Other Plans Related to Construction Program *(Pre-Final SSS OMP 201606022.pdf)*	Sections 3.2 and 4
(20160729.Storm Sewer System Operation and Maintenance Program.pdf)	Sections 3.2 and 4
(20170228.Contents of CD for Storm Sewer System Operation and Maintenance Plan Manual-HI03KB482-HI03KB488.pdf)	Sections 3.2 and 4
(2014-Tenant-Inspection-Manual_Final1.pdf (Harbors SOW - 20150508_final_SD.pdf)	Sections 3.2 and 4
(11-3 Appendix C.pdf)	Sections 3.2, 3.4, 4, and 4.3

3. On-Site Evaluation

1 December 2017

On 1 December 2017, the Audit Team held a kickoff meeting at Kalaeloa Harbor with Harbors Division staff. Photographs taken during the On-Site Evaluation can be found in Section 4 below.

Construction Site 4.1 Stockpile 2A Removal

The Audit Team drove to the Stockpile 2A Removal project and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Harbors Division staff and consultants as they conducted an inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

4. On-Site Evaluation Photos

Photographs are provided on the subsequent pages below.

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.1
Site Safety Meeting

Construction Site 4.1 Photo 4.1.2
Construction Site Entrance

Construction Site 4.1 Photo 4.1.3
Erosion Control Berms

Construction Site 4.1 Photo 4.1.4
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.5
Erosion Control Berms

Construction Site 4.1 Photo 4.1.6
Erosion Control Berms

Construction Site 4.1 Photo 4.1.7
Construction Site Entrance

Construction Site 4.1 Photo 4.1.8
Construction Site Entrance

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.9
Construction Site Entrance

Construction Site 4.1 Photo 4.1.10
Construction Site Entrance

Construction Site 4.1 Photo 4.1.11
Construction Site Entrance

Construction Site 4.1 Photo 4.1.12
Construction Site Entrance

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.13
Construction Site Entrance

Construction Site 4.1 Photo 4.1.14
Construction Site Entrance

Construction Site 4.1 Photo 4.1.15
Construction Site Entrance

Construction Site 4.1 Photo 4.1.16
Construction Site Entrance

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.17
Construction Site Entrance

Construction Site 4.1 Photo 4.1.18
Construction Site Entrance

Construction Site 4.1 Photo 4.1.19
Construction Site Entrance

Construction Site 4.1 Photo 4.1.20
Erosion Control Berm (West Edge of Site)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.21
Erosion Control Berm (West Edge of Site)

Construction Site 4.1 Photo 4.1.22
Erosion Control Berm (West Edge of Site)

Construction Site 4.1 Photo 4.1.23
Erosion Control Berm (West Edge of Site)

Construction Site 4.1 Photo 4.1.24
Recycled Asphalt Access Ramp

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.25
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.26
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.27
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.28
Rilling Erosion Along Recycled Asphalt Access Ramp

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.29
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.30
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.31
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.32
Erosion Control Berm (West Edge of Site – Looking West)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.33
Exposed Soil

Construction Site 4.1 Photo 4.1.34
Erosion Control Berm (West Edge of Site – Looking North)

Construction Site 4.1 Photo 4.1.35
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.36
Rilling Erosion Along Recycled Asphalt Access Ramp

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.37
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.38
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.39
Rilling Erosion Along Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.40
South Edge on Top of Material Loading Stockpile

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.41
South Edge on Top of Material Loading Stockpile

Construction Site 4.1 Photo 4.1.42
South Edge on Top of Material Loading Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.43
South Edge on Top of Material Loading Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.44
South Edge on Top of Material Loading Stockpile (Looking South)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.45
South Edge on Top of Material Loading Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.46
South Edge on Top of Material Loading Stockpile (Exposed Soil)

Construction Site 4.1 Photo 4.1.47
South Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.48
Damaged/Broken Excavator

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.49
South Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.50
South Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.51
South Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.52
Damaged/Broken Excavator

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.53
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.54
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.55
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.56
Damaged/Broken Excavator

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.57
Exposed Trash Rag

Construction Site 4.1 Photo 4.1.58
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.59
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.60
Damaged/Broken Excavator (Oily Residue)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.61
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.62
Damaged/Broken Excavator

Construction Site 4.1 Photo 4.1.63
Exposed Soil

Construction Site 4.1 Photo 4.1.64
Old Stockpile Entrance Ramp (Exposed Soil)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.65
East of Old Stockpile Entrance Ramp

Construction Site 4.1 Photo 4.1.66
Old Stockpile Entrance Ramp

Construction Site 4.1 Photo 4.1.67
Old Stockpile Entrance Ramp

Construction Site 4.1 Photo 4.1.68
Old Stockpile Entrance Ramp

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.69
West of Old Stockpile Entrance Ramp

Construction Site 4.1 Photo 4.1.70
Old Stockpile Entrance Ramp (Looking West)

Construction Site 4.1 Photo 4.1.71
Old Stockpile Entrance Ramp

Construction Site 4.1 Photo 4.1.72
Old Stockpile Entrance Ramp (Exposed Soil)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.73
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.74
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.75
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.76
Old Stockpile Entrance Ramp (Exposed Soil)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.77
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.78
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.79
Excavator Storage

Construction Site 4.1 Photo 4.1.80
East Edge on Top of Material Loading Stockpile (Looking East)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.81
East Edge on Top of Material Loading Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.82
East Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.83
East Edge on Top of Material Loading Stockpile (Looking South)

Construction Site 4.1 Photo 4.1.84
East Edge on Top of Material Loading Stockpile (Looking East)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.85
East Edge on Top of Material Loading Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.86
East Edge on Top of Material Loading Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.87
East Edge on Top of Material Loading Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.88
East Edge on Top of Material Loading Stockpile (Looking East)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.89
Exposed Soil

Construction Site 4.1 Photo 4.1.90
North Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.91
North Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.92
North Edge on Top of Material Loading Stockpile (Looking North)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.93
North Edge on Top of Material Loading Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.94
North Edge on Top of Material Loading Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.95
North Edge on Top of Material Loading Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.96
North Edge on Top of Material Loading Stockpile (Looking South)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.97
North Edge on Top of Material Loading Stockpile (Looking South)

Construction Site 4.1 Photo 4.1.98
North Edge on Top of Material Loading Stockpile (Looking South)

Construction Site 4.1 Photo 4.1.99
North Edge on Top of Material Loading Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.100
North Edge on Top of Material Loading Stockpile (Looking West)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.101
Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.102
Recycled Asphalt Access Ramp

Construction Site 4.1 Photo 4.1.103
Recycled Asphalt Access Ramp Looking toward Construction Entrance

Construction Site 4.1 Photo 4.1.104
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.105
Erosion Control Berms

Construction Site 4.1 Photo 4.1.106
Construction Entrance (Looking East)

Construction Site 4.1 Photo 4.1.107
Construction Entrance (Looking East)

Construction Site 4.1 Photo 4.1.108
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.109
Erosion Control Berms

Construction Site 4.1 Photo 4.1.110
Erosion Control Berms

Construction Site 4.1 Photo 4.1.111
Erosion Control Berms

Construction Site 4.1 Photo 4.1.112
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.113
Erosion Control Berms

Construction Site 4.1 Photo 4.1.114
Erosion Control Berms

Construction Site 4.1 Photo 4.1.115
Erosion Control Berms

Construction Site 4.1 Photo 4.1.116
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.117
Erosion Control Berms

Construction Site 4.1 Photo 4.1.118
Erosion Control Berms

Construction Site 4.1 Photo 4.1.119
Erosion Control Berms

Construction Site 4.1 Photo 4.1.120
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.121
Erosion Control Berms

Construction Site 4.1 Photo 4.1.122
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.123
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.124
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.125
Erosion Control Berms

Construction Site 4.1 Photo 4.1.126
Erosion Control Berms

Construction Site 4.1 Photo 4.1.127
Erosion Control Berms

Construction Site 4.1 Photo 4.1.128
Erosion Control Berms

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.129
Erosion Control Berms

Construction Site 4.1 Photo 4.1.130
Erosion Control Berms

Construction Site 4.1 Photo 4.1.131
Looking west towards Construction Entrance

Construction Site 4.1 Photo 4.1.132
South Edge of Stockpile

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.133
South Edge of Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.134
South Edge of Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.135
South Edge of Stockpile (Looking East)

Construction Site 4.1 Photo 4.1.136
South Edge of Stockpile (Looking North)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.137
South Edge of Stockpile (Looking North)

Construction Site 4.1 Photo 4.1.138
South Edge of Stockpile (Looking West)

Construction Site 4.1 Photo 4.1.139
Nearby Bay Outfall (Looking South)

Construction Site 4.1 Photo 4.1.140
Nearby Bay Outfall (Looking East)

Facility: Stockpile 2A Removal, Kalaeloa Harbor, HI
Date Photos Taken: 01 December 2017 (10:00am – 11:00am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 4.1 Photo 4.1.141
Nearby Bay Outfall (Looking East)

Construction Site 4.1 Photo 4.1.142
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.143
Old Stockpile Entrance Ramp (Exposed Soil)

Construction Site 4.1 Photo 4.1.144
Old Stockpile Entrance Ramp (Exposed Soil)

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix B5

Permit-Specific Information – Highways Maui District

Appendix B5: Permit-Specific Information – Highways Maui District

1. Key Documents

Permit / Document	5. Maui District Small MS4 Permit HI 15KE674
2016 Annual Report	00MauiDistrictAnnualReport2016.pdf, plus appendices (available in 5. Highways Maui District\2016 Annual Report)
BMP Manual	a. Construction BMP Field Manual (January 2008).pdf b. I.1_Maintenance-Activities-BMPs-Field-Manual.pdf
Construction Site Inventory	a. HDOTProjectStatus.pdf b. C.2 Active Encroachment Construction Projects-v1.pdf c. C.4 Contract Construction Projects Advertised or Awarded-v1.pdf d. C.1 Active Contract Construction Projects-v1.pdf e. C.3 Connection and Discharge Permits Associated with Construction Activities Issued-v1.pdf
Enforcement Response Plan	a. Section 4.2.2 of MauiSWMP--Dec 2016 Final w-o Appendices.pdf b. 10AppendixJ-ConstructionERP.pdf
Memoranda of Understanding or Agreement	MOU HWY & HAR 8-7-15.pdf
Organizational charts	Page 20 of 61 Maui-SWMP-Plan.pdf

Appendix B5: Permit-Specific Information – Highways Maui District

Permit / Document	5. Maui District Small MS4 Permit HI 15KE674
Other Program Checklists and Forms	a. Appx-D.5-Water-Pollution-and-Erosion-Control-Notes.pdf b. Appx D.2.A HSS Road Bridge Construction.pdf c. Appx D.2.B. Harbors General Provisions.pdf d. Appx-C.2-Connection-Permit.pdf e. Appx-C.1-Application-for-Connect_Discharge-Permit.pdf f. Appx-C.3-Discharge-Permit.pdf g. Appx D.6 NPDES for Permit Projects Within State Highway Right-of-Way Notes .pdf h. Appx-D.8-Independent-Inspection-Checklist.pdf
Permit	Appx-D.6-NPDES-for-Permit-Projects-Within-State-Highway-Right-of-Way-Notes-
Plan Review Checklist	a. Site Specific BMP Plan SWPPP Review Checklist (December 2013).pdf b. Appx D.4.B Harbors Construction Site Design Review Checklist.pdf
Program Records	a. 04AppendixD-TrainingActivities.pdf b. 05AppendixE-ConstructionActivities.pdf
SWMPP	MauiSWMP--Dec 2016 Final w-o Appendices.pdf Plus Appendices
Training and Education Materials	a. Appx B.1 Outreach and Training Strategy.pdf
Website	http://hidot.hawaii.gov/stormwater/storm-water-management/maui/swmp/

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name *(Original File Name)*	**Sections/Pages Relevant to PEAR 2**
2016 Annual Report (*00MauiDistrictAnnualReport2016.pdf, plus appendices (available in 5. Highways Maui District\2016 Annual Report)*	Table 1 (pages 10, 11) Table 2 (page 14) Appendix J
BMP Manual *(Construction BMP Field Manual (January 2008).pdf)*	In entirety
(I.1_Maintenance-Activities-BMPs-Field-Manual.pdf)	Pages 2, 7, 9, and 13
Construction Site Inventory *(HDOTProjectStatus.pdf)*	In entirety
(C.2 Active Encroachment Construction Projects-v1.pdf)	In entirety
(C.4 Contract Construction Projects Advertised or Awarded-v1.pdf)	In entirety
(C.1 Active Contract Construction Projects-v1.pdf)	In entirety
(C.3 Connection and Discharge Permits Associated with Construction Activities Issued-v1.pdf)	In entirety
Enforcement Response Plan *(Section 4.2.2 of MauiSWMP--Dec 2016 Final w-o Appendices.pdf)*	In entirety
(10AppendixJ-ConstructionERP.pdf)	In entirety
Memoranda of Understanding or Agreement *(MOU HWY & HAR 8-7-15.pdf)*	Item G, IV Item G, VII.a.5
Organizational charts *(Maui-SWMP-Plan.pdf)*	Page 20 of 61
Other Program Checklists and Forms *(Appx-D.5-Water-Pollution-and-Erosion-Control-Notes.pdf)*	Page 3
(Appx D.2.A HSS Road Bridge Construction.pdf)	In entirety
(Appx D.2.B. Harbors General Provisions.pdf)	Pages 2-3
(Appx-C.2-Connection-Permit.pdf)	Pages 1-2
(Appx-C.1-Application-for-Connect_Discharge-Permit.pdf)	Pages 1-2
(Appx-C.3-Discharge-Permit.pdf)	In entirety
(Appx D.6 NPDES for Permit Projects Within State Highway Right-of-Way Notes .pdf)	In entirety
(Appx-D.8-Independent-Inspection-Checklist.pdf)	In entirety

Document Name *(Original File Name)*	Sections/Pages Relevant to PEAR 2
Permit *(Appx-D.6-NPDES-for-Permit-Projects-Within-State-Highway-Right-of-Way-Notes-)*	In entirety
Plan Review Checklist *(Site Specific BMP Plan SWPPP Review Checklist (December 2013).pdf)* *(Appx D.4.B Harbors Construction Site Design Review Checklist.pdf)*	In entirety In entirety
Program Records *(04AppendixD-TrainingActivities.pdf)* *(05AppendixE-ConstructionActivities.pdf)*	In entirety
SWMPP *(MauiSWMP--Dec 2016 Final w-o Appendices.pdf)* *Plus Appendices*	Table 4-1 Section 4.0 in entirety Appendices D.3.A- D.4.B
Training and Education Materials *(Appx B.1 Outreach and Training Strategy.pdf)*	Section 2 Section 5.1 Table 5-1
Website *(http://hidot.hawaii.gov/stormwater/storm-water-management/maui/swmp/)*	In entirety

3. On-Site Evaluation

As of the time of the On-Site Audit (late November 2017), two projects were eligible for review. Those projects had not yet broken ground by date of the On-Site Audit (27 November 2017). Therefore, the Audit Team only reviewed records related to those projects; no field effort could be completed.

4. On-Site Evaluation Photos

See Section 3; no photographs were taken, as no On-Site Audit was completed.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix B6

Permit-Specific Information – Highways Oahu District

Appendix B6: Permit-Specific Information – Highways Oahu District

1. Key Documents

Permit / Document	6. Oahu District Individual Permit HI S000001
2016 Annual Report	a. 20161101.Compliance Submission of Other-Annual Report 2015-2016-HIS000001.pdf
BMP Manual	a. Construction BMP Field Manual (January 2008).pdf b. I.1_Maintenance-Activities-BMPs-Field-Manual.pdf
Construction Site Inventory	a. HDOTProjectStatus.pdf b. C.2 Active Encroachment Construction Projects-v1.pdf c. C.4 Contract Construction Projects Advertised or Awarded-v1.pdf d. C.1 Active Contract Construction Projects-v1.pdf e. C.3 Connection and Discharge Permits Associated with Construction Activities Issued-v1.pdf
Enforcement Response Plan	Enforcement Response Plan_Construction Site Runoff Control (April 2015).pdf
Memoranda of Understanding or Agreement	a. MOU Between HDOT and DOH (July 1999).pdf b. A.4_MOU-DOT-Highways-City-2002.pdf
Organizational charts	Figure 4-1 on Page 4-8 SWMPP (April 2015)

Permit / Document	6. Oahu District Individual Permit HI S000001
Other Program Checklists and Forms	a. 20140124.Inspection Forms and Reporting and Corrective Procedures-S000001.PDF b. (1) 209f_Temporary_Water_Pollution_Dust_and_Erosion_Control_dated_11-30-15 c. Water Pollution Notes dated 100515 d. C.2_Permit-for-Connection-to-the-State-Highways-Drainage-System.pdf e. J.1_Permit-to-Discharge-into-the-State-Highways-Drainage-System.pdf f. Contractor Certification of NPDES Compliance (April 2015).pdf g. D.4_SSBMP-SWPPP-Inspection-Maintenance-Report.pdf h. D.5_Independent-Inspection-Checklist.pdf

Permit / Document	6. Oahu District Individual Permit HI S000001
Permit	20160318.Modified NPDES Permit HI S000001.PDF
Permitting Authority Correspondence with Construction Programs	a. 20131029.Petition for Review - Part 1 - HI S000001.PDF b. 20131029.Petition for Review - Part 2 - HI S000001.PDF c. 20131029.Petition for Review - Part 3 - HI S000001.pdf d. 20131029.Petition for Review - Part 4 - HI S000001.pdf e . 20131029.Petition for Review - Part 5 - HI S000001.pdf f. 20130307 response to HDOT MS4 DRAFT PERMIT COMMENTS.pdf g. 20130927.DOT Comments - HI S000001 - 09072PRM.13b.pdf h. 20130628.DOT comments on the Public Notice - HI S000001.PDF
Plan Review Checklist	a. Site Specific BMP Plan SWPPP Review Checklist (December 2013).pdf b. Construction BMP Checklist (May 2015).pdf
Audit Findings	HDOT Highways Audit 2004.pdf
Program Records	a. C.7 Oahu Construction BMP Training Sign-in Sheets-v1.pdf b. C.6 Periodic Inspections for Encroachment Construction Project-v1.pdf c. 20130822.Construction Site Runoff Control-Inspections and Enforcement of Contract Construction Projects-S000001.PDF d. Central Oahu BMP Ph 2 Sep 14 16_DOH Submittal-v1.pdf e. C.5 Periodic Inspections for Contract Projects-v1.pdf
SWMPP	SWMPP (April 2015).pdf

Permit / Document	6. Oahu District Individual Permit HI S000001
Training and Education Materials	a. B.1_Public-Education-Plan_REV1_9.23.15.pdf b. Contractor Compliance Inspection Handout.pdf c. D.8_Permit-Holders-Guide-to-Understanding-Storm-Water.pdf d. DOT_HWYS_YouTube_2016Conference Videos.pdf e. D.4 Permit Holders Guide to Understanding Storm Water−v1.pdf f. Contractor Staging Area Handout.pdf g. ContractorHandout_ERP.pdf
Website	http://www.stormwaterhawaii.com/

2. Sections of Key Documents Found Relevant for PEAR 2

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 2**
2016 Annual Report *(20161101.Compliance Submission of Other-Annual Report 2015-2016-HIS000001.pdf)*	Table 1 (pages 10, 11) Table 2 (page 14) Appendix J
BMP Manual *(Construction BMP Field Manual (January 2008).pdf)* *(I.1_Maintenance-Activities-BMPs-Field-Manual.pdf)*	In entirety Pages 2, 7, 9, and 13
Construction Site Inventory *(HDOTProjectStatus.pdf)*	In entirety
(C.2 Active Encroachment Construction Projects-v1.pdf)	In entirety
(C.4 Contract Construction Projects Advertised or Awarded-v1.pdf)	In entirety
(C.1 Active Contract Construction Projects-v1.pdf)	In entirety
(C.3 Connection and Discharge Permits Associated with Construction Activities Issued-v1.pdf)	In entirety
Enforcement Response Plan *(Enforcement Response Plan_Construction Site Runoff Control (April 2015).pdf)*	In entirety
Memoranda of Understanding or Agreement *(MOU Between HDOT and DOH (July 1999).pdf)*	No discussion of PEAR 2 topics
(A.4_MOU-DOT-Highways-City-2002.pdf)	Pages 2 and 4
Organizational charts *(SWMPP (April 2015).pdf)*	Figure 4-1, Page 96
Other Program Checklists and Forms *(20140124.Inspection Forms and Reporting and Corrective Procedures-S000001.PDF)*	Pages: 3, 6, 15, 21, 24, 27, and 29
(Spec05-Pro-fd-209e_Temporary_Water_Pollution_Dust_and_Erosion_Control_dated_2-10-14.pdf)	Pages: 1-15 and 22-31
(Water Pollution Notes dated 100515.pdf)	In entirety
(C.2_Permit-for-Connection-to-the-State-Highways-Drainage-System.pdf)	In entirety
(J.1_Permit-to-Discharge-into-the-State-Highways-Drainage-System.pdf)	In entirety
(Contractor Certification of NPDES Compliance (April 2015).pdf)	In entirety
(D.4_SSBMP-SWPPP-Inspection-Maintenance-Report.pdf)	Page 2
(D.5_Independent-Inspection-Checklist.pdf)	In entirety
Permit *(20160318.Modified NPDES Permit HI S000001.PDF)*	In entirety
Permitting Authority Correspondence with Permittee Regarding Construction Programs *(20131029.Petition for Review - Part 1 - HI S000001.PDF)*	Pages: 7, 18, 26, 30-35, 72-77, 121-123, 138, and 154
(20131029.Petition for Review - Part 2 - HI S000001.PDF)	Pages: 13-19
(20131029.Petition for Review - Part 3 - HI S000001.pdf)	Pages: 1, 2, 5 and 39

Appendix B6: Permit-Specific Information – Highways Oahu District

Document Name *(Original File Name)*	**Sections/Pages Relevant to PEAR 2**
(20131029.Petition for Review - Part 4 - HI S000001.pdf)	Pages 2-10
(20131029.Petition for Review - Part 5 - HI S000001.pdf)	Pages 8-12
(20130307 response to HDOT MS4 DRAFT PERMIT COMMENTS.pdf)	Pages 1-11
(20130927.DOT Comments - HI S000001 - 09072PRM.13b.pdf)	Pages 6-11
(20130628.DOT comments on the Public Notice - HI S000001.PDF)	Pages 2, 3, 4, 5, and 7
Plan Review Checklist *(Site Specific BMP Plan SWPPP Review Checklist (December 2013).pdf)*	In entirety
Audit Findings *(HDOT Highways Audit 2004.pdf)*	Pages: 1, 2, 3, 7, 9, and 11
Program Records *(C.7 Oahu Construction BMP Training Sign-in Sheets-v1.pdf)*	In entirety
(C.6 Periodic Inspections for Encroachment Construction Project-v1.pdf)	In entirety
(20130822.Construction Site Runoff Control-Inspections and Enforcement of Contract Construction Projects-S000001.PDF)	Pages: 1, 4, 6, 7, and 9
(Central Oahu BMP Ph 2 Sep 14 16_DOH Submittal-v1.pdf)	
(C.5 Periodic Inspections for Contract Projects-v1.pdf)	
SWMPP *(SWMPP (April 2015).pdf)*	Figures 4-1 to 4-8 Tables 4-1 to 4-3 Chapter 4 - In entirety Chapter 8.3 Appendix D.1
Training and Education Materials (B.1_Public-Education-Plan_REV1_9.23.15.pdf)	Pages: 7, 23, 26-33, 72-75, 77, 126, 128, 138, 139, and 155
(Contractor Compliance Inspection Handout.pdf)	In entirety
(D.8_Permit-Holders-Guide-to-Understanding-Storm-Water.pdf)	In entirety
(DOT_HWYS_YouTube_2016Conference Videos.pdf)	In entirety
Website *(http://www.stormwaterhawaii.com/)*	In entirety

3. On-Site Evaluation

4 December 2017

On 4 December 2017, the Audit Team held a kickoff meeting at Highways Oahu District's Kakoi office with Highways Oahu District staff and consultants. Photographs taken during the On-Site Evaluation can be found in Section 4 below.

Construction Project 6.1 Miscellaneous Permanent Best Management Practices, Phase 2A. Project Number HWY-O-01-15.

The Audit Team drove to the project and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Highways Oahu District staff and consultants as they conducted an independent inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

Construction Project 6.2 Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7. Project Number HWY-O-04-16

The Audit Team drove to the project and met with the construction site contractor and construction management personnel. The Audit Team then accompanied Highways Oahu District staff and consultants as they conducted an independent inspection of the site. The Audit Team concluded the On-Site Evaluation with a debrief meeting.

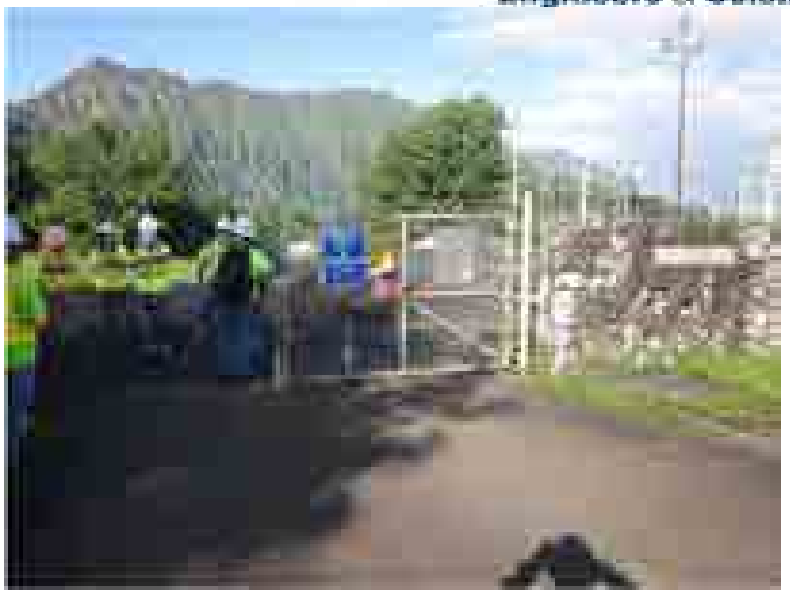
4. On-Site Evaluation Photos

Photographs are provided on the subsequent pages below.

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.1
Construction Site Entrance



Construction Site 6.1 Photo 6.1.2
Construction Site Entrance

Construction Site 6.1 Photo 6.1.3
Construction Site Entrance

Construction Site 6.2 Photo 6.1.4
Construction Site Entrance

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.5
Construction Ingress/Egress Mat

Construction Site 6.1 Photo 6.1.6
Construction Ingress/Egress Mat

Construction Site 6.1 Photo 6.1.7
Construction Ingress/Egress Mat

Construction Site 6.1 Photo 6.1.8
Construction Ingress/Egress Mat

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.9
Construction Staging Area

Construction Site 6.1 Photo 6.1.10
Construction Site Entrance

Construction Site 6.1 Photo 6.1.11
Construction Staging Area

Construction Site 6.1 Photo 6.1.12
Construction Staging Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.13
Construction Staging Area

Construction Site 6.1 Photo 6.1.14
Construction Staging Area

Construction Site 6.1 Photo 6.1.15
Construction Staging Area

Construction Site 6.1 Photo 6.1.16
Construction Staging Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.17
Construction Staging Area

Construction Site 6.1 Photo 6.1.18
Construction Staging Area

Construction Site 6.1 Photo 6.1.19
Construction Staging Area

Construction Site 6.1 Photo 6.1.20
Construction Staging Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.21
Construction Staging Area

Construction Site 6.1 Photo 6.1.22
Construction Staging Area

Construction Site 6.1 Photo 6.1.23
Construction Staging Area

Construction Site 6.1 Photo 6.1.24
Construction Staging Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.25
Construction Staging Area

Construction Site 6.1 Photo 6.1.26
Construction Staging Area

Construction Site 6.1 Photo 6.1.27
Construction Staging Area

Construction Site 6.1 Photo 6.1.28
Construction Staging Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.29
Construction Staging Area

Construction Site 6.1 Photo 6.1.30
Construction Staging Area

Construction Site 6.1 Photo 6.1.31
Construction Staging Area

Construction Site 6.1 Photo 6.1.32
Construction Ingress/Egress Mat

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.33
Construction Staging Area

Construction Site 6.1 Photo 6.1.34
Construction Ingress/Egress Mat

Construction Site 6.1 Photo 6.1.35
Construction Ingress/Egress Mat

Construction Site 6.1 Photo 6.1.36
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.37
Erosion Control Berms

Construction Site 6.1 Photo 6.1.38
Erosion Control Berms

Construction Site 6.1 Photo 6.1.39
Erosion Control Berms

Construction Site 6.1 Photo 6.1.40
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.41
Erosion Control Berms

Construction Site 6.1 Photo 6.1.42
Erosion Control Berms

Construction Site 6.1 Photo 6.1.43
Erosion Control Berms

Construction Site 6.1 Photo 6.1.44
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.45
Erosion Control Berms

Construction Site 6.1 Photo 6.1.46
Erosion Control Berms

Construction Site 6.1 Photo 6.1.47
Erosion Control Berms

Construction Site 6.1 Photo 6.1.48
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.49
Erosion Control Berms

Construction Site 6.1 Photo 6.1.50
Erosion Control Berms

Construction Site 6.1 Photo 6.1.51
Erosion Control Berms

Construction Site 6.1 Photo 6.1.52
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.53
Erosion Control Berms

Construction Site 6.1 Photo 6.1.54
Construction Material Stockpiles

Construction Site 6.1 Photo 6.1.55
Construction Material Stockpiles

Construction Site 6.1 Photo 6.1.56
Slope Stabilization

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.57
Slope Stabilization

Construction Site 6.1 Photo 6.1.58
Slope Stabilization

Construction Site 6.1 Photo 6.1.59
Slope Stabilization

Construction Site 6.1 Photo 6.1.60
Slope Stabilization

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.61
Slope Stabilization

Construction Site 6.1 Photo 6.1.62
Construction Material Stockpiles

Construction Site 6.1 Photo 6.1.63
Slope Stabilization

Construction Site 6.1 Photo 6.1.64
Slope Stabilization

Construction Site 6.1 Photo 6.1.65
Slope Stabilization

Construction Site 6.1 Photo 6.1.66
Slope Stabilization

Construction Site 6.1 Photo 6.1.67
Slope Stabilization

Construction Site 6.1 Photo 6.1.68
Equipment Laydown Area

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.69
Erosion Control Berms

Construction Site 6.1 Photo 6.1.70
Erosion Control Berms

Construction Site 6.1 Photo 6.1.71
Erosion Control Berms

Construction Site 6.1 Photo 6.1.72
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.73
Erosion Control Berms

Construction Site 6.1 Photo 6.1.74
Erosion Control Berms

Construction Site 6.1 Photo 6.1.75
Erosion Control Berms

Construction Site 6.1 Photo 6.1.76
Erosion Control Berms

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.77
Slope Stabilization

Construction Site 6.1 Photo 6.1.78
Slope Stabilization

Construction Site 6.1 Photo 6.1.79
Stabilize Slope: Exposed dirt and dead grass

Construction Site 6.1 Photo 6.1.80
Drain Inlet Protection: Sediment buildup around inlet

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.81
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.82
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.83
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.84
Drain Inlet Protection: Sediment buildup around inlet

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.85
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.86
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.87
Slope Stabilization

Construction Site 6.1 Photo 6.1.88
Slope Stabilization

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
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Construction Site 6.1 Photo 6.1.89
Slope Stabilization

Construction Site 6.1 Photo 6.1.90
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.91
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.92
Drain Inlet Protection: Sediment buildup around inlet

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.93
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.94
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.95
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.96
Drain Inlet Protection: Sediment buildup around inlet

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.97
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.98
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.99
Drain Inlet Protection: Sediment buildup around inlet

Construction Site 6.1 Photo 6.1.100
Slope Stabilization

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.101
Slope Stabilization

Construction Site 6.1 Photo 6.1.102
Grubbed Accessway

Construction Site 6.1 Photo 6.1.103
Erosion Control Berms: Sediment buildup along berm

Construction Site 6.1 Photo 6.1.104
Erosion Control Berms: Sediment buildup along berm

Facility: Misc. Permanent Best Management Practices Ph. 2A, Kaneohe, HI
Date Photos Taken: 04 December 2017 (9:00am – 10:15am)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.1 Photo 6.1.105
Site Inspection Debrief

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.1
North of Construction Staging Area

Construction Site 6.2 Photo 6.2.2
North of Construction Staging Area

Construction Site 6.2 Photo 6.2.3
North of Construction Staging Area

Construction Site 6.1 Photo 6.2.4
Drain Inlet Protection: North of Construction Staging Area

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.5
Drain Inlet Protection: North of Construction Staging Area

Construction Site 6.2 Photo 6.2.6
Construction Staging Area: Vehicle Storage Area

Construction Site 6.2 Photo 6.2.7
Construction Staging Area: Material Stockpile

Construction Site 6.2 Photo 6.2.8
Construction Staging Area: Vehicle Storage Area

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.9
Construction Staging Area: Vehicle Storage Area

Construction Site 6.2 Photo 6.2.10
Construction Staging Area: Vehicle Storage Area

Construction Site 6.2 Photo 6.2.11
Erosion Control Berms and ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.12
Erosion Control Berms and ProWattle Perimeter Control

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.13
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.14
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.15
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.16
ProWattle Perimeter Control

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.17
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.18
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.19
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.20
ProWattle Perimeter Control

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.21
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.22
Slope Grubbing and ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.23
Slope Grubbing

Construction Site 6.2 Photo 6.2.24
Slope Grubbing

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.25
Slope Grubbing

Construction Site 6.2 Photo 6.2.26
Slope Grubbing

Construction Site 6.2 Photo 6.2.27
Slope Grubbing and ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.28
Slope Grubbing and ProWattle Perimeter Control

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.29
Installing ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.30
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.31
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.32
Sediment buildup along ProWattle

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.33
Sediment buildup along ProWattle

Construction Site 6.2 Photo 6.2.34
Sediment buildup along ProWattle

Construction Site 6.2 Photo 6.2.35
Sediment buildup along ProWattle

Construction Site 6.2 Photo 6.2.36
Sediment buildup along ProWattle

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.37
ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.38
Sediment buildup along ProWattle

Construction Site 6.2 Photo 6.2.39
Sediment buildup along ProWattle

Construction Site 6.2 Photo 6.2.40
Sediment buildup along ProWattle

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.41
Installing ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.42
Installing ProWattle Perimeter Control

Construction Site 6.2 Photo 6.2.43
Temporary Check Dam

Construction Site 6.2 Photo 6.2.44
Temporary Check Dam: Remove debris & needs reinforcement

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.45
Site North of Temporary Check Dams

Construction Site 6.2 Photo 6.2.46
Site North of Temporary Check Dams

Construction Site 6.2 Photo 6.2.47
Site North of Temporary Check Dams

Construction Site 6.2 Photo 6.2.48
Temporary Check Dam

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.49
Temporary Check Dam

Construction Site 6.2 Photo 6.2.50
Temporary Check Dam: Remove debris

Construction Site 6.2 Photo 6.2.51
Temporary Check Dam: Remove debris

Construction Site 6.2 Photo 6.2.52
Temporary Check Dam: Remove debris

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.53
Temporary Check Dam

Construction Site 6.2 Photo 6.2.54
Temporary Check Dam

Construction Site 6.2 Photo 6.2.55
Temporary Check Dam: Remove debris

Construction Site 6.2 Photo 6.2.56
Temporary Check Dam: Remove debris

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.57
Temporary Check Dam

Construction Site 6.2 Photo 6.2.58
Temporary Check Dam

Construction Site 6.2 Photo 6.2.59
Temporary Check Dam: Remove debris & needs reinforcement

Construction Site 6.2 Photo 6.2.60
Temporary Check Dam: Remove debris & needs reinforcement

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.61
Temporary Check Dam: Remove debris & needs reinforcement

Construction Site 6.2 Photo 6.2.62
South of Temporary Check Dams

Construction Site 6.2 Photo 6.2.63
South of Temporary Check Dams

Construction Site 6.2 Photo 6.2.64
South of Temporary Check Dams

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.65
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.66
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.67
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.68
Catch Basin Inlet Protection

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.69
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.70
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.71
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.72
Catch Basin Inlet Protection

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.73
Catch Basin Inlet Protection

Construction Site 6.2 Photo 6.2.74
Catch Basin Outfall

Construction Site 6.2 Photo 6.2.75
Catch Basin Outfall

Construction Site 6.2 Photo 6.2.76
Catch Basin Outfall

Facility: Slope Improvements for Erosion Control at Various Sites on Oahu, Phase 7, Mililani, HI
Date Photos Taken: 04 December 2017 (10:45am – 12:00pm)
Photographer: Kennedy/Jenks Consultants

Kennedy/Jenks Consultants
Engineers & Scientists

Construction Site 6.2 Photo 6.2.77
Site Inspection Debrief

Construction Site 6.2 Photo 6.2.78
Site Inspection Debrief

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix C

Revised Audit Work Plan, November 2016

State of Hawaii Department of Transportation
Office of Environmental Compliance

Revised Audit Work Plan

State Project No. OSC-15-01

November 2016

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A Consent Decree Sections Pertaining to Audit (10.d Page and Appendix A)

B1 - B6 PEAR 1 - 6 Guiding Questions

- B1: PEAR #1 – Post-Construction / Permanent Best Management Practices
- B2: PEAR #2 – Construction Site Runoff Control
- B3: PEAR #3 – Public Outreach / Public Involvement
- B4: PEAR #4 – Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
- B5: PEAR #5 – Pollution Prevention / Good Housekeeping Program
- B6: PEAR #6 – Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

C1 - C6 PEAR 1 - 6 Schedule

- C1: PEAR #1 – Schedule for Post-Construction / Permanent Best Management Practices
- C2: PEAR #2 – Schedule for Construction Site Runoff Control
- C3: PEAR #3 – Schedule for Public Outreach / Public Involvement
- C4: PEAR #4 – Schedule for Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
- C5: PEAR #5 – Schedule for Pollution Prevention / Good Housekeeping Program
- C6: PEAR #6 – Schedule for Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

D1 – D3 Notices to EPA & DOH

- D1: Draft Notice of Potential Violation
- D2: Final Notice of Potential Violation
- D3: Notice of Corrective Action

List of Acronyms

ACR	Annual Compliance Report
AWPC	Audit Work Plan Commencement
BMP	best management practice
CD	Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC)
CFR	Code of Federal Regulations
DOH	Department of Health
EPA	United States Environmental Protection Agency
HAR	Hawaii Administrative Rules
HARP	Hazard Appraisal and Recognition Plan
HDOT	State of Hawaii Department of Transportation
MEP	maximum extent practicable
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
PEAR	Program Element Audit Report
PM	Project Manager
QA	quality assurance
QC	quality control
SWMPP	Storm Water Management Program Plan

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Section 1: Introduction, Purpose, and Goals

Under Paragraph 10.d of the Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC) entered on 5 November 2014 (CD) with the United States Environmental Protection Agency (EPA) and the State of Hawaii (State) Department of Health (DOH), the State of Hawaii Department of Transportation (HDOT) is required to perform compliance audits of Municipal Separate Storm Sewer System (MS4)[1] permits issued to HDOT's Airports, Highways, and Harbors Divisions (referred to herein as the singular "MS4 Permit Audit"). Specific requirements for the MS4 Permit Audit are defined in Appendix A of the CD and included in Appendix A of this document. The MS4 Permit Audit will be conducted in accordance with this Audit Work Plan (AWP) by Kennedy/Jenks Consultants (Kennedy/Jenks), the selected independent third-party audit firm.

This AWP was conditionally approved by EPA & DOH on 31 October 2016. As memorialized in the conditional approval letter, HDOT will begin the audit on 15 March 2017. This date is hereafter referred to as the AWP Commencement date (AWPC). This AWP includes project milestones with defined dates in some cases (e.g., "15 April 2017") while other dates may be specified relative to the AWPC (e.g., "30 days after AWPC"). All "days" in this AWP refer to calendar days as opposed to business days.

The defined purpose of the MS4 Permit Audit is to assess HDOT's current regulatory and administrative compliance with its MS4 permits, DOH National Pollutant Discharge Elimination System (NPDES) General Permit Coverage Authorizing Discharges of Storm Water and Certain Non-Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Hawaii Small MS4 General Permit), applicable Storm Water Management Program Plans (SWMPPs), and the CD.

The defined goals of the MS4 Permit Audit focus on meeting the requirements listed in Appendix A of the CD, including:

- Evaluating compliance with HDOT MS4 permits and the CD
- Identifying information gathered during the MS4 Permit Audit that may be used to promote information and technology transfer between HDOT Divisions
- Identifying Potential Violations (areas where the evaluation found the permittee not in compliance with a specific permit requirement or SWMPP commitment) and Deficiencies (items which, if not corrected, may be anticipated to lead to Potential Violations) in HDOT's stormwater programs and assisting with timely self-correction of identified Potential Violations and Deficiencies by HDOT.

[1] The MS4 refers to the conveyance system in addition to the jurisdiction(s) which own/operate the system.

In addition to meeting the CD requirements and EPA & DOH expectations, the overarching goal of the MS4 Permit Audit is to develop internal trust and collaboration within HDOT. The Audit Team will seek HDOT-wide opportunities for improvement rather than focusing on minor issues of non-compliance.

Reporting requirements of the MS4 Permit Audit are defined in Appendix A Section D.7. of the CD and include:

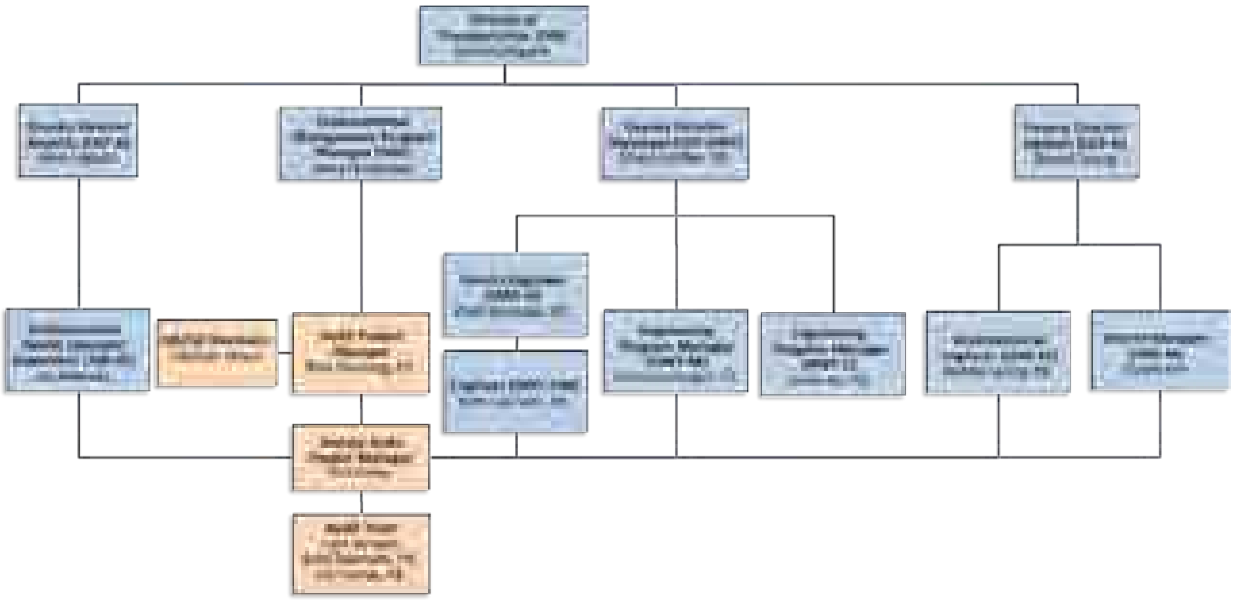
- A specific statement of the procedures followed, HDOT sites and activities visited, and all materials reviewed during the MS4 Permit Audit
- Retrospective analysis of activities that may be outmoded, ineffective, insufficient, or excessively burdensome, and providing recommendations to modify, streamline, or augment them in accordance with what has been learned during the MS4 Permit Audit, as appropriate.
- Identification of Potential Violations and Deficiencies and of MS4 permit conditions, applicable SWMPPs, the CD, and/or other applicable regulations, and providing recommendations for improvements as found to be appropriate
- Identification of best practices and opportunities for information/technology transfer to be applied across the three HDOT Divisions
- An analysis of the practices implemented for each HDOT Division's program elements and a determination as to whether identified best practices can be universally implement across all three Divisions. If best practices cannot be universally implemented, the report will clearly describe impediments identified.

In accordance with requirements defined in Appendix A of the CD, EPA's *MS4 Program Evaluation Guidance* (hereinafter EPA (2007) guidance) was consulted in the development of this AWP. The audit protocols included herein are intended to promote consistency among regulated facilities when conducting environmental audits and to validate that the MS4 Permit Audit is conducted in a thorough and comprehensive manner. Program evaluation worksheets (included in Appendix B) were developed to guide the Audit Team while performing the MS4 Permit Audit. Each worksheet addresses a separate program element, and includes key questions derived from the EPA (2007) guidance document recommended to be considered during an MS4 evaluation. While this AWP is based on the EPA (2007) guidance for auditing small MS4s, HDOT has adapted the guidance to focus some aspects of the audit process to reflect the unique nature of HDOT operations.

Section 2: Audit Team and HDOT Personnel

Figure 2-1 provides an organizational chart defining the Audit Team and HDOT staff that will be involved in the MS4 Permit Audit.

Figure 2-1 Organizational Chart



Additional information describing key MS4 Permit Audit personnel is provided below.

HDOT Project Manager – Anna Fernandez

In her role as Environmental Program Manager, Anna Fernandez reports directly to the HDOT Director. She serves as the HDOT Project Manager (PM) for this project. In this role, she administers and manages Kennedy/Jenks in performing the MS4 Permit Audit and their contact with HDOT leaders and stakeholders.

Deputy Director(s)

Deputy Directors report directly to the HDOT Director. They are responsible for facilitating the Audit Team's access to HDOT personnel and facilities within their respective Divisions as appropriate. The following Deputy Directors will be directly involved in the MS4 Permit Audit process:

Airports (DEP-A) – Ross Higashi
Highways (DEP-HWY) – Edwin Sniffen, P.E.
Harbors (DEP-H) – Darrell Young

MS4 Permit Coordinator(s)

MS4 Permit Coordinators are those HDOT personnel responsible for managing compliance with the MS4 permit for each Division, district, or designated MS4 permitted area. The following MS4 Permit Coordinators will be directly involved in the MS4 Permit Audit process:

Airports (AIR-EE) – Joy Masuda (Environmental Health Specialist Supervisor)
Oahu Highways (HWY-OW) – Kelly Lee Sato, P.E. (Engineer)
Maui Highways (HWY-M) – Ferdinand Cajigal, P.E. (Engineering Program Manager)
Oahu Harbors (HAR-EE) – Randal Leong, P.E. (Environmental Engineer)
Maui Harbors (HAR-M) – Duane Kim (District Manager)

Additional Key MS4 Permit Audit Personnel

The following key staff will also be consulted throughout the MS4 Permit Audit Process:

District Engineer (HWY-O) - Pratt Kinimaka, P.E.
Engineering Program Manager (HWY-C) - Jamie Ho, P.E.

Audit Project Manager – Ross W. Dunning, P.E. / Principal (Kennedy/Jenks)

Ross is a Principal of Kennedy/Jenks and leads their companywide stormwater practice. He has assisted many Western U.S. Port authorities for almost 20 years with development of strategies and stormwater management plans to address Clean Water Act and NPDES regulations. He is Kennedy/Jenks' point of contact for the HDOT PM, and manages the Audit Team to verify that MS4 Permit Audit procedures and reports meet CD requirements and are on schedule. The Audit PM is responsible for updating this Audit Work Plan (with the approval of the HDOT PM), producing schedules, preparing audit reports, and maintaining audit records.

Lead Quality Assurance/Quality Control (QA/QC) Reviewer: Heather Wood (Kennedy/Jenks)

Heather is the former Director of Sustainability for the Port of Virginia, responsible for development of their environmental programs and permit compliance (including NPDES). Heather is also the former Chair of the American Association of Port Authorities Environmental Committee. She is Kennedy/Jenks' Ports and Harbors Sector Leader. In her role as the Lead QA/QC Reviewer, she will direct the review of MS4 Permit Audit work products, including draft and final audit reports, by qualified Kennedy/Jenks staff.

Deputy Audit Project Manager – Phil Potter (Kennedy/Jenks)

Phil is based in Kennedy/Jenks' Honolulu office and leads the firm's stormwater practice in Hawaii. For over 8 years, he has assisted municipal clients including the HDOT Highways Oahu District and the City and County of Honolulu with development and implementation of their NPDES compliance programs. In his role as the Deputy Audit PM, Phil is responsible for assisting the Audit PM in the execution of the Audit Work Plan and will directly coordinate with the HDOT MS4 Permit Coordinators and other stakeholders.

Auditors – Cale Yamada; Brad Takenaka, P.E.; Jon Honda P.E. (Kennedy/Jenks)

Cale, Brad, and Jon are experienced stormwater professionals in Kennedy/Jenks' Honolulu office. Among their many stormwater projects, they currently assist the City and County of Honolulu with ongoing development and implementation of its municipal stormwater program including, but not limited to, providing periodic MS4 program compliance inspections for hundreds of City and County industrial facilities throughout the island of Oahu.

Auditors are responsible for performing inspections of HDOT facilities and documentation, and performing interviews with HDOT employees responsible for MS4 program implementation and management in order to assess compliance with applicable MS4 program and CD requirements. Auditors are also responsible for coordinating with the Audit PM and Deputy Audit PM regarding any Potential Violations and Deficiencies identified. Hereinafter, the "Audit Team" refers to the Kennedy/Jenks' staff introduced above.

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Section 3: Audit Notes and Guidelines

This Section addresses various topics intended to guide the Audit Team in completing the MS4 Permit Audit in a safe and efficient manner.

3.1 Health, Safety, and Site Access Considerations

Prior to initiating onsite evaluations (see Section 5.2), the Audit PM will lead the Audit Team in developing a Hazard Appraisal and Recognition Plan (HARP), following Kennedy/Jenks' standard safety program. The HARP describes how to identify and analyze safety risks associated with field activities, operations, and facilities; approaches for mitigating identified risks; and processes for documenting and reporting accidents, near misses, and potentially unsafe conditions which may be encountered in the field. The HARP is a "living document" which will be updated as appropriate throughout the term of the MS4 Permit Audit. The Audit Team will wear appropriate personal protective equipment (hard hat, safety vest, safety shoes, protective eyewear, and hearing protection as appropriate) while performing the onsite evaluations.

<u>Harbors Facilities</u>

At this time, no special security clearances or requirements are defined to be necessary at Harbors facilities and/or project sites, as long as the Audit Team is escorted by personnel with valid Transportation Worker Identification Credentials (TWIC) and documentation of Maritime Security (MARSEC) Facility Security Awareness training certification. Active loading or unloading of cargo may necessitate additional safety requirements at certain pier locations.

<u>Airports Facilities</u>

At this time, Airports Division facilities to be evaluated are anticipated to be outside secured air operations areas; therefore, no special requirements or clearances are defined to be necessary. Adequate notice will be provided to the Airports Division MS4 Permit Coordinator to arrange security escort as found to be necessary.

<u>Highways Facilities</u>

At this time, there are no defined security restrictions to access Oahu District or Maui District Highway facilities as the Audit Team will be escorted by HDOT personnel at all times.

3.2 Quality Control Procedures

The Audit PM is responsible for ensuring that Kennedy/Jenks' effort and deliverables meet their company's professional mandate to consistently perform work in a technically correct manner, meeting the standard of care for their profession. The standard of care is defined to represent the watchfulness, attention, caution, prudence, and skill that other qualified professionals in the same or similar circumstances would exercise.

Kennedy/Jenks' quality assurance (QA) program includes processes and procedures developed over their near century-old history to achieve and maintain a rigorous level of quality, planning,

application, and verification. Its quality control (QC) program implements this process and QC reviewers will continuously monitor their effort and work products on this project to meet contract and CD requirements, Kennedy/Jenks' QA/QC standards, and HDOT's expectations.

3.3 Photographs

Digital photographs collected and archived during the course of the MS4 Permit Audit will be managed in accordance with EPA's *Digital Camera Guidance for EPA Civil Inspections and Investigations* (2006). Photographs taken will be organized into photograph logs with each photograph numbered with the date and time included. A brief photograph caption will identify the facility or site name, describe what is depicted in the photograph, the location, direction, and other pertinent data (e.g., the location within the facility or site) as appropriate.

3.4 "Maximum Extent Practicable" Concept

Unlike NPDES industrial wastewater permits which typically contain specific end-of-pipe effluent limits based on water quality standards or available treatment technology, HDOT's MS4 permits include programmatic requirements involving the implementation of BMPs in order to reduce pollutants discharged to the "maximum extent practicable" (MEP). In addition, HDOT's permits allow flexibility in the types of BMPs and activities implemented to meet permit requirements. There is also added complexity in evaluating several similar permits applicable to the very different operations conducted at HDOT Highways, Airports, and Harbors facilities. This makes it challenging to assess the true effectiveness of HDOT's several MS4 stormwater programs and how they may be integrated.

Per EPA (2007) guidance, HDOT is considered a non-traditional MS4 permittee, and as such, the evaluation of its MS4 programs will be specific to their particular circumstances and applicable permit requirements. Some HDOT MS4 permits contain broad requirements that outline the basic SWMPP components the permittee is required to implement, giving the permittee the flexibility to develop a program to meet these broad requirements. Other MS4 permits are more prescriptive and specify in detail the minimum activities and best management practices (BMPs) for each program element.

Given these inherent operational differences and challenges, each HDOT permittee has traditionally applied different approaches to comply with specific permit requirements based on MS4-specific traits or issues. For example, EPA regulations require permittees to develop "procedures for site inspection and enforcement" for addressing construction activities. Few MS4 permits specify how the permittee should inventory their active construction projects or track enforcement activities. A permittee with only a few construction projects a year may be able to use a paper system to inventory and track construction projects. A permittee with hundreds or thousands of construction projects would likely need a database or similar electronic tracking system to ensure it was implementing the program to a level considered to meet MEP.

It is relatively straightforward to assess whether HDOT has developed certain programs and conducted various activities that are called for and within the timeframes specified in each of the permits under consideration, as well as activities or programs specified under SWMPPs or other documents prepared by HDOT. The challenge for the Audit Team and HDOT is to assess

whether the programs and activities implemented have or will constitute MEP. EPA (2007) guidance will assist with this determination, but is not definitive. Determination requires application of the Audit Team's best professional judgment.

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Section 4: Audit Structure and Schedule

For each of the six program elements required to be reviewed by the CD, Kennedy/Jenks will review the six permitted MS4 programs concurrently, developing six Program Element Audit Reports (Final PEARs) that represent the culmination of the auditing efforts across the three HDOT Divisions.

Appendix A of the CD defines various project milestones and deadlines, described for ease of reference below:

Table 4-1 CD Appendix A Deadlines

Program Element	Evaluation Complete: [a]	Draft PEAR to HDOT: [d]	HDOT Review of Draft PEAR: [e]	Final PEAR to HDOT: [f]
PEAR #1: Post-Construction Runoff Control / Permanent Best Management Practices	3 Months (90 Days) [b] After AWPC[c] 13 June 2017	135 Days After AWPC 28 July 2017	165 Days After AWPC 27 August 2017	210 Days After AWPC 11 October 2017
PEAR #2: Construction Site Runoff Control	9 Months (270 Days) After AWPC 10 December 2017	315 Days After AWPC 24 January 2017	345 Days After AWPC 23 February 2017	390 Days After AWPC 9 April 2018
PEAR #3: Public Outreach / Public Involvement	15 Months (450 Days) After AWPC 8 June 2018	495 Days After AWPC 23 July 2018	525 Days After AWPC 22 August 2018	570 Days After AWPC 8 October 2018
PEAR #4: Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Programs	21 Months (630 Days) After AWPC 5 December 2018	675 Days After AWPC 19 January 2019	705 Days After AWPC 18 February 2019	750 Days After AWPC 4 April 2019
PEAR #5: Pollution Prevention / Good Housekeeping	27 Months (810 Days) After AWPC 3 June 2019	855 Days After AWPC 18 July 2019	885 Days After AWPC 17 August 2019	930 Days After AWPC 1 October 2019
PEAR #6: Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability	33 Months (990 Days) After AWPC 30 November 2019	1035 Days After AWPC 14 January 2020	1065 Days After AWPC 13 February 2019	1110 Days After AWPC 29 March 2020

Notes:

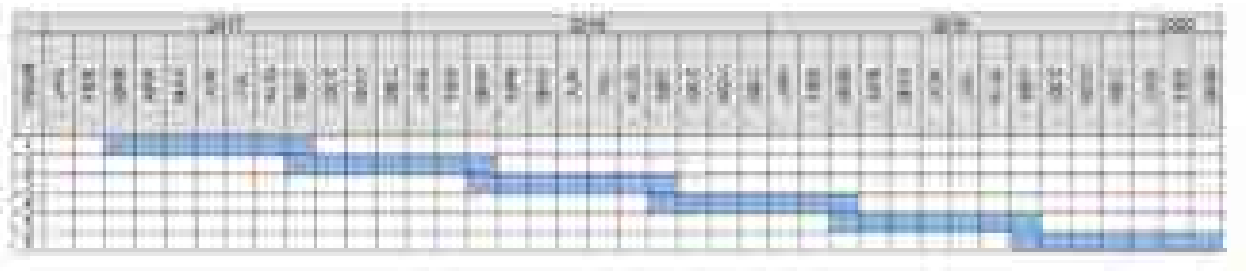
(a) "Evaluation" as referenced in CD Appendix A Section B.5. is defined in this AWP to represent the conclusion of the Post-Onsite Evaluation Review Period (See Section 5.2.3) for PEARs #1, 2, 4, and 5. For PEARs #3 and 6, no onsite evaluation is required and therefore "evaluation" is defined to represent the date of conclusion of the Records Review period. Please refer to Appendix C for more detail.

(b) “Months” are based on 30-day months in this AWP.
(c) AWPC = Audit Work Plan Commencement (15 March 2017)
(d) Pursuant to CD Appendix A Section D.2., Kennedy/Jenks will complete a draft audit report and transmit it to HDOT within 45 days of completing an audit of a program element (defined in this AWP as the conclusion of “evaluation”, as discussed in Note (a)).
(e) Pursuant to CD Appendix A Section D.3., HDOT will review the draft PEAR to correct any factual inaccuracies within 30 days of receipt.
(f) Pursuant to CD Appendix A Section D.4., Kennedy/Jenks will complete a final PEAR within 120 days of completing an audit of a program element (defined in this AWP as the conclusion of “evaluation”, as discussed in Note (a)).

Section 5: Program Element Audits

Each program element audit will follow a similar schedule and structure, discussed generally in this section. The Program Element Audits will occur over a 37-month period depicted graphically below (Figure 5-1):

Figure 5-1 Program Element Audit Schedule



Appendices B1 - B6 list the basic information anticipated to be reviewed for each MS4 program element to be audited. The Audit Team will utilize worksheets provided in Appendices B1 - B6 to collect and track information for each MS4 permit and element. References to Appendices C1 - C6 are also included, defining specific schedules for each of the six PEARs. Each Program Element Audit will include three phases (Pre-Audit, Onsite Evaluation, and Reporting), detailed in the following sections.

5.1 Pre-Audit

This Section describes the first phase of each Program Element Audit.

5.1.1 Notice of Audit

The Audit Team will schedule events, confirm appropriate participants, and begin planning the upcoming program element audit with the HDOT PM prior to initiating each Program Element Audit (Appendices C1 - C6 Item 1). The HDOT PM will coordinate with the MS4 Permit Coordinators to provide the following for each of the six MS4 permits:

- Facility or Division-specific SWMPPs
- Recent Annual Reports
- Documentation of required training, inspection reports, legal enforcement correspondence, if any, etc.
- Relevant memoranda of understanding with adjacent of contributing agencies, municipalities, etc.
- Organizational charts specifically listing HDOT staff with MS4 permit authority and responsibility.

The HDOT PM will coordinate with the MS4 Permit Coordinators to identify individuals and stakeholders that should be engaged during the MS4 Permit Audit.

5.1.2 Records Request

The Audit Team will review those sections of the NPDES permits, SWMPPs, guidance documents, the CD, etc. pertinent to the each individual audit element. Based on this review, the Audit Team will develop a records request and submit it to the HDOT PM (Appendices C1 - C6 Item 2). Where documentation is required (completed forms, logs, sign-in sheets, etc.), the Audit Team will request a subset of relevant records for verification. Electronic records are preferred, but physical copies of hard copy records are also acceptable. The HDOT PM will work with the MS4 Permit Coordinators to acquire and provide requested records to the Audit Team (Appendices C1 - C6 Item 3).

5.1.3 Records Review

The Audit Team will compare the program element requirements and commitments identified in the NPDES permits, SWMPPs, CD, annual reports, etc. and the records obtained in the record review (Appendices C1 - C6 Item 4). This review will be informed to the extent appropriate by the interview questionnaire provided in Appendices B1 - B6. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators may be conducted during this period.

5.2 Onsite Evaluation

This Section describes the second phase of each Program Element Audit.

5.2.1 Pre-Onsite Evaluation Conference Call

The Audit Team and HDOT PM will contact each MS4 Permit Coordinator to confirm schedules, address questions and security concerns, confirm personnel safety equipment needed, and organize training and orientation briefings that may be required (Appendices C1 - C6 Item 5).

5.2.2 Onsite Evaluation

For work planning purposes, it is assumed that onsite evaluations for each Program Element will be conducted over the course of five (5) days (except for PEAR #4, which requires an extra day). Detailed activity descriptions and schedules are included in Appendices C1 - C6 (Item 6). It should be noted that following EPA (2007) guidance, PEAR #3 and PEAR #6 do not require onsite evaluations[2]. The onsite evaluations for each Program Element are tentatively scheduled during the following time periods (Table 5-1):

[2] Although no on-site evaluation is required for PEAR #3 (Public Outreach / Public Involvement Program), the Audit Team will endeavor to identify and attend events such as Harbors' tenant outreach in order to gain a well-rounded understanding of this program.

Table 5-1 Tentative On-Site Evaluation Dates

PEAR	On-Site Evaluation
PEAR #1: Post-Construction / Permanent Best Management Practices	Tuesday 30 May 2017 to Monday 5 June 2017
PEAR #2: Construction Site Runoff Control	Monday 27 November 2017 to Friday 1 December 2017
PEAR #3: Public Outreach / Public Involvement Program	[none required]
PEAR #4: Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program	Monday 19 November 2018 to Wednesday 28 November 2018
PEAR #5: Pollution Prevention / Good Housekeeping Program	Monday 20 May 2019 to Friday 24 May 2019
PEAR #6: Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability	[none required]

5.2.3 Post-Onsite Evaluation Review Period

Following the Onsite Evaluations, the Audit Team will review the findings of the Pre-Audits and Onsite Evaluations and address final evaluation-related tasks that may have been noted (Appendices C1 - C6 Item 7). This review period completes the evaluation of the program element, as referenced in CD Appendix A Section B.5.

5.3 Reporting

This Section describes the third phase of each Program Element Audit.

5.3.1 Draft PEARs

Pursuant to the CD, the Audit Team will prepare draft PEARs documenting the procedures followed, sites and activities visited, materials reviewed, and a summary of major findings from the program element audits of the six HDOT NPDES permits (Appendices C1 - C6 Item 8). The PEARs will be structured so that they may be easily incorporated into each Division's Annual Compliance Report (ACR) (see Section 7).

The Audit Team will endeavor to draw defensible conclusions based on the NPDES permit requirements and conditions, the SWMPP developed to meet the permit goals, measurable achievement of those goals, and the Audit Team's best professional judgment interpretation of compliance with the NPDES regulations.

EPA (2007) guidance describes that, in some cases, it may not be possible to assess compliance with a program component because of the limitations of the MS4 program evaluation process. If this is found to be the case, the draft PEAR for the program element will state that this is the case and provide as much supporting information as possible. Similarly, if there were no findings of note for a particular SWMPP or NPDES component, this fact will be stated in the PEAR.

If the Audit Team identifies what may be a Potential Violation or Deficiency at any point during the Pre-Audit, Onsite Evaluation, or Reporting periods, actions will be taken in accordance with the decision tree defined in Section 6 for the Audit Team, HDOT PM, and MS4 Permit Coordinators to follow. The draft PEAR will describe the two findings as follows:

- Findings reviewed per Section 6 and found to be Potential Violations, reported to DOH/EPA and addressed via Corrective Actions.
- Findings found to be Deficiencies, for which recommendations for improvement will be included.

Each draft PEAR will identify BMPs and opportunities for information/technology transfer that may be considered for application across the three HDOT Divisions. The draft PEARs will also analyze the practices implemented for each HDOT Division's program elements and assess whether identified best practices can be universally implemented across the three HDOT Divisions. If best practices cannot be universally implemented, the draft PEAR report will describe identified impediments (such as legal barriers). The draft PEAR will also identify positive program elements considered to exceed the NPDES requirements and SWMPP. Finally, the draft PEAR will include a retrospective analysis of activities that are considered to be potentially outmoded, ineffective, insufficient, or excessively burdensome. Recommendations to modify, streamline, or expand them in accordance with what has been learned will be listed.

The Audit Team will complete the draft PEAR within 45 days of the completion of the evaluation for each program element. The Audit Team will provide five (5) copies of the draft PEAR and one electronic file copy in Word (Version 2007 or earlier) to the HDOT PM.

5.3.2 HDOT Review

Upon receipt, the HDOT PM will distribute copies of the draft PEARs to the appropriate MS4 Permit Coordinators, who will be responsible for reviewing the reports and distributing the reports to key personnel for their review. The MS4 Permit Coordinators will submit to the HDOT PM a consolidated written request for clarification and corrections to the draft PEAR for their respective permit as found to be necessary (Appendices C1 - C6 Item 9). The HDOT PM will then submit the consolidated requests and corrections to the Audit PM (Appendices C1 - C6 Item 10).

5.3.3 Final Audit Report

Upon receipt of the consolidated requests and corrections, the Audit Team will make appropriate changes to the draft PEARs and submit the final PEARs (Appendices C1 - C6 Item 11).

For PEARs #1 - 5, the Final PEAR is scheduled to be submitted approximately 25 days in advance of the CD deadline. This is intended to afford additional time for the Divisions in each subsequent Program Element Audit. The CD is structured such that, if followed strictly, only 60 calendar days are afforded for Steps 1 to 7 of PEARs #2 - 6. For example, Final PEAR #1 is due at 210 days following AWPC and the evaluation of PEAR #2 is due at 270 days following AWPC. By reducing the time it takes Kennedy/Jenks to write the Final PEAR, an additional 25 days are afforded to the Divisions to fulfill the records request for the subsequent audit (Appendices C2 - C6 Item 3).

The Audit Team will provide five (5) copies of the final PEARs and one electronic file copy in Word (Version 2007 or earlier) to the HDOT PM.

5.3.4 Post-Audit Report Review

The HDOT PM and Audit PM will meet after the submission of each PEAR to discuss QC procedures and potential improvements to be made prior to the subsequent PEAR.

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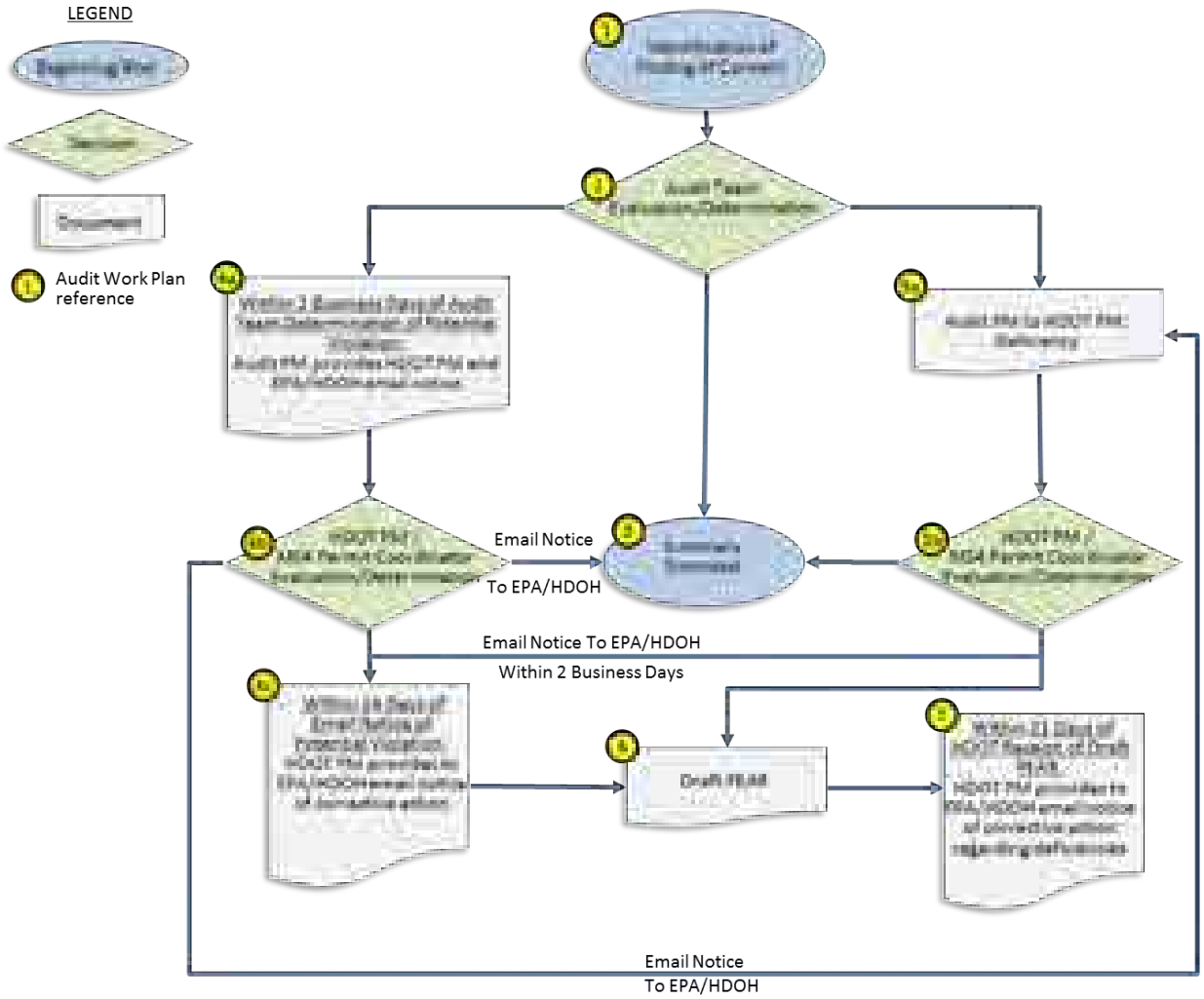
Section 6: Potential Violations and Deficiencies

If at any point during the Pre-Audit, Onsite Evaluation or Reporting Periods the Audit Team identifies what may represent a Potential Violation or Deficiency (hereinafter "Finding of Concern"), the Audit Team, HDOT PM, and MS4 Permit Coordinators will follow the decision tree shown on Figure 6-1.

Figure 6-1 Potential Violation and Deficiency Decision Tree



1 6.1 Identification of Finding of Concern

2 6.2 Audit Team Consultation

Upon identification of a Finding of Concern, the Audit Team will consult internally to assess whether the Finding of Concern may represent a Potential Violation, a Deficiency, or whether it summarily merits dismissal.

Potential Violation - The Audit Team will categorize the Finding of Concern as a Potential Violation if it meets the EPA (2007) guidance definition of an "area where the evaluation found the permittee not in compliance with a specific permit requirement or SWMPP commitment". These occurrences would follow the procedures listed in Section 6.3.

Deficiency – The Audit Team will categorize the Finding of Concern as a Deficiency if it meets the Consent Decree definition of an "item which, if not corrected, will lead to potential violations"[1]. These occurrences would follow the procedures listed in Section 6.4.

3 Summary Dismissal – The Audit Team will dismiss the Finding of Concern if it does not meet either the definition of a Potential Violation or a Deficiency. No further action will be required.

[1] EPA (2007) guidance further elaborates that deficiencies are areas of concern impeding effective program implementation. They are typically areas where the permit or SWMPP does not describe specifically how the permittee should conduct an activity, yet the evaluator believes the permittee may consider altering how they conduct the activity to meet water quality goals. Deficiencies can also be areas where future permit violations could result if the permittee continues on its present path. The Audit Team will look for opportunities to enhance program elements (e.g. recommending that MS4 Coordinators perform required annual reviews earlier in the year, thereby allowing time for self-correction).

6.3 Potential Violation Decision Tree

Notification: Audit PM to HDOT PM and EPA & DOH

If the Finding of Concern is categorized by the Audit Team as a Potential Violation, the Audit PM will notify the HDOT PM and EPA & DOH via email[1] within 2 business days of making the determination using the form presented in Appendix D1. Additionally, the HDOT PM will be notified via telephone. These notifications will include the following information:

1. Specific details of the Potential Violation
2. Related photographs, if any
3. Applicable regulatory references [i.e., NPDES permit, SWMPP, Hawaii Administrative Rules (HAR), or Code of Federal Regulations (CFR) references, as applicable].

Evaluation/Determination

The HDOT PM will consult with the appropriate MS4 Permit Coordinator to further investigate the factual accuracy of the Potential Violation determination. Based on that consultation, the Potential Violation may be summarily dismissed (if found to be factually inaccurate) or re-categorized as a Deficiency (if incorrectly categorized as a Potential Violation). Both of these scenarios would be accompanied by email notification from the HDOT PM to EPA & DOH using the form presented in Appendix D2. The time required for this consultation is included in the 14-day timeline described in Item 4c, below.

Determination of Potential Violation

If the Finding of Concern is confirmed to be a Potential Violation, the HDOT PM will then work with the appropriate MS4 Permit Coordinator to assess suitable corrective actions.

Unless otherwise agreed upon with EPA & DOH, HDOT will correct the Potential Violation within 14 days of initial Audit Team email notification to EPA & DOH (see Item 4a above). Email notification of the Corrective Action will be provided to EPA & DOH by the HDOT PM using the forms presented in Appendix D2 and Appendix D3. The Consent Decree allows HDOT the option to request an extension to this reporting deadline. In order for EPA & DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA & DOH.

[1] Per EPA & DOH request, Connor Adams (EPA) and Matthew Kurano (DOH) will be copied on all email notifications to EPA & DOH.

6.4 Deficiency Decision Tree

5a **Notification: Audit PM to HDOT PM**

If a Finding of Concern is categorized as a Deficiency, the Audit PM will notify the HDOT PM via telephone and email and include the following information:

1. Specific details of the Deficiency
2. Related photographs, if any
3. Applicable regulatory references (i.e., NPDES permit, SWMPP, HAR, or CFR references, as applicable).

5b **Evaluation/Determination**

The HDOT PM will consult with the appropriate MS4 Permit Coordinator to further investigate the factual accuracy of the Deficiency determination. Based on that consultation, the Deficiency may be summarily dismissed (if found to be factually inaccurate) or re-categorized as a Potential Violation (if incorrectly categorized as a Deficiency). The latter scenario will be accompanied by an email notification to EPA & DOH within 2 business days of making the determination using the form presented in Appendix D2.

6 **Deficiency**

If the finding is confirmed to be a Deficiency, this finding (along with confirmed Potential Violations) will be documented in the appropriate draft PEAR. The HDOT PM will work with the appropriate MS4 Permit Coordinator to assess the appropriate corrective actions.

7 Unless otherwise agreed upon with EPA & DOH, HDOT will correct Deficiencies within 21 days of receiving the draft PEAR (Appendices C1 - C6 Item 8). Email notification of the Corrective Action will be provided to EPA & DOH by the HDOT PM using the form included in Appendix D3. The CD allows HDOT the option to request an extension to this reporting deadline. In order for EPA & DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA & DOH.

Section 7: Annual Compliance Report

Due to the differences in Division operations, not all portions of each PEAR will be applicable to all MS4 permittees. As such, the PEARs will be structured so that they may be easily incorporated into each Division's Annual Compliance Report (ACR). The HDOT PM will work with each permittee to ensure that the appropriate PEAR content is included in each individual ACR. Each ACR will include a detailed summary of actions taken as a result of the audit reports and dates at which corrective actions, if warranted, were taken.

Additionally, pursuant to CD Appendix A Section D.5., the HDOT PM will submit each original draft and final PEAR to EPA & DOH at the same time that ACRs are submitted. Within the draft and final PEAR, an authorized HDOT official will certify that, to the best of the official's knowledge and information, the MS4 Permit Audit was conducted in accordance with this AWP. If items have not been corrected, HDOT will provide a schedule for implementing corrective measures.

References

United States Environmental Protection Agency. 2005. Small SM4 Stormwater Program Overview. December. Accessed online at <https://www3.epa.gov/npdes/pubs/fact2-0.pdf>.

United States Environmental Protection Agency. 2006. Digital Camera Guidance for EPA Civil Inspections and Investigations. July. Accessed online at <https://www.epa.gov/sites/production/files/2013-09/documents/digitalcameraguide.pdf>.

United States Environmental Protection Agency. 2007. *MS4 Program Evaluation Guidance.* Accessed online at <https://www3.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf>.

Appendix A

Consent Decree Sections Pertaining to Audit
(10.d Page and Appendix A)

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APPENDIX A

ENVIRONMENTAL COMPLIANCE AUDITS

A. General Provisions

1. This Appendix provides details of the NPDES MS4 compliance audits required by Paragraph 10.d of the Consent Decree. The audits shall include evaluation of common stormwater program elements at each of HDOT's three divisions (Airports, Highways and Harbors), as stated in Paragraph A.3 below, throughout the state on a per element schedule. The audits shall be completed to fulfill the following goals:
    a. Determine compliance with the federal regulations and state MS4 permits and regulations and this Consent Decree (see Paragraph A.2, below);
    b. Ensure information gathered during the audits is used to promote information and technology transfer between divisions; and
    c. Identify deficiencies and potential violations that are discovered by the third party auditor and allow for timely self-correction of the deficiencies and potential violations by HDOT.
2. The audits shall be designed to assess current regulatory and administrative compliance with the following items throughout each of HDOT's divisions:
    a. The Hawaii NPDES General Permit Authorizing Discharges of Storm Water and Certain Non-Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Hawaii Small MS4 General Permit), Hawaii Administrative Rules, chapter 11-55, Appendix K;
    b. NPDES permit, Permit No. HI S000001, MS4 Permit for the HDOT-Highways, Oahu District;
    c. NPDES Permit, Permit No. HIS000005, MS4 Permit for the HDOT-Airports, Honolulu International Airport;
    d. Applicable Storm Water Management Plans (SWMPs); and
    e. This Consent Decree.
    f. Future NPDES MS4 permits and SWMPs issued to HDOT. This obligation shall not delay or prevent termination of the Consent Decree.
3. The audits shall include, but not be limited to, an evaluation of the following MS4 Program Elements as they relate to compliance at each of HDOT's three divisions:
    a. Public Education/Outreach and Participation/Involvement
    b. Illicit Discharge Detection and Elimination (including commercial/tenant oversight programs)
    c. Construction Site Runoff Control
    d. Post-Construction Runoff Control/ Permanent BMPs
    e. Pollution Prevention/ Good Housekeeping
    f. An analysis of how Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability impact MS4 compliance
4. HDOT shall audit Program Elements for the Harbors, Airports and Highways Divisions in accordance with the schedule defined in the Work Plan described in Paragraph B.1, below.

5. The audits shall be conducted by a qualified third party environmental consulting firm retained by HDOT and selected by a committee consisting of representatives of the HDOH and HDOT. The selection committee shall choose an audit firm which is experienced with environmental auditing and the permits and regulations described in Paragraph A.2, above.
6. The requirements of this Appendix related to the consulting firm's qualifications, authority to conduct the audits, and production of the HDOT Audit Reports (Audit Reports) shall be incorporated in any contract relating to the audits entered into by HDOT and the selected consulting firm to the extent allowed by State Procurement Code.
7. Any violations by HDOT discovered though the execution of the Environmental Compliance Audit detailed in this Appendix are neither "voluntarily discovered" within the terms of EPA's revised *Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations Policy* (Audit Policy) nor voluntarily disclosed to EPA under EPA penalty policies. Accordingly, any such violations are ineligible for penalty mitigation or other favorable treatment under the Audit Policy.
8. HDOT agrees not to attempt to use any state audit and/or privilege laws to restrict EPA's or HDOH's ability to review the Audit Reports at HDOT facilities to determine if the audits have been properly completed and HDOT has corrected any uncorrected non-compliance, potential violation, or deficiency as per its certification (see Paragraph F below). Also, HDOT agrees not to attempt to use any state audit and/or privilege laws to restrict EPA's or HDOH's ability to obtain, review and/or use the Audit Reports in any action to enforce the audit provisions of the Consent Decree. Neither information contained in the Audit Reports, nor underlying information upon which the Audit Reports relied, that indicates regulatory violations at any HDOT facility, shall be claimed as confidential business information by HDOT or its consulting firm.

B. Procurement of Services/Audit Work Plan

1. HDOT shall advertise a Request for Qualifications from third party audit firms to conduct the audits. Advertisement for the Request for Qualifications shall not exceed forty-five (45) days.
2. Within thirty (30) days of the end of the Request for Qualifications period, the HDOT and HDOH selection committee shall conduct the professional services selection of an audit firm and provide the recommendation to the Director.
3. Within fifteen (15) days of the selection committee recommendation to the Director of Transportation, or another length of time agreed to by EPA and HDOH, HDOT shall notify the potential audit firm with a letter of selection, pending negotiation of fees.
4. Within thirty (30) days or another length of time agreed to by EPA and HDOH, HDOT shall, as approved by the Director of Transportation, award the selected audit firm and proceed to process the contract for the audit work. Within seven (7) days of each milestone, HDOT shall notify EPA and HDOH by email that the following milestones were completed:
    a. Request for Qualifications advertisement;
    b. Awarding of contract between HDOT and the selected audit firm;
    c. Notice to Proceed on the Audit.
5. On or before September 16, 2016, HDOT shall submit a draft audit work plan (Audit Work Plan) to EPA and HDOH for review and approval. In developing the Audit Work Plan, HDOT shall consult EPA's guidance on auditing small MS4s:

http://www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf The Audit Work Plan shall include the following audit schedule and describe each task necessary to accomplish the Audit Scope with targeted time frames for the consulting firm to complete:

a. 3 months after the Audit Work Plan is approved: Evaluation of Post Construction/Permanent BMP programs for all three HDOT divisions;
b. 9 months after the Audit Work Plan is approved: Evaluation of Construction Site Runoff Control programs for all three HDOT divisions;
c. 15 months after the Audit Work Plan is approved: Evaluation of Public Outreach/Public Involvement for all three HDOT divisions;
d. 21 months after the Audit Work Plan is approved: Evaluation of Illicit Discharge Detection and Elimination, Industrial Commercial Activities/Tenant Programs for all three HDOT Divisions;
e. 27 months after the Audit Work Plan is approved: Evaluation of Pollution Prevention/Good Housekeeping for all three HDOT Divisions;
f. 33 months after the Audit Work Plan is approved: Evaluation of Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability for all three HDOT divisions.

6. The Audit Work Plan shall include, but is not limited to: the minimum documents to be reviewed (e.g. SWMPs, training records, inspection reports, etc.), minimum number of field verifications, as necessary, for each program element evaluated, deliverables (notices of potential violations, draft and final audit reports), and reporting deadlines.
7. EPA, after consultation with HDOH, may reject the draft Audit Work Plan in whole or in part. If EPA rejects the Audit Work Plan or any portion of it, EPA shall identify the reason(s) in writing to HDOT for such rejection and may require HDOT to redraft the Audit Work Plan in its entirety or part. EPA shall provide any comments to HDOT within forty-five (45) days.
8. If EPA and HDOH reject the Audit Work Plan in whole or part, HDOT shall resubmit a revised Audit Work Plan within one hundred and twenty (120) days. After submission of the revised Audit Work Plan, EPA, after consultation with HDOH, shall provide any comments to HDOT within forty-five (45) days. HDOT will review all comments and make all required modifications to the revised Audit Work Plan. If EPA does not provide written comments, the revised Audit Work Plan shall be deemed approved by EPA and HDOH.

C. Audits

1. HDOT shall take all appropriate measures to facilitate the audit firm in performing the audits in accordance with the approved Audit Work Plan.
2. HDOT shall grant the audit firm full access to and unrestricted review of all HDOT records, documents and information that the audit firm requires to complete the audits.

D. Reporting/Audit Reports

1. HDOT shall require the audit firm to provide preliminary written notice of any potential violations identified in any audit to HDOT, EPA and HDOH within 2 business days following an audit of a program element in Paragraph B.1, above.
2. HDOT shall require the audit firm to complete a draft audit report to HDOT within 45 days of completing an audit of a program element.
3. HDOT shall review the draft audit report to correct any factual inaccuracies within 30 days after receiving the draft audit report.
4. HDOT shall require the audit firm to complete a final audit report within 120 days, or another length of time agreed to by EPA and DOH, of completing an audit of a program element.
5. HDOT shall submit original draft and final audit reports to EPA and HDOH with the Annual Compliance Report (ACR).
6. HDOT shall provide a detailed summary of any actions taken as a result of the audit reports and dates at which those actions were taken with the ACR.
7. The HDOT Audit Reports shall contain:
    a. A specific statement of the procedures followed, HDOT sites and activities visited and all materials reviewed during the audits;
    b. Retrospective analysis of activities that may be outmoded, ineffective, insufficient, or excessively burdensome, and recommendations to modify, streamline, or expand them in accordance with what has been learned;
    c. An identification of deficiencies (items which, if not corrected, will lead to potential violations) and potential violations with the applicable SWMPs, this Consent Decree, and/or applicable permit and regulations, and recommendations for improvement;
    d. Identification of best practices and opportunities for information/technology transfer to be applied across all divisions; and
    e. An analysis of the practices implemented for each Division's program elements and a determination as to whether identified best practices can be universally implement across all three Divisions. If best practices cannot be universally implemented, the report shall clearly describe the identified impediments.
8. HDOT shall correct any deficiency or potential violation identified in the Audit Reports or otherwise discovered by HDOT as part of the audit process set forth herein within the time frames identified in Paragraph E below.

E. Corrections of Potential Violations and Deficiencies

1. HDOT shall correct any potential violations within 14 days of notification as described in D.1 of this Appendix, or another period of time agreed to by EPA and DOH. In order for EPA and DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA and HDOH.
2. HDOT shall correct any deficiencies within 21 days of receiving the draft Audit Report, or another period of time agreed to by EPA and HDOH. In order for EPA and HDOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA and HDOH.
3. If HDOT corrects any violation discovered through the Audit process within the time frames described above, it shall not be subject any related stipulated penalties under Paragraph 30.

4. Notwithstanding anything in E.3 of this Appendix, the United States and HDOH reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree or to obtain penalties or injunctive relief under the Act or its implementing regulations, or under other federal or State laws, regulations, or permit conditions, if HDOH or EPA independently discovers a violation of a permit, law, or statute.
5. Similarly, United States and HDOH, reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree or to obtain penalties or injunctive relief under the Act or its implementing regulations, or under other federal or State laws, regulations, or permit conditions, if an activity or violation poses an immediate threat to human health or the environment.

F. Certifications

1. HDOT shall provide the following information and certifications to EPA and HDOH regarding completion of each audit and correction of any non-compliance or potential violation identified in the Audit Reports or otherwise discovered by HDOT as part of the audit process within an Environmental Compliance Audit section of the ACR. An authorized HDOT official shall certify that, to the best of the official's knowledge and information, the audits were conducted in accordance with the Work Plan described above, the Audit Reports are submitted to HDOT, EPA and HDOH in the ACR as described above, and all items of non-compliance identified in the Audit Reports have been corrected or steps have been taken to correct them. If all items have not been corrected, HDOT must include a schedule for correcting the issue.

Appendix B

PEAR 1 through 6 Guiding Questions

B1: PEAR #1 – Post-Construction / Permanent Best Management Practices

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Overall Approach**						
A1	Discuss the process chronologically in the order that a project would occur. Walk us through the process as if we were a developer proposing a project.						
B	**Laws/Rules/Regulations/Policies**						
B1	What legal authority does the permittee have to require post-construction BMPs on development sites and to ensure maintenance?						
B2	Does the permittee's legal authority address post-construction requirements for all projects disturbing one acre or more?						
B3	Does the legal authority require site design, source control, and stormwater treatment BMPs?						
B4	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
B5	What procedures for alternative compliance (i.e., planning-level BMPs and other non-structural controls) are allowed?						
B6	Does the legal authority authorize the permittee to require stormwater management plans to address post-construction impacts?						
B7	Do the laws/rules/regulations/policies outline the contents of an approvable plan and responsibilities for operation and maintenance of approved BMPs?						
C	**Post-Construction BMP Standards**						
C1	What technical guidance (e.g., BMP manual) does the permittee use as the standard for design and selection of post-construction BMPs? Note: It is not necessary to do a thorough review of the manual or standards used by the permittee.						
C2	Are project proponents required to follow a technical guidance manual?						
C3	Does the guidance provide siting and use criteria for the BMPs to ensure proper and adequate BMPs are being selected and implemented?						
C4	Does the guidance provide siting and use criteria for BMP selection based on the development context (i.e., BMP selection appropriate for ultra urban-areas versus those more appropriate for more rural settings with larger parcels)?						
C5	Are pollutants of concern that are typically generated by the proposed development type considered when selecting or approving BMPs?						
C6	Does the technical manual provide guidance on sizing, performance, and location of BMPs?						
C7	When was the BMP manual last updated?						
C8	Does the permittee have different requirements or standards for different types of developments (e.g., specific post-construction requirements for gas stations or automobile repair facilities)?						
C9	Does the permittee have design manuals related to land-efficient site designs (e.g. better site design, better models for large retailers)?						
C10	Does the permittee promote source control and site design standards to reduce the generation of pollutants in addition to treatment BMPs?						
C11	Does the permittee include in standards and manuals specifications for innovative site design practices, such as low-impact development and other techniques that manage runoff on-site?						

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C12	Are project applicants encouraged or required to use vegetative BMPs that promote infiltration, such as swales, biofiltration practices, etc., where possible?						
C12	Does the permittee offer financial incentives to support post-construction stormwater goals (e.g., programs to support redevelopment, such as enterprise zones, or stormwater utility credits)?						
D	**Plan Review and Approval Procedures**						
D1	Which Division/District is responsible for post-construction stormwater plan review?						
D2	How many plan reviewers are there?						
D3	How many plans submitted for review (private and public projects) each year?						
D4	What is the project size threshold for the permittee to require post-construction BMPs?						
D5	Does the permittee apply standard conditions that incorporate post-construction installation and maintenance requirements into its plan review process?						
D6	Do plan reviewers use specific criteria or a checklist when reviewing plans?						
D7	Does the permittee consider pollutants of concern or whether the project discharges to a 303(d) listed impaired water when determining which BMPs are required?						
D8	Does the permittee consider such regional concerns as smart growth initiatives, watershed master plans, and other larger-scale planning efforts to ensure that each new development and redevelopment plan is consistent with the goals of these initiatives?						
D9	For up to three sets of post-construction plans provided by permitee:						
D9a	Are adequate BMPs included on plans, details, and drawings?						
D9b	What types of standard conditions or notes are included?						
D9c	Are maintenance requirements specified?						
D9d	Do the location of BMPs hinder maintenance?						
D10	What types of projects must be reviewed by the permittee for post-construction stormwater controls?						
D11	Does the permittee have a process to identify priority projects identified in the MS4 NPDES permit?						
D12	What types of standards or technical guidance do the permittee's reviewers use to review projects?						
D13	Does the permittee condition improvements to existing developments with requirements for post-construction stormwater controls? How are these redevelopment requirements triggered?						
E	**Post-Construction BMP Inventory**						
E1	How does the permittee track the installation and maintenance of post-construction BMPs?						
E2	Is your post-construction BMP inventory managed in a database and/or linked to GIS?						
E3	What information is collected?						
F	**BMP Inspection & Maintenance**						
F1	Does the permittee require maintenance agreements for all projects with post-construction BMPs?						
F2	Are as-built inspections conducted at the conclusion of a project to ensure the BMP has been built properly? What Division/District is responsible for this?						
F3	Do staff conduct these inspections or are they self-certified?						
F4	Does the permittee inspect private facilities or require inspections by owner/operators?						

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F5	If the permittee performs the inspections, how often are they performed?						
F6	If owner/operators are required to inspect and maintain their BMPs, how is this authorized? Through a MOU? Through conditions of approval? Through another type of agreement?						
F7	How does the permittee ensure inspections are occurring? Reminder notices? Inspection reports?						
F8	Who is responsible for structural stormwater BMP maintenance (public and private)? Permitee? Owner?						
G	**Enforcement**						
G1	How does the permittee require proper maintenance and repair after the inspection?						
G2	What types of enforcement actions are provided by laws/rules/regulations/policies (e.g., notices of violation, abatement)?						
G3	Is the permittee's enforcement authority limited (e.g., limits on the dollar amount of fines, inability to issue civil penalties)?						
G4	How many enforcement actions have been taken in the past year due to lack of BMP maintenance?						
H	**Public Construction Projects**						
H1	For staff:						
H1a	Are plan reviewers trained on post-construction BMPs and requirements?						
H1b	What type of training do staff performing "as built" and post-construction inspections receive?						
H1c	How often are the trainings conducted?						
H1d	How many staff have been trained?						
H1e	What type of training or education does the permittee provide to developers and engineers on post-construction requirements?						
H2	For developers and plan designers:						
H2a	What types of educational materials have been developed and distributed to developers and designers regarding post-construction BMPs and application requirements?						
H2b	How are the materials distributed? At the permit desk? During inspections?						
H2c	What type of training does the permittee provide or advertise to local developers and designers?						
H2d	How often is this training conducted?						
H2e	How many developers and designers have been trained?						
H2f	Are they required to attend?						
I	**Consent Decree Questions**						
I1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
I1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
I2a	Have deficiencies or potential violations been identified?						
I2b	What are recommendations for correcting these deficiencies or potential violations?						
I4	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						

Question Number	Question	Airports		Harbors		Highways	
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I5	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
I6	If best practices cannot be universally implemented, what are the identified impediments?						

B2: PEAR #2 – Construction Site Runoff Control

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Laws/Rules/Regulations/Policies**						
A1	What legal authority does the permittee have to require erosion and sediment control BMPs on construction sites and to ensure compliance?						
A2	Does the permittee's legal authority address stormwater quality for all projects disturbing at least 1 acre?						
A3	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
A4	Does the legal authority authorize the permittee to require erosion and sediment control plans?						
B	**Construction Site Inventory**						
B1	How does the permittee track construction projects?						
B2	Is the following information collected?						
B2a	The number and status (active/inactive/completed) of construction sites						
B2b	The number, frequency, results, and follow-up actions resulting from inspections						
B2c	The actions taken to resolve the issues and dates when compliance was achieved.						
B2d	The number and type of enforcement actions taken at sites in violation						
B2e	Complaints submitted by the public						
B3	Does the inventory include construction sites disturbing less than 1 acre?						
B4	What is the threshold for tracking projects?						
B5	Does the inventory track which sites have submitted an NOI for coverage under a state/EPA construction general permit?						
B6	How is the inventory updated? How often?						
B7	Does the permittee prioritize projects for more frequent or targeted inspections? If yes, based on what criteria?						
C	**Construction Requirements and BMPs**						
C1	What technical guidance (e.g., BMP manual or fact sheets) does the permittee use as the standard for design and selection of nonstructural and structural construction BMPs?						
C2	Are project applicants required to follow these technical manuals?						
C3	Does the guidance set minimum operation and maintenance requirements for BMPs?						
C4	Does the guidance include installation requirements for the BMPs?						
C5	Does the guidance provide proper siting and use criteria for BMPs to ensure that adequate BMPs are being selected and implemented?						
C6	Does the permittee provide guidance as to recommended BMPs to be used?						
C7	Does the permittee have different requirements or standards for different times of the year (i.e., during the rainy season vs. the dry season)?						
D	**Plan Review Procedures**						
D1	Does the permittee hold pre-application meetings on any construction project? Are stormwater and erosion and sediment control requirements addressed at these meetings?						
D2	What is the permittee's threshold for plan review? (For example, does the permittee review plans for all projects disturbing greater than 1 acre, or do they use another threshold?)						

Question Number	Question	Airports		Harbors		Highways	
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D3	Does the permittee apply standard conditions that incorporate erosion and sediment control requirements into its plan review process?						
D4	Do the plan reviewers verify whether the project applicant has submitted an NOI to the state or EPA? Is evidence of NOI submission required before a plan can be approved or a local permit issued?						
D5	Do plan reviewers use specific criteria or a checklist when reviewing plans?						
D6	Does the permittee consider during the review process whether the construction project discharges to a TMDL/impaired water?						
D7	For up to two construction plans provided:						
D7a	Are adequate BMPs included on plans?						
D7b	What types of standard conditions or notes are included?						
D7c	Are maintenance requirements specified?						
D7d	Are BMPs addressing other construction activities, such as materials storage and waste disposal, incorporated into the construction plans?						
D7e	Do the plans include notes addressing the prohibition of non-stormwater discharges?						
D7f	Were comments provided by the permittee to the project proponent reasonable and appropriate?						
E	**Construction Site Inspections**						
E1	Does the permittee adequately inspect the following phases of construction?						
E1a	Clearing and grubbing and site preparation						
E1b	Mass grading and public infrastructure/utility construction						
E1c	Building construction and final grading						
E1d	Final stabilization						
E2	What group is charged with erosion and sediment control inspections?						
E3	Do the inspectors use a checklist or inspection form during each inspection?						
E4	How many inspectors does the permittee use to verify erosion and sediment control compliance at construction sites?						
E5	Does this number appear adequate to assess active construction occurring in the permitted area? Compare this to the total number of construction sites that need to be inspected at any one time (number of inspections per construction site per year). Consider project durations and phasing, local conditions (e.g., dry vs. wet seasons), and additional duties assigned to inspectors.						
E6	Does the permittee have an established prioritization process for establishing inspection frequency? If so, on what factors is the prioritization based (i.e., size, proximity to water body, sensitive areas)?						
E7	How often are sites inspected?						
E8	Does the permittee target inspections during and immediately after wet weather events? If so:						
E8a	What size rain event triggers an inspection?						
E8b	How soon after a rain event?						
E9	Is there an established rainy season for the area? Are sites inspected prior to the start of the rainy season to determine preparedness?						

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F	**Program Support and Resources**						
F1	Does the program have a dedicated source of funding to support plan review staff and inspectors?						
G	**Enforcement**						
G1	What types of enforcement actions are provided for in applicable laws/rules/regulations/policies (e.g., notices of violation, “stop work” orders, fines)?						
G2	Is use of these actions outlined in an established, escalating enforcement policy?						
G3	Review with the permittee statistics on enforcement of construction site erosion and sediment controls.						
G3a	How many enforcement actions are taken per year?						
G3b	Are follow-up inspections conducted to verify compliance?						
G4	Are there limitations on the permittee’s enforcement authority (e.g., limits on the dollar amount of fines, inability to issue civil penalties)?						
G5	Do staff feel that their enforcement authority is adequate to achieve compliance on construction projects?						
H	**Training and Education**						
H1	For staff:						
H1a	What type of training do construction inspectors receive? Are plan reviewers trained on erosion and sediment control BMPs and requirements?						
H1b	How often is training conducted?						
H1c	How many staff have been trained?						
H1d	What type of follow-up is conducted by the permittee to verify that the training is effective?						
H2	For construction operators:						
H2a	What types of educational materials have been developed and distributed to construction operators?						
H2b	How are the educational materials distributed?						
H2c	What type of training does the permittee provide or advertise to local construction operators?						
H2d	How often is this training conducted? How many construction site operators have been trained?						
H2e	Are contractors and developers required to attend?						
H2f	Are training sessions held in cooperation with other local permittees or regional authorities?						
I	**Public Construction Projects**						
I1	Do RFPs or contracts include language specifying stormwater requirements?						
I2	Are inspection and maintenance requirements specified in the contract?						
I3	What oversight does the permittee implement to ensure the contractor is implementing all requirements appropriately and adequately?						
I4	What penalties are in place to require compliance from the permittee’s contractors?						
J	**Consent Decree Questions**						
J1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						

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J1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
J2a	Have deficiencies or potential violations been identified?						
J2b	What are recommendations for correcting these deficiencies or potential violations?						
J3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
J4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
J5	If best practices cannot be universally implemented, what are the identified impediments?						

B3: PEAR #3 – Public Outreach / Public Involvement

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Goals and Objectives**						
A1	Does the permittee have a strategy document for education and participation?						
A2	Does the document include specific goals?						
A3	On what are the goals based?						
A4	Are the goals measurable? How?						
B	**Message Development**						
B1	Have specific messages been developed for stormwater outreach?						
B2	On what are the messages based? Pollutants of concern? General awareness? Problem target audience? All of the above?						
B3	Are different messages used for different target audiences (i.e., children, homeowners, industry, etc.) or is one central message used for all?						
B4	Do the messages encourage participation in stormwater-related activities?						
B5	Do the messages educate about behavior changes that the audience can make to contribute to a solution?						
B6	Have messages been developed specific to reducing illicit discharges with information about how to report them to the appropriate authorities?						
B7	Have messages been developed to educate pesticide, fertilizer, and herbicide applicators (including homeowners) about ways to reduce stormwater pollution?						
C	**Target Audiences**						
C1	Has the permittee identified target audiences for outreach efforts? How are these target audiences selected? What are the target audiences?						
C2	What land use groups (i.e., industry, commercial businesses) has the permittee targeted?						
C3	Have certain ethnic groups or nationalities been identified as audiences to be targeted based on an evaluation of local demographics?						
C4	Have the target groups been reevaluated based on evaluation of the strategy and progress that has been made?						
C5	For Phase I permittees: have they targeted pesticide, herbicide, and fertilizer applicators (including homeowners) and construction site operators for outreach?						
C6	For Phase II permittees: have they targeted industries or commercial businesses of concern for outreach?						
D	**Message Packaging**						
D1	Does the permittee have a variety of written educational materials?						
D2	Does the permittee have a variety of other packages (i.e., Web site, presentations, displays) for educational materials?						
D3	Did the permittee produce the education and outreach materials in the different languages that are spoken in the community?						
D4	Do the permittee's materials explain stormwater issues in easy-to-understand terms?						

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E	**Distribution Mechanisms**						
E1	Does the permittee track distribution of materials to measure effectiveness?						
E2	Is the permittee focused solely on distribution or is an effort made to evaluate the impact of the messages?						
E3	Does the permittee use a variety of distribution mechanisms to target various audiences?						
F	**Evaluation Methods**						
F1	How does the permittee evaluate the effectiveness of the outreach strategy?						
F2	Has the permittee conducted a public awareness survey?						
F3	Which outreach materials have been the most effective in soliciting public involvement and participation? Changing audience behaviors? Increasing general stormwater awareness?						
F4	Have any changes been made to the outreach strategy or materials based on an evaluation of effectiveness?						
G	**Public Participation Activities**						
G1	What opportunities does the permittee give to the public to review and comment on any changes to the SWMP, such as public comment via a Web site, a public meeting, or a stormwater advisory group?						
G2	What volunteer opportunities (i.e., stream cleanups, storm drain stenciling) does the permittee coordinate or publicize to encourage the public to participate in stormwater-related activities?						
G3	Does the permittee sponsor or promote any of the following activities?						
G3a	Beach/stream/lake cleanups						
G3b	Volunteer stream monitoring						
G3c	Stream clean-ups or equivalent activities						
G3d	Stormwater citizen panel						
H	**Consent Decree Questions**						
H1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
H1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
H2a	Have deficiencies or potential violations been identified?						
H2b	What are recommendations for correcting these deficiencies or potential violations?						
H3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
H4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
H5	If best practices cannot be universally implemented, what are the identified impediments?						

B4: PEAR #4 – Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program

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A	**Legal Authority (IDDE)**						
A1	Does the permittee have laws/rules/regulations/policies to prohibit illicit discharges and dumping to the MS4?						
A2	What exclusions are included in laws/rules/regulations/policies?						
A3	What enforcement mechanisms are authorized in the event of an illicit discharge being detected?						
A4	Has an enforcement escalation plan been developed?						
B	**Mapping (IDDE)**						
B1	Does the permittee have a map showing storm drain pipes, outfalls, and storm drain inlets?						
B2	Is the map readily available to the personnel who would respond to an illicit discharge incident?						
B3	Does the permittee have a map of the storm drain system showing the locations of outfalls and municipally maintained structural stormwater controls?						
C	**Field Screening (IDDE)**						
C1	How are field screening areas identified?						
C2	Are areas of the MS4 prioritized based on incidents of illicit discharges, land use, dumping reports, etc.?						
C3	How often are field screening areas evaluated?						
C4	Are outfalls inspected during dry weather to identify any potential dry-weather discharges? What does the inspection include?						
C5	If dry-weather flows are present, are they being sampled to determine potential sources of pollutants? For what parameters?						
C6	Does the permittee have a database (or other method) to track locations of illicit discharges, spills, and illegal dumping?						
C7	Does the database track dry-weather monitoring or screening data?						
D	**Investigation of Potential Illicit Discharges (IDDE)**						
D1	Does the permittee have a procedure for tracing the source of an active illicit discharge?						
D2	Who performs the investigations?						
D3	Are these procedures written in a document or plan?						
D4	What equipment does the permittee use to find illicit discharges?						
D5	Does the permittee have equipment to videotape storm drains, or can it quickly contract out this work?						
D6	How are investigations tracked?						
D7	Has an enforcement response plan been adopted for use when an illicit discharge source has been located?						
E	**Spill Response and Prevention (IDDE)**						
E1	Does the permittee have a clear set of procedures in place that details who is responsible for responding to spills and emergency situations?						
E2	Do field staff have spill containment supplies in their vehicles, and are they trained to contain minor spills?						

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E3	Is a contractor or other entity available for larger spills?						
E4	Does the permittee have the ability to collect cleanup and abatement costs from the responsible party?						
E5	How are spills and spill response tracked to ensure adequate reporting?						
F	**Public Awareness and Reporting Program (IDDE)**						
F1	Does the permittee prioritize subwatersheds or neighborhoods and assign resources for educational efforts based on frequency and types of illicit discharge incidents?						
F2	Is there a general phone number or “hotline” in the phone book or Web site that people can call to report a spill or dumping?						
F3	What types of public outreach materials are available to publicize public reporting?						
F4	Does the permittee track the number of public calls or complaints reporting illicit discharges?						
G	**Preventing Sanitary Sewer Discharges (IDDE)**						
G1	Has the permittee conducted any studies or evaluations to determine whether sanitary sewers are contributing pollutants to the MS4?						
G2	What is the extent of infiltration and inflow into the sanitary sewer system? How is this impacting discharge from the MS4?						
G3	If the permittee also operates a sanitary sewer system, do they have procedures to prevent sewage spills and SSOs to the MS4?						
H	**Education and Training (IDDE)**						
H1	What type of training do field staff (e.g., storm sewer maintenance crews, street sweepers) receive on spill response and IDDE?						
H2	Are staff generally educated about what illicit discharges are and how to report them?						
I	**Legal Authority (I/C)**						
I1	Does the Phase I permittee have the authority to require industrial and commercial facilities to implement stormwater BMPs?						
I2	Does the Phase I permittee have the authority to conduct inspections and enforce requirements?						
I3	What laws/rules/regulations/policies provide this legal authority?						
I4	What types of facilities are covered under this legal authority?						
I5	Who (e.g., specific staff, Division/District, etc.) has the authority to enforce the laws/rules/regulations/policies and/or inspect the facilities?						
I6	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
J	**Facility Inventory (I/C)**						
J1	Has the permittee completed an inventory of industrial/commercial facilities discharging to the stormwater system?						
J2	What types of facilities are included on the inventory?						
J3	What sources were used to create the inventory?						
J3A	Facilities that filed NOIs for EPA MSGP or state industrial general permit coverage?						
J3B	Significant industrial users within the pretreatment program?						

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J3C	Business licenses?						
J3D	Phone book?						
J3E	"Windshield" survey?						
J4	Does the inventory include all the industrial/commercial facilities subject to the industrial general permit?						
J5	Does the permittee periodically check to see if new facilities that must be covered by an industrial stormwater general permit have filed an NOI?						
J6	What is the process for notifying the permitting authority of non-filers?						
J7	If applicable, does the inventory include all the facilities specified as required in the MS4 NPDES permit?						
J8	How is the inventory updated? How often?						
J9	What information is maintained about the facilities?						
J10	How is the inventory maintained and stored?						
J11	Does the permittee prioritize the facilities?						
J12	Is the prioritization based on facility type, past inspection or enforcement results, proximity to receiving waters, potential pollutant sources on-site, and so forth?						
J13	Is the prioritization used to determine frequency of inspections?						
J14	Has the permittee mapped the locations of prioritized facilities to cross-reference reports of dumping, illicit discharges, or other water quality issues?						
K	**Standards, BMPs and Outreach (I/C)**						
K1	Has the permittee adopted standards or BMPs that industrial/commercial facilities are required to implement (e.g., all car dealerships must install a wash rack plumbed to the sanitary sewer)?						
K2	Are the requirements for new developments only or are they triggered by improvements of existing facilities? Are there schedules for implementing retrofits?						
K3	Are these standards applicable to existing facilities, new facilities, or both?						
K4	Does the permittee refer facility operators to specific stormwater BMP or standards guidance documents?						
K5	What type of educational program has been developed for industrial and commercial facility operators?						
K6	What type of brochures, handouts, or guidance on BMPs is provided to these facilities by the permittee?						
K7	When is this information provided? During inspections? During training events? During professional organization presentations?						
L	**Staff Training (I/C)**						
L1	What type of training do the industrial and commercial inspectors receive?						
L2	How often?						
L3	If additional inspectors are used (e.g., food safety inspectors for restaurant inspections, pretreatment inspectors), are they trained specifically on stormwater BMPs and requirements? By whom?						

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M	**Inspections (I/C)**						
M1	Who performs inspections and for what types of facilities (e.g., health inspectors for restaurants, pretreatment inspectors for industrial facilities with a pretreatment permit)						
M2	How often are industrial and commercial facilities inspected? How is the frequency determined?						
M3	Does the permittee's industrial/commercial inspector(s) use a standard checklist during inspections?						
M4	Is a report written after the inspection? How is the inspection documented in the file?						
M5	Does the permittee verify NPDES permit coverage for facilities?						
M6	For industrial facilities, does the inspector review the SWPPP and monitoring data during the inspection?						
M7	Does the permittee refer non-filers to the permitting authority?						
M8	Do inspectors provide educational materials during inspections? What types?						
M9	If multiple Divisions/Districts perform inspections, how is information transferred or cataloged?						
N	**Program Support and Resources (I/C)**						
N1	Does the program have a dedicated source of funding to support inspectors?						
O	**Enforcement (I/C)**						
O1	In instances of noncompliance, do the inspection staff use a formalized, approved enforcement escalation procedure?						
O2	How was the enforcement escalation procedure developed? Is it used? Is it effective?						
O3	Who is authorized to apply various enforcement procedures (e.g., NOVs, fines)?						
O4	What types of penalties are readily available to the inspection staff?						
O5	What is the most common method of gaining compliance (e.g., NOVs, fines, abatement)?						
O6	Can the permittee describe a recent non-compliance issue at an industrial/commercial facility? If so, how was compliance achieved?						
O7	At what point are non-compliance cases referred to the NPDES permitting authority? How many have been referred in the last 12 months?						
P	**Consent Decree Questions**						
P1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
P1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
P2a	Have deficiencies or potential violations been identified?						
P2b	What are recommendations for correcting these deficiencies or potential violations?						
P3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
P4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
P5	If best practices cannot be universally implemented, what are the identified impediments?						

B5: PEAR #5 – Pollution Prevention / Good Housekeeping Program

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A	**Infrastructure Mapping and Characterization**						
A1	Does the permittee have a map showing all inlets, outfalls, storm drain conduits, stormwater management facilities, and receiving water bodies?						
A2	Does this map include catch basins and structural stormwater controls?						
A3	Is the map readily available and used by maintenance field staff when performing maintenance activities?						
A4	Is the map in hard copy format only or is it also in a geographic information system (GIS)?						
A5	Are infrastructure assets or components named or numbered to better track necessary maintenance and repairs?						
A6	Is information regarding stormwater infrastructure maintained in a database or mapping system? What types of data are maintained?						
A6a	Type of structure or asset						
A6b	Location (address, latitude/longitude)						
A6c	Photo						
A6d	Date built						
A6e	Date last inspected						
A6f	Date last cleaned/maintained						
B	**Catch Basin Cleaning**						
B1	Does the permittee have a schedule for routine maintenance or cleaning of catch basins?						
B1a	How many are cleaned and how often?						
B1b	Has the permittee targeted certain areas for more frequent maintenance?						
B1c	Does the permittee set goals for how many basins are inspected and cleaned each year?						
B1d	How does the permittee track and record cleaning and maintenance needs?						
B1e	What information is documented? Does the permittee track which catch basins are cleaned, how much material is removed, and so forth?						
B1f	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency? Are they used to identify areas for targeted outreach?						
B2	What are the permittee's procedures for disposing of waste removed from catch basins or storm drains?						
B2a	Does the permittee flush material that could potentially discharge to surface water?						
B2b	If the material is removed using a wet vacuum, how is the material dewatered? How is the decanted water disposed?						
B3	Does the permittee have a schedule for routine maintenance or inspection of storm drain pipes?						
B4	What are the permittee's maintenance procedures for cleaning clogged storm drain pipes?						
C	**Stormwater Management Structures**						
C1	Are catch basins and other inlet structures marked so that the public knows they drain to surface waters?						

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C2	Has the permittee inventoried the type and location of public stormwater management structures in its jurisdiction? How are the data collected and stored?						
C2a	Pump stations						
C2b	Drainage structures (debris basins, detention basins, regional ponds, etc.)						
C2c	Structural treatment controls						
C2d	Open channels						
C3	How is vegetation maintained in grassed swales, rain gardens, pond perimeters, and other vegetated stormwater controls?						
C4	Has the permittee mapped private stormwater management structures?						
C5	How often are these facilities inspected?						
C6	Are the stormwater management structures regularly maintained by the permittee?						
C6a	Are records kept of material and debris removed during maintenance?						
C6b	How is maintenance conducted? Are chemicals used to maintain vegetation and pests?						
C7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency? Are they used to identify areas for targeted outreach based on type and volume of materials removed?						
D	**Street Sweeping**						
D1	Does the permittee regularly sweep streets? Public parking lots?						
D2	What is the schedule for street sweeping?						
D3	Are areas scheduled for sweeping based on aesthetics only or is consideration given for reducing impacts on the stormwater management infrastructure and surface water?						
D4	What types of sweepers are used? Wet or dry?						
D5	How is street-sweeping debris disposed? If the debris is dewatered, how is this done? How is the decanted water disposed?						
D6	Are records kept of the amount of debris collected?						
D7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency?						
E	**Public Streets, Roads and Highway Maintenance**						
E1	What types of public streets, roads, and highways operation and maintenance practices and procedures are performed by the permittee?						
E2	Are BMPs used by field crews to minimize stormwater impacts during road maintenance or repair activities?						
E3	What types of BMPs are used? Discuss BMPs used for such activities as:						
E3a	Ditch cleaning						
E3b	Sidewalk repair						
E3c	Asphalt patching						
E3d	Curb and gutter repair						
E3e	Street striping						

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E3f	Sign painting						
E3g	Maintaining dirt and gravel roads (preventing erosion, dust control)						
F	**Facility Inventory**						
F1	Does the permittee have an inventory of public facilities? At a minimum, this list should include the following, as applicable:						
F1a	Public works yards						
F1b	Public transit facilities						
F1c	Wastewater and domestic water treatment plants						
F1d	Sanitary sewer system overflow locations						
F1e	Public parks/open areas						
F1f	Public parking lots						
F1g	Public buildings						
F1h	Landfills and hazardous waste disposal sites, transfer locations, or storage facilities						
F2	Have the facilities been inspected and assessed for water quality impacts?						
F3	Are any facilities required to apply for coverage under a general industrial permit? Do these facilities have SWPPPs?						
G	**Chemical and Hazardous Material Use and Disposal**						
G1	What types of chemicals or hazardous materials are used by the permittee?						
G2	Where are these materials stored?						
G3	Has the permittee implemented an alternative materials program to reduce the use of hazardous materials?						
G4	Has the permittee implemented an inventory reduction program to reduce the quantity of chemicals and hazardous materials stored and used?						
G5	Does the permittee have a household hazardous waste collection center for the public?						
G5a	Are records of the quantity of materials collected maintained by type of material?						
G5b	How does the permittee notify the public of these sites?						
G6	Does the permittee have special household hazardous waste collection days?						
G7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize maintenance frequency? Are they used to identify areas of targeted outreach?						
H	**Pesticide, Herbicide and Fertilizer Application and Management**						
H1	What kind of program has been established to address pollutants associated with the application of pesticides, herbicides, and fertilizer at public facilities?						
H2	Are the permittee's fertilizer/pesticide applicators certified? Are permits or other certifications required?						
H3	Where are the chemicals stored? Are appropriate procedures and secondary containment followed?						
H4	Is there a pesticide/fertilizer application plan?						
H5	Does the permittee practice integrated pest management (IPM) or use alternatives to pesticides?						

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H6	How does the permittee implement alternative landscaping to minimize the use of fertilizers and pesticides?						
H7	What types of educational activities does the permittee conduct for applicators?						
H8	What types of BMPs are used during application of pesticides in public rights-of-way?						
H9	What types of BMPs are used during application of pesticides at municipal facilities such as parks?						
I	**Municipal Staff**						
I1	Have standard operating procedures or their equivalent been developed to ensure that municipal field staff integrate stormwater quality BMPs into their daily activities?						
I2	Have BMPs or standards been officially adopted by the permittee for use by municipal field staff?						
I3	What reference materials or guidance documents are provided to field staff regarding BMP specifications and details?						
I4	How does the permittee ensure that staff are fulfilling their responsibilities as outlined in standard operating procedures? Do managers provide oversight on a regular basis?						
J	**Contracted Services Staff**						
J1	Does the permittee require contractors to incorporate stormwater quality BMPs into their activities?						
J2	How are BMPs required? Are the requirements outlined in requests for proposals? Are they included in contracts?						
J3	Have BMPs or standards been officially adopted by the permittee for use by contractual staff?						
J4	What reference materials or guidance documents are provided to contractual staff regarding BMP specifications and details?						
J5	How does the permittee ensure that contractors are fulfilling their responsibilities as outlined in their contracts? Are inspections performed? Are periodic reports submitted?						
K	**Training and Education**						
K1	What type of general stormwater training is provided to staff that are not involved in field activities? How often?						
K2	How are new employees trained?						
K3	What types of activity-specific training is provided to field staff? Is information on specific BMPs provided?						
K4	Is any training provided to contract staff?						
L	**Consent Decree Questions**						
L1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
L1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
L2a	Have deficiencies or potential violations been identified?						
L2b	What are recommendations for correcting these deficiencies or potential violations?						
L3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						

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L4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
L5	If best practices cannot be universally implemented, what are the identified impediments?						

B6: PEAR #6 – Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

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A	**SWMP Planning Documents**						
A1	Has a SWMP Plan been developed? If so, when? Last revised?						
A2	Is there a schedule for revision of the SWMP plan?						
A3	Is there an additional MS4-wide document, plan, or program? Who developed it?						
A4	How were internal and external stakeholders included in the development or revision of the SWMP plan?						
B	**Staff Inventory and Organization**						
B1	Does the permittee have a person designated to lead and coordinate the stormwater program and activities?						
B2	Does the SWMP planning document include an organization chart listing responsible parties for each SWMP component?						
C	**Performance Standards or Goals**						
C1	Has the permittee established measurable goals or performance standards for program components?						
C2	If performance standards have been established, are they measurable or are they essentially BMP recommendations with level of service (i.e., number of miles swept) requirements?						
C3	Does the permittee attempt to quantify or assess a program or a BMP's water quality impact or effectiveness as opposed to merely tracking level of service?						
D	**Prioritization of Resources**						
D1	Has the permittee identified specific pollutants of concern for its local water bodies?						
D2	Are these pollutants of concern consistent with priorities identified in the 303(d)-listed impairments for local water bodies?						
D3	Are these pollutants of concern consistent with any water quality monitoring data or studies conducted by the permittee or another agency?						
D4	Has the permittee developed strategies to specifically address those pollutants?						
D5	How does the permittee decide on program priorities? Are these reassessed periodically?						
D6	Does the SWMP include a schedule of activities?						
D7	Does the MS4 discharge to a water body on the state's list of impaired waters?						
D7a	What pollutants are identified on the list?						
D7b	Has stormwater been identified as a source?						
D7c	Does the SWMP specifically address this pollutant?						
D7d	Does the SWMP identify BMPs specifically for sources or discharges to the listed water body						
D8	Has a TMDL been developed for a water body to which the MS4 discharges and for which stormwater has been identified as a pollutant source?						
D8a	What pollutants are addressed in the TMDL?						
D8b	Does the TMDL specifically address (or include wasteload allocations for) stormwater?						
D8c	Has the corrective action plan or other planning to address TMDLs been reviewed for integration with the SWMP?						

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D8d	Does the permittee's stormwater program address the pollutants of concern identified in the TMDL?						
D9	Is the permittee participating in any watershed planning efforts?						
D10	Have any goals been developed based on watershed issues, strategies, or challenges?						
D11	Has the permittee established a set of indicators or parameters to assess progress toward meeting the goal(s) of the watershed plan?						
D12	Is the permittee's stormwater program implemented on a watershed basis?						
E	**Assessment and Evaluation of Programs**						
E1	Does the permittee regularly measure progress against the established performance standards and goals?						
E2	Are the goals quantifiable?						
E3	Is the permittee analyzing data in the annual report to identify program activities that may need to change to address problem areas?						
E4	Has the SWMP been altered based on this evaluation?						
F	**Assessment and Evaluation of BMPs**						
F1	Is the permittee able to track both structural BMPs and non-structural BMPs and activities?						
F2	Has the permittee set measurable goals or performance standards to evaluate individual BMPs and activities or suites of BMPs that address a particular pollutant source?						
F3	Is there a process to evaluate or revise individual BMPs and suites of BMPs when receiving water outcomes or endpoints are not being met?						
F4	Do assessments evaluate impacts of BMPs on ground water?						
F5	Is the permittee analyzing data in the annual report to identify individual BMPs or suites of BMPs that may need to change to address problem areas?						
G	**Assessment and Evaluation of Water Quality**						
G1	Has the permittee documented environmental, water quality, stream corridor, habitat, or other types of improvements?						
G2	Has the permittee estimated reductions in pollutant loadings from the MS4 or other quantifiable water quality benefits expected as the result of the municipal stormwater program?						
H	**Dry & Wet Weather Outfall Screening and Monitoring (If Applicable)**						
H1	Does the permittee conduct dry or wet weather screening at outfalls to characterize stormwater flows from the MS4?						
H2	Does the permittee have written screening procedures?						
H3	What is the permittee's schedule for screening the sites?						
H4	Are parts of the permit area prioritized for screening based on incidents of illicit discharges, land use, dumping reports, etc.?						
H5	What parameters are being tested?						
H6	How does the permittee prioritize sites for follow-up (e.g., magnitude and nature of suspected discharge)?						

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
H7	Who conducts the sampling? What kind of training have sampling personnel received?						
H8	What type of records are kept?						
H8a	Analytical results						
H8b	Date and duration (in hours) of the storm events sampled (rainfall data)						
H8c	Rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff (rainfall data)						
H8d	Duration (in hours) of the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (rainfall data)						
H8e	Estimate of the total flow of the discharge sampled (stage and velocity)						
H9	What analytical methods are used (i.e., 40 CFR Part 136)?						
H10	What are the results of the initial sampling and analysis?						
H11	Has the permittee made any changes to the monitoring program based on past results and experience?						
H12	How have monitoring results been used to assess program components?						
H13	Are monitoring data used to estimate pollutant loads for a TMDL?						
I	**Biological Monitoring (If Applicable)**						
I1	Does the permittee perform biological sampling?						
I2	Has a plan been developed to conduct biological sampling? If so, does the plan include the following:						
I2a	Identification of sampling stations and rationale for selection						
I2b	Location of known major MS4 outfalls discharging to water bodies in which sampling stations were chosen						
I2c	Land use activities near sampling stations						
I2d	Frequency of monitoring						
I3	Who conducts biological sampling and what training have they received?						
I4	Has the permittee made any changes to the monitoring program based on past results and experience?						
I5	How have monitoring results been used to assess program components?						
J	**Ambient Monitoring (If Applicable)**						
J1	Does the permittee conduct ambient monitoring to characterize water quality conditions in receiving waters?						
J2	How were the sampling sites selected?						
J3	Is sampling conducted both during dry weather and wet weather?						
J4	What is the frequency of sampling?						
J5	What parameters are analyzed? What sampling and analytical methods have been used?						
J6	Does the permittee have a written protocol or procedures for this sampling program?						
J7	Who conducts the sampling and what training have they received?						
J8	Has the permittee made any changes to the monitoring program based on past results and experience?						

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
J9	How have monitoring results been used to assess program components?						
J10	Are monitoring data used to estimate pollutant loads for a TMDL?						
K	**Data Collection and Reporting**						
K1	What reporting requirements are included in the MS4 NPDES permit?						
K2	For co-permittees or Phase II permittees that rely on other entities to implement required elements of the program, how are data provided or reported?						
K3	How are the required data collected, tracked, and reported?						
K3a	Is there a database?						
K3b	Are there reporting forms?						
K4	Are there internal reporting deadlines within the municipal program structure?						
K5	Are the appropriate data being collected by the permittee to be able to measure effectiveness and determine if performance standards are being met?						
K6	How are data disseminated to those who use them, if at all?						
L	**Consent Decree Questions**						
L1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
L1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
L2a	Have deficiencies or potential violations been identified?						
L2b	What are recommendations for correcting these deficiencies or potential violations?						
L3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
L4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
L5	If best practices cannot be universally implemented, what are the identified impediments?						

Appendix C

PEAR 1 through 6 Schedule

C1: PEAR #1 – Schedule for Post-Construction / Permanent Best Management Practices

Appendix C1: Schedule for PEAR #1 – Post-Construction / Permanent Best Management Practices

1. Notice of Audit

- Within 7 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 22 March 2017

2. Records Request

- Within 14 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 29 March 2017

3. Fulfillment of Records Request

- Within 43 Days of AWPC
- Within 29 Days of Last Milestone
- By Thursday 27 April 2017

4. Records Review Complete

- Within 57 Days of AWPC
- Within 14 Days of Last Milestone
- By Thursday 11 May 2017

5. Pre-Onsite Evaluation Conference Call

- Within 64 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 18 May 2017

6. Completion of Onsite Evaluation

- Within 82 Days of AWPC
- Within 18 Days of Last Milestone
- By Monday 5 June 2017

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C1: Schedule for PEAR #1 – Post-Construction / Permanent Best Management Practices

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
76 Days After AWPC Tuesday 30 May 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* OGG CONRAC, location tentative *BMP 2:* Wash rack, location tentative [An additional BMP will be inspected only if one is installed by this time] **11am – 12pm** Debrief Meeting [See Note (c)]	77 Days After AWPC Wednesday 31 May 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* Pervious pavement and bioswale systems, NDWP New Employee Parking Lots at Elliott St. *BMP 2:* Contech CDS 2025 System and FloGuard drop inlet filtration insert, NDWP Diamondhead Site Improvements, GSE Lot fronting Hardstand 3 *BMP 3:* Bioswale system, Kalewa St Storage Lots 1-6, Corner of Lagoon and Kalewa St. **11am – 12pm** Debrief Meeting [See Note (c)]	79 Days After AWPC Friday 2 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1*: Alaska Marine Lines, Pier 29 *BMP 2:* Matson Auto Facility, Pier 32 *BMP 3:* HC&D Facility, Pier 60 Replaced with UH Marine Center Pier 35, per 4-18-17 Call with Spencer Yim **11am – 12pm** Debrief Meeting [See Note (c)]	82 Days After AWPC Monday 5 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* GLP Asphalt Facility [Additional BMPs will be inspected only if they are installed by this time] Spencer Yim confirmed via phone on 4-18-17 that no additional BMPs have been installed. **11am – 12pm** Debrief Meeting [See Note (c)]	76 Days After AWPC Tuesday 30 May 2017 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] [BMPs will be inspected only if they are installed by this time] See Records Request. No BMPs to inspect. Meeting only. **4pm – 5pm** Debrief Meeting [See Note (c)]	78 Days After AWPC Thursday 1 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* University Ave. Bioswales, In median of H-1 ramps to University Ave. on makai side of freeway *BMP 2:* Fort Weaver Rd. CDS Units, Fort Weaver Rd., Ewa *BMP 3:* Luluku Storm Water Treatment System, H-3/Likelike interchange, Kaneohe **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) The Audit Team will then verify that up to three (3) structural and source control BMPs approved by each permittee and subject to post-construction requirements were installed and are being maintained properly in the field. Approved plans and inspection records for each BMP will have been reviewed ahead of the onsite evaluation (during the records review period). The BMPs identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period
- Within 90 Days of AWPC
- **Consent Decree Deadline:** Within 90 Days of AWPC
- Within 8 Days of Last Milestone
- By Tuesday 13 June 2017

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators
- Within 135 Days of AWPC
- **Consent Decree Deadline:** Within 135 Days of AWPC
- Within 45 Days of Last Milestone
- By Friday 28 July 2017

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM
- Within 162 Days of AWPC
- Within 27 Days of Last Milestone
- By Thursday 24 August 2017

10. Written Request for Clarification and Corrections HDOT PM to Audit PM
- Within 163 Days of AWPC[1]
- **Consent Decree Deadline:** Within 165 Days of AWPC
- Within 1 Days of Last Milestone
- By Friday 25 August 2017

11. Completion of Final PEAR
- Within 183 Days of AWPC[2]
- **Consent Decree Deadline:** 210 Days of AWPC
- Within 20 Days of Last Milestone
- By Thursday 14 September 2017

[1] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.
[2] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C2: PEAR #2 – Schedule for Construction Site Runoff Control

1. Notice of Audit
- Within 190 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 21 September 2017

2. Records Request
- Within 197 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 28 September 2017

3. Fulfillment of Records Request
- Within 226 Days of AWPC
- Within 29 Days of Last Milestone
- By Friday 27 October 2017

4. Records Review Complete
- Within 239 Days of AWPC
- Within 13 Days of Last Milestone
- By Thursday 9 November 2017

5. Pre-Onsite Evaluation Conference Call
- Within 246 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 16 November 2017

6. Completion of Onsite Evaluation
- Within 261 Days of AWPC
- Within 15 Days of Last Milestone
- By Friday 1 December 2017

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C2: Schedule for PEAR #2 - Construction Site Runoff Control

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
257 Days After AWPC Monday 27 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* OGG Consolidated Rent A Car Facility, Kahului Airport, Near Hemaloa St and Keolani Pl. *Construction Site #2:* OGG Vehicle Washrack Installation, AOA side, Near Cargo Building and Triturator **11am – 12pm** Debrief Meeting [See Note (c)]	258 Days After AWPC Tuesday 28 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Corner of Aolele, Rodgers, Paiea St. *Construction Site #2:* HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal **11am – 12pm** Debrief Meeting [See Note (c)]	260 Days After AWPC Thursday 30 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* New Kapalama Container Yard, Kapalama, Honolulu Harbor *Construction Site #2:* Piers 24-29 Utilities **11am – 12pm** Debrief Meeting [See Note (c)]	261 Days After AWPC Friday 1 December 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] [Unable to forecast construction projects; will be re-contacted by Kennedy/Jenks Consultants closer to the date] **11am – 12pm** Debrief Meeting [See Note (c)]	257 Days After AWPC Monday 27 November 2017 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] *Construction Site #1:* Kuihelani Highway Resurfacing [An additional construction site will be inspected only if one is active at this time] **4pm – 5pm** Debrief Meeting [See Note (c)]	259 Days After AWPC Wednesday 29 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] [Unable to forecast construction projects; will be re-contacted by Kennedy/Jenks Consultants closer to the date] **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) The Audit Team will then accompany construction inspectors as they conduct up to two (2) inspections. The purpose of the field evaluation is to assess the permittee's construction inspection program—how knowledgeable the inspectors are about stormwater requirements and BMPs, how thorough of an inspection they conduct, and how they handle problems identified at construction sites. The construction sites identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 268 Days of AWPC[1]
- **Consent Decree Deadline:** Within 270 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 8 December 2017

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 313 Days of AWPC[2]
- **Consent Decree Deadline:** Within 315 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 22 January 2018

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM

- Within 338 Days of AWPC
- Within 25 Days of Last Milestone
- By Friday 16 February 2018

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM

- Within 342 Days of AWPC[2]
- **Consent Decree Deadline:** Within 345 Days of AWPC
- Within 4 Days of Last Milestone
- By Tuesday 20 February 2018

11. Completion of Final PEAR

- Within 362 Days of AWPC[3]
- **Consent Decree Deadline:** 390 Days of AWPC
- Within 20 Days of Last Milestone
- By Monday 12 March 2018

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[1] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.
[2] The deadline is ahead of the CD Deadline due to the required shift in the #7 deadline.
[3] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C3: PEAR #3 – Schedule for Public Outreach / Public Involvement

Appendix C3: Schedule for PEAR #3 - Public Outreach / Public Involvement Program

1. Notice of Audit

- Within 369 Days of AWPC
- Within 7 Days of Last Milestone
- By Monday 19 March 2018

2. Records Request

- Within 377 Days of AWPC
- Within 8 Days of Last Milestone
- By Tuesday 27 March 2018

3. Fulfillment of Records Request

- Within 420 Days of AWPC
- Within 43 Days of Last Milestone
- By Wednesday 9 May 2018

4. Records Review Complete

- Within 450 Days of AWPC
- **Consent Decree Deadline:** Within 450 Days of AWPC
- Within 30 Days of Last Milestone
- By Friday 8 June 2018

For this Program Element, the end of the records review period represents the completion of evaluation. No onsite evaluation will occur for this program element. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators may be conducted during the records review period. If requested by the Audit Team or MS4 Permit Coordinator, an in-person meeting may be scheduled during this period.

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.

5. – 7. Not Applicable (See #4)

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 495 Days of AWPC
- **Consent Decree Deadline:** Within 495 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 23 July 2018

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 523 Days of AWPC
- Within 28 Days of Last Milestone
- By Monday 20 August 2018

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 525 Days of AWPC
- **Consent Decree Deadline:** Within 525 Days of AWPC
- Within 2 Days of Last Milestone
- By Wednesday 22 August 2018

11. Completion of Final PEAR

- Within 545 Days of AWPC[1]
- **Consent Decree Deadline:** 570 Days of AWPC
- Within 20 Days of Last Milestone
- By Tuesday 11 September 2018

[1] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C4: PEAR #4 – Schedule for Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program

Appendix C4: Schedule for PEAR #4 - Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program

1. Notice of Audit

- Within 552 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 18 September 2018

2. Records Request

- Within 559 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 25 September 2018

3. Fulfillment of Records Request

- Within 583 Days of AWPC
- Within 24 Days of Last Milestone
- By Friday 19 October 2018

4. Records Review Complete

- Within 597 Days of AWPC
- Within 14 Days of Last Milestone
- By Friday 2 November 2018

5. Pre-Onsite Evaluation Conference Call

- Within 604 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 9 November 2018

6. Completion of Onsite Evaluation

- Within 623 Days of AWPC
- Within 19 Days of Last Milestone
- By Wednesday 28 November 2018

The table below provides a preliminary schedule for the onsite evaluation period.

Appendix C4: Schedule for PEAR #4 - Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
614 Days After AWPC Monday 19 November 2018	616 Days After AWPC Wednesday 21 November 2018	621 Days After AWPC Monday 26 November 2018	622 Days After AWPC Tuesday 27 November 2018	615 Days After AWPC Tuesday 20 November 2018	623 Days After AWPC Wednesday 28 November 2018
8am – 9am IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]
9am – 11am IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]
Outfall #1: Near baseyard, Keolani Place *Outfall #2:* Sampling #G, Basin G	*Outfall #1:* Near Iolana Place, Off Lagoon Drive *Outfall #2:* Aolewa Place, Near Access A	*Outfall #1:* SDDH035050, Pier 38 *Outfall #2:* SDDH0517960, Pier 51	*Outfall #1:* SDDBP043660, Pier P-4 [Outfall #1 is the only accessible outfall at this harbor, due to safety concerns]	*Outfall #1:* Outlet No. 1 *Outfall #2:* DP3	*Outfall #1:* PID 304162 Jarrett White Rd., north of Mahiole St., *Outfall #2:* PID 301831, Kaahele St., north of Moanalua Rd.
11am – 12pm IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]
12pm – 1pm LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH
1pm – 2pm I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	[I/C Program not evaluated, as Maui Highways does not have an I/C Program]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]
2pm – 4pm I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]		**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]
I/C Facility #1: UPS, 9682 Hemaloa Pl. *I/C Facility #2:* ASIC-HFFC, 761 Kaonawai Pl.	*I/C Facility #1:* UPS, 128 Mokuea Pl. *I/C Facility #2:* United Airlines, 110 Lauhoe Pl.	*I/C Facility #1:* Young Brothers Maintenance Facility, Pier 39 *I/C Facility #2:* Matson Maintenance Facility, Piers 52-53	*I/C Facility #1:* Marisco *I/C Facility #2:* Grace Pacific		*I/C Facility #1:* First Hawaiian Bank, 94-205 Leoku St., Waipahu, HI *I/C Facility #2:* CM Recycling, 204 Sand Island Access Rd., Honolulu, HI
4pm – 5pm I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]		**4pm – 5pm** I/C Debrief Meeting [See Note (d)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meetings. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) Illicit Discharge Detection and Elimination (IDDE) Program: The Audit Team will accompany inspectors in the field as they conduct up to two (2) dry-weather outfall screenings. The outfalls identified in this Appendix are preliminary and are subject to modification.

(c) Industrial/Commercial (I/C) Program: The Audit Team will accompany inspectors in the field as they inspect up to two (2) industrial/commercial facilities. The facilities identified in this Appendix are preliminary and are subject to modification.

(d) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period
- Within 630 Days of AWPC
- **Consent Decree Deadline:** Within 630 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 5 December 2018

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators
- Within 674 Days of AWPC[1]
- **Consent Decree Deadline:** Within 675 Days of AWPC
- Within 44 Days of Last Milestone
- By Friday 18 January 2019

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM
- Within 700 Days of AWPC
- Within 26 Days of Last Milestone
- By Wednesday 13 February 2019

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM
- Within 702 Days of AWPC[2]
- **Consent Decree Deadline:** Within 705 Days of AWPC
- Within 2 Days of Last Milestone
- By Friday 15 February 2019

11. Completion of Final PEAR
- Within 723 Days of AWPC[3]
- **Consent Decree Deadline:** 750 Days of AWPC
- Within 21 Days of Last Milestone
- By Friday 8 March 2019

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.
[2] The deadline is ahead of the CD Deadline due to the required shift in the #8 deadline.
[3] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C5: PEAR #5 – Schedule for Pollution Prevention / Good Housekeeping Program

Appendix C5: Schedule for PEAR #5: Pollution Prevention / Good Housekeeping Program

1. Notice of Audit

- Within 730 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 15 March 2019

2. Records Request

- Within 737 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 22 March 2019

3. Fulfillment of Records Request

- Within 762 Days of AWPC
- Within 25 Days of Last Milestone
- By Tuesday 16 April 2019

4. Records Review Complete

- Within 776 Days of AWPC
- Within 14 Days of Last Milestone
- By Tuesday 30 April 2019

5. Pre-Onsite Evaluation Conference Call

- Within 783 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 7 May 2019

6. Completion of Onsite Evaluation

- Within 800 Days of AWPC
- Within 17 Days of Last Milestone
- By Friday 24 May 2019

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C5: Schedule for PEAR #5: Pollution Prevention / Good Housekeeping Program

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
796 Days After AWPC Monday 20 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* OGG Baseyard, Keolani Pl. *Facility #2:* ARFF Station, Onsite **11am – 12pm** Debrief Meeting [See Note (c)]	797 Days After AWPC Tuesday 21 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* HNL Baseyard, 2919 Aolele St. *Facility #2:* Crash Fire Station 2, off Lagoon Drive **11am – 12pm** Debrief Meeting [See Note (c)]	799 Days After AWPC Thursday 23 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Sand Island Baseyard, 48 Sand Island Access Road [DOT-HAR only operates one maintenance facility at Honolulu Harbor] **11am – 12pm** Debrief Meeting [See Note (c)]	800 Days After AWPC Friday 24 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Kalaeloa Storage Facility [DOT-HAR only operates one maintenance facility at Kalaeloa Harbor] **11am – 12pm** Debrief Meeting [See Note (c)]	796 Days After AWPC Monday 20 May 2019 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] *Facility #1:* HWY-M Kahului Baseyard, 650 Palapapa Dr. *Facility #2:* HAR-M Kahului Harbor, 103 Ala Luina St. **4pm – 5pm** Debrief Meeting [See Note (c)]	798 Days After AWPC Wednesday 22 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Kakoi Baseyard, 727 Kakoi St. *Facility #2:* Windward Baseyard, 45-889 Pookela St. **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) After the Kickoff Meeting, the Audit Team will conduct a walk-through of up to two (2) permittee owned or operated facilities (maintenance yards, chemical storage facilities, etc.) with a facility supervisor and/or other key staff to verify that activities are performed as described in the SWMPP. The facilities identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 810 Days of AWPC
- **Consent Decree Deadline:** Within 810 Days of AWPC
- Within 10 Days of Last Milestone
- By Tuesday 3 June 2019

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 855 Days of AWPC
- **Consent Decree Deadline:** Within 855 Days of AWPC
- Within 45 Days of Last Milestone
- By Thursday 18 July 2019

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 882 Days of AWPC
- Within 27 Days of Last Milestone
- By Wednesday 14 August 2019

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 884 Days of AWPC[1]
- **Consent Decree Deadline:** Within 885 Days of AWPC
- Within 2 Day of Last Milestone
- By Friday 16 August 2019

11. Completion of Final PEAR

- Within 905 Days of AWPC[2]
- **Consent Decree Deadline:** 930 Days of AWPC
- Within 21 Days of Last Milestone
- By Friday 6 September 2019

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.
[2] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C6: PEAR #6 – Schedule for Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

Appendix C6: Schedule for PEAR #6 - Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

1. Notice of Audit

- Within 912 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 13 September 2019

2. Records Request

- Within 919 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 20 September 2019

3. Fulfillment of Records Request

- Within 961 Days of AWPC
- Within 42 Days of Last Milestone
- By Friday 1 November 2019

4. Records Review Complete

- Within 989 Days of AWPC[1]
- **Consent Decree Deadline:** Within 990 Days of AWPC
- Within 28 Days of Last Milestone
- By Friday 29 November 2019

For this Program Element, the end of the records review period represents the completion of evaluation. No onsite evaluation will occur for this program element. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators will be conducted during the records review period. If requested by the Audit Team or MS4 Permit Coordinator, an in-person meeting may be scheduled during this period.

Airports		**Harbors**		**Highways**	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.

5. – 7. Not Applicable (See #4)

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 1034 Days of AWPC[2]
- **Consent Decree Deadline:** Within 1035 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 13 January 2020

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM

- Within 1058 Days of AWPC
- Within 24 Days of Last Milestone
- By Thursday 6 February 2019

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM

- Within 1064 Days of AWPC[2]
- **Consent Decree Deadline:** Within 1065 Days of AWPC
- Within 6 Days of Last Milestone
- By Wednesday 12 February 2020

11. Completion of Final PEAR

- Within 1108 Days of AWPC[3]
- **Consent Decree Deadline:** 1110 Days of AWPC
- Within 44 Days of Last Milestone
- By Friday 27 March 2020

[2] The deadline is ahead of the CD Deadline due to the required shift in the #4 deadline.
[3] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.

Appendix D

Notices to EPA & DOH

D1: Draft Notice of Potential Violation

State of Hawaii Department of Transportation
MS4 Permit Audit
Draft Notice of Potential Violation

Potential Violation Tracking #: _____

Determination of Potential Violation Date: _____

Potential Violation Notification Date:_____
(Today's Date)

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

_____

_____

_____

_____

_____

_____

_____

Description of Attached Photographs (if applicable):

_____

_____

_____

_____

Applicable Regulatory References

NPDES Permit No.: _____

SWMPP: _____

Hawaii Administrative Rules (HAR): _____

Code of Federal Regulations (CFR):_____

DRAFT

D2: Final Notice of Potential Violation

State of Hawaii Department of Transportation
MS4 Permit Audit
Final Notice of Potential Violation

Potential Violation Tracking #: _____

Determination of Potential Violation Date: _____

Potential Violation Notification Date: _____
(Today's Date)

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

_____
_____
_____
_____
_____
_____
_____

Description of Attached Photographs (if applicable):

_____
_____
_____
_____

Applicable Regulatory References

NPDES Permit No.: _____

SWMPP: _____

Hawaii Administrative Rules (HAR): _____

Code of Federal Regulations (CFR):_____

Result of HDOT PM Review:

- ☐ Confirmed Potential Violation
  - o Email Notice of Corrective Action sent to EPA/DOH on: _____
    (Due Within 14 Calendar Days of Potential Violation Notification Date)
- ☐ Re-categorized as Deficiency
  - o Email Notice sent to EPA/DOH on: _____
- ☐ Summarily Dismissed
  - o Email Notice sent to EPA/DOH on: _____

FINAL

D3: Notice of Corrective Action

State of Hawaii Department of Transportation
MS4 Permit Audit
Notice of Corrective Action

Corrective Action in Response to:

☐ Potential Violation (complete Section A & C)

☐ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:____ Potential Violation Notification Date:_____
(from Notice of Potential Violation Form)

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

HDOT Receipt of Draft PEAR Date:_____

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action

_____

_____

_____

_____

_____

_____

_____

_____

_____

Description of Attached Photographs (if applicable):

_____

_____

_____

_____

_____

Attachment 21

PEAR 3 Draft and Final Reports for Honolulu Harbor and Kalaeloa Barbers Point Harbor

DRAFT Program Element Audit Report (PEAR) No. 3

Public Outreach / Public Involvement

State Project No. OSC-15-01

July 2018

Prepared by

Kennedy/Jenks Consultants

Prepared for

State of Hawaii
Department of Transportation
Office of Environmental Compliance
869 Punchbowl Street
Honolulu, Hawaii 96813

K/J Project No. 1696025*00

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C Revised Audit Work Plan, November 2016

List of Acronyms

AWP	Audit Work Plan
BMP	best management practice
CD	Consent Decree
DOH	State of Hawaii Department of Health
EPA	United States Environmental Protection Agency
HDOT	State of Hawaii Department of Transportation
I/C	Industrial Commercial Activities/Tenant
IDDE	Illicit Discharge Detection and Elimination
MS4	Municipal Separate Storm Sewer System
PEAR	Program Element Audit Report
PM	Project Manager
SWMPP	Stormwater Management Program Plan

Section 1: Introduction

Under Paragraph 10.d of the Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC) entered on 5 November 2014 (CD) with the United States Environmental Protection Agency (EPA) and the State of Hawaii Department of Health (DOH), the State of Hawaii Department of Transportation (HDOT) was required to perform compliance audits of Municipal Separate Storm Sewer System (MS4) permits issued to HDOT's Airports, Highways, and Harbors Divisions (referred to herein as the singular "MS4 Permit Audit"). The ongoing MS4 Permit Audit is being conducted in accordance with an Audit Work Plan (AWP) approved by EPA and DOH on 31 October 2016 and provided as Appendix C of this report. The MS4 Permit Audit consists of individual audits of six program elements:

1. Post-Construction Runoff Control / Permanent Best Management Practices (BMPs)
2. Construction Site Runoff Control
3. Public Outreach / Public Involvement
4. Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
5. Pollution Prevention / Good Housekeeping Program
6. Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

This Program Element Audit Report (PEAR) 3 documents procedures and findings of the Public Outreach / Public Involvement program element.

Section 2: Methods (CD Appendix A Section D.7.a.)

As required in CD Appendix A Section D.7.a., this section includes a specific statement of the procedures followed, HDOT sites visited and related activities (if any), and materials reviewed during the MS4 Permit Audit. Additional details on specific dates can be found in Appendix A. Additional permit-specific details can be found in Appendices B1 through B6. The Audit Team reviewed the individual program element for the six permitted MS4 programs concurrently, developing a PEAR that represents the culmination of the auditing efforts across the three HDOT Divisions. The MS4 Permit Audit included two phases (Pre-Audit and Reporting), detailed in the following sections. Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations. The Audit Team attended the 2017 Protect Our Waters conference and a Harbors tenant training event to gain a well-rounded understanding of this program.

2.1 Pre-Audit

2.1.1 Notice of Audit

The Audit Team began by providing a Notice of Audit to the MS4 Permit Coordinators via email. The Audit Team requested that the MS4 Permit Coordinators review two key documents.

First, the Audit Team created a table of Governing Regulations applicable to PEAR 3, which included sections of the federal regulations, HDOT's MS4 permits, and the CD. This table was used by the Audit Team in conjunction with the guiding questions in Appendix B of the AWP to informally track the results from the evaluation. The MS4 Permit Coordinators provided comments on this table to the Audit Team.

Second, the Audit Team developed a draft list of documents to be reviewed to generate the Records Request. The Audit Team asked the MS4 Permit Coordinators to confirm that the Audit Team had identified the most updated and suitable documents. The Audit Team finalized this list of documents based on feedback from the MS4 Permit Coordinators. This list is provided in Section 1 of Appendices B1 through B6.

2.1.2 Records Request

The Audit Team reviewed the key documents and identified those sections relevant to PEAR 3 (provided in Section 2 of Appendices B1 through B6). Based on this review, the Audit Team developed a Records Request that was shared with the MS4 Permit Coordinators.

2.1.3 Records Review

The MS4 Permit Coordinators responded to the Records Request and the Audit Team completed an initial review of the records received. The Audit Team next sent Requests for Clarification, as appropriate. The Audit Team also conducted in-person meetings with MS4 Permit Coordinators during this timeframe. MS4 Permit Coordinators provided additional information and records in response to this second request, as appropriate. The Audit Team

then completed their review of records received. For this Program Element, the end of the records review period represented the completion of evaluation.

2.2 Reporting

2.2.1 Draft PEAR

Pursuant to the CD, the Audit Team prepared a draft PEAR 3 and transmitted it to the HDOT Project Manager (PM), who distributed copies of the draft PEAR to the appropriate MS4 Permit Coordinators. The MS4 Permit Coordinators reviewed the draft PEAR and distributed the report to key personnel for their review (at the discretion of the MS4 Permit Coordinators). The MS4 Permit Coordinators submitted to the HDOT PM a consolidated written request for clarification and corrections to the draft PEAR for their respective permit. The HDOT PM then submitted the consolidated requests and corrections to the Audit PM.

2.2.2 Final PEAR

The Audit Team made appropriate changes to the draft PEAR and submitted the final PEAR.

Section 3: Key Findings (CD Appendix A Section D.7.b. – e.)

As required in CD Appendix A Section D.7.b. – e., this section includes details on the key findings of the MS4 Permit Audit for PEAR 3.

Compliance with program components for Airports Division and Highways Oahu District could not be determined, as discussed below. Specifically, Part D.1.a. of both HI S000001 and S000005 state the following:

> *The [public education and outreach] program should create: changes in attitude, knowledge, and awareness; BMP implementation; pollutant load reduction; and changes in discharge and receiving water quality.*

The Audit Team has concluded that this permit language requires further consultation between HDOT and DOH. The Audit Team noted that both Airports Division and Highways Oahu District track changes in these items via questionnaires, water quality monitoring, and other types of quantification. It would be preferable if this permit language were revised to use the term "promote" instead of "create", and/or set clear metrics by which the permittees can be assessed. Absent those revisions, compliance with this permit requirement could not be determined.

Aside from the limitations discussed above and unless otherwise noted in this report, the Audit Team found HDOT's permittees to be in compliance with their permit obligations.

3.1 Identification of Potential Violations and Deficiencies (CD Appendix A Section D.7.c.)

As required in CD Appendix A Section D.7.c., this section includes an identification of Potential Violations and Deficiencies and recommendations for improvement.

3.1.1 Potential Violations

A Potential Violation is defined in the AWP as an area where the evaluation found the permittee not in compliance with a specific Stormwater Management Program Plan (SWMPP) commitment, the CD, and/or permit and regulations. The Audit Team identified one Potential Violation related to Harbors Division. More details on the Potential Violation and associated Corrective Actions proposed by HDOT are provided in Section 5 of Appendix B3.

3.1.2 Deficiencies

A Deficiency is defined in the AWP as an item which, if not corrected, may lead to Potential Violations.

The Audit Team identified two (2) Deficiencies related to Harbors Division. Deficiency details and associated Corrective Actions proposed by HDOT are provided in Section 6 of Appendix B3. For each Deficiency, the Audit Team's recommendations for improvement are

also provided. Section 6.4 of the AWP further discusses HDOT's response to these Deficiencies, as required by CD Appendix A Section E.2.

3.2 Best Practices and Opportunities (CD Appendix A Section D.7.d.)

As required in CD Appendix A Section D.7.d., this section includes identification of best practices and opportunities for information/technology transfer to be applied across the Divisions.

During the MS4 Permit Audit, the Audit Team noted several areas where best practices and technologies may be considered across the Divisions. Findings include the following:

1. Each Division should continue their efforts to actively solicit public input in developing and revising their respective SWMPPs. The Audit Team observed the use of newspaper postings, website postings, public meetings, and a variety of other forms of outreach. Additional efforts could involve the establishment of a Department-wide or permit-specific citizen advisory group. Highways Oahu District's permit indicates that they may organize a citizen advisory group (though they are not required to do so and have not done so to date). The Audit Team understands that Highways Oahu District currently gathers informal input from users of their MS4.

   In our research related to this recommendation, the Audit Team identified an example of such an advisory group. The Advisory Committee on Transportational Storm Water Management was created in 2015 to "work cooperatively with the Nevada Division of Environmental Protection (NDEP) to monitor the status and efficacy of the Nevada Department of Transportation's storm water program, and ensure its sound implementation and functioning"[1]. The Advisory Committee is made up of five members, including one from the general public.

   The Audit Team acknowledges that convening such a group would require additional HDOT time and resources. HDOT may consider reaching out to other state DOTs such as Nevada to assess the costs and benefits of convening such a group.

2. Airports Division may consider implementing a formal tenant environmental awards program like the program implemented by Harbors Division. Airports Division's individual permit for Daniel K. Inouye International Airport indicates that they may do so (though they are not required to do so and have not done so to date).

3. Highways Oahu District maintains an excellent social media presence. Airports Division posts its training videos on YouTube, but otherwise has not pursued a social media presence. Highways Maui District, Harbors Division, and Airports Division may consider implementing some of the social media practices used by Highways Oahu District. The Audit Team is aware that Harbors Division maintains reservations with the use of social media, as documented in their latest annual report: "With cyber-security at the forefront

[1] https://ndep.nv.gov/water/advisory-committee-on-transportational-storm-water-management

of protecting government information, proposed social media approaches to promoting stormwater compliance have not progressed… The social media initiative was suspended by Harbors due to concerns regarding vulnerabilities involving false information and misreporting information." HDOT may consider developing one social media policy related to stormwater outreach, and/or developing one social media campaign that covers all three Divisions' efforts.

4. Highways Oahu District tailors their public outreach based on seasonality – for example, in the wintertime, they provided "Rainy Season Tips" for residents to consider. The Audit Team believes this is a best practice that could be more widely implemented throughout the Department's public outreach efforts related to stormwater.

3.3 Retrospective Analysis (CD Appendix A Section D.7.b.)

As required in CD Appendix A Section D.7.b., this section includes a retrospective analysis of activities that maybe outmoded, ineffective, insufficient, or excessively burdensome, and recommendations to modify, streamline, or expand them in accordance with what has been learned. Findings include the following:

1. The CD requires that Harbors Division update and maintain its stormwater management website to include the Tenant Environmental Manager of the Year award. At present, that award listing is embedded within a PDF file which must be downloaded to be viewed. Harbors Division may consider adding the Tenant Environmental Manager of the Year award as a stand-alone item on their website for additional recognition and visibility.

2. Each Division maintains a hotline where HDOT staff and the public can report stormwater concerns such as illicit discharge. To encourage reporting by HDOT personnel, each Division may consider creating educational cards to place in locations such as the visor of maintenance vehicles to remind HDOT personnel to report violations.

3. The Kahului Airport SWMPP states that Airports Division will "record distribution of [Tenant Brochures / Fact Sheets] on inspection form[s]." Airports Division's current inspection form does not accommodate this kind of tracking; instead, they have implemented an alternate tracking system that achieves the same result. As such, this item was not deemed to be a Finding of Concern by the Audit Team. However, Airports Division should revise their SWMPP accordingly.

4. Harbors Division communicated to the Audit Team that it has been challenging for maintenance staff to complete certain stormwater compliance assignments, utilize CityWorks, and maintain adequate records of their activities. These are relatively new job responsibilities for these staff and may require additional training and management oversight to achieve Harbors Division's stormwater compliance goals.

5. While not mandated in permits, the Audit Team was unable to find examples of the Divisions generating public outreach materials in other languages commonly spoken in

Hawaii. The Divisions may consider investigating whether doing so would be practical and/or effective.

3.4 Implementation (CD Appendix A Section D.7.e)

As required in CD Appendix A Section D.7.e., this section includes an analysis of the practices implemented for each Division's program elements and a determination as to whether identified best practices can be universally implemented across all three Divisions. If best practices cannot be universally implemented, this section describes identified impediments.

Several recommendations for universally implementing best practices have been identified in Sections 3.2 and 3.3. For HDOT staff to champion such implementation from within the organization, the Audit Team believes that a compelling case must be made for why the proposed changes will lead to improvements in permit compliance and stormwater quality. Absent that compelling case, HDOT staff may understandably maintain that their time and attention should remain focused on implementing their current programs. The Audit Team has concluded that this represents the greatest impediment to universally implementing these recommendations.

3.5 Positive Program Elements

HDOT staff were helpful and cooperative in responding to requests for information. HDOT staff were receptive to MS4 Permit Audit findings shared to date and interested in improving their MS4 programs. The Audit Team identified the following positive program elements:

1. Highways Oahu District exceeded several of their outreach-related goals set for 2017. These goals were related to the Adopt-A-Highway Program, school programs, and participation in special events.

2. In their Annual Report, Highways Oahu District provided effective tracking and analysis of traffic related to their stormwater websites.

3. Harbors Division disseminated six (6) forms of stormwater awareness information to their tenants and the public, which exceeds the CD decree requirement of three (3) forms of information.

4. Airports Division has made their training materials available on their website so the materials can be easily accessed at any time.

5. Airports Division has implemented the Audit Team’s PEAR 1 recommendation to implement educational signage at the Elliot Street pervious pavement installation. Hawaiian Airlines staff have been observed reading the signage.

6. Highways Oahu District has lent training resources to Airports Division for their use, which is an example of increased collaboration amongst the Divisions.

7. The Audit Team observed that Divisions have been effectively partnering with non-profit organizations as shown in the following examples:

    - Airports Division has partnered with 808 Cleanups to undertake waste removal along Lagoon Drive
    - Highways Division runs the Adopt-A-Highway program which typically uses non-profit volunteers
    - Highways Maui District has partnered with Hands On Maui and the County of Maui for storm drain stenciling
    - Highways Oahu District partnered with the Waikiki Aquarium for several community outreach events and promotes events from other non-profits in its social media
    - Harbors Division asked a representative of the Surfrider Foundation to speak at their annual Tenant Training.

Appendix A

Project Milestones and Deadlines

Appendix A: PEAR 3 Project Milestones and Deadlines

Appendix A of the Consent Decree (CD) defines various project milestones and deadlines, described for ease of reference below:

Program Element	Evaluation Complete: [(a)]	Draft PEAR to HDOT: [(b)]	HDOT Review of Draft PEAR: [(c)]	Final PEAR to HDOT: [(d)]
PEAR 3: Public Outreach / Public Involvement Program	15 Months (450 Days)[(e)] After AWPC[(f)] 8 June 2018	495 Days After AWPC 23 July 2018	525 Days After AWPC 22 August 2018	545 Days After AWPC 11 September 2018

Notes:

(a) For Program Element Audit Report (PEAR) 3, no onsite evaluation is required and therefore, "evaluation" is defined to represent the date of conclusion of the Records Review period.
(b) Pursuant to CD Appendix A Section D.2., Kennedy/Jenks Consultants completed a draft audit report and transmitted it to State of Hawaii Department of Transportation (HDOT) within 45 days of completing the audit of this program element [defined as the conclusion of "evaluation", as discussed in Note (a)].
(c) Pursuant to CD Appendix A Section D.3., HDOT reviewed the draft PEAR to correct any factual inaccuracies within 30 days of receipt.
(d) Pursuant to CD Appendix A Section D.4., Kennedy/Jenks Consultants completed a final PEAR within 120 days of completing the audit of the program element [defined as the conclusion of "evaluation", as discussed in Note (a)].
(e) "Months" are based on 30-day month.
(f) AWPC = Audit Work Plan Commencement (15 March 2017)

Milestone	Date Completed
Notice of Audit	19 March 2018
Records Request	27 March 2018
Response to Records Request	9 May 2018
Completion of Records Review	8 June 2018
Draft Potential Violations to HDOT PM	19 June 2018
Notice of Corrective Action to EPA/DOH	3 July 2018
Draft PEAR to HDOT PM	23 July 2018
MS4 Permit Coordinator Comments to HDOT PM	20 August 2018
HDOT PM Comments to Audit Team	22 August 2018
Final PEAR to HDOT PM	11 September 2018

Notes:

PM = project manager
EPA = United States Environmental Protection Agency
DOH = State of Hawaii Department of Health
MS4 = Municipal Separate Storm Sewer System

Appendix B1

Permit-Specific Information – Kahului Airport

Appendix B1: Permit-Specific Information – Kahului Airport

1. Key Documents

Permit / Document	1. Kahului Airport Small MS4 Permit HI 14KE349
2017 Annual Report	20180126.Compliance Submission for Reports & documents-HI 14KE349.pdf Plus Parts 1 – 3
DOH Comments on 2017 Annual Report	None received.
Permit	OGG-MS4-permit-20140721.14KE349.FNL_.14.pdf Plus 2016 extension
Stormwater Website	http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/ogg-storm-water-program/
SWMPP	OGG-SWMPP_20141023.pdf

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 3**
2017 Annual Report *(20180126.Compliance Submission for Reports & documents-HI 14KE349.pdf Plus Parts 1 – 3)*	Section 2.5 Section 3.1 Section 3.2 Section 4.2 Attachments 1-5
Permit *(OGG-MS4-permit-20140721.14KE349.FNL_.14.pdf Plus 2016 extension)*	In entirety
Stormwater Website (*http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/ogg-storm-water-program/)*	In entirety
SWMPP (OGG-SWMPP_20141023.pdf)	Public Education and Outreach section Public Involvement section

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix B2

Permit-Specific Information – Daniel K. Inouye International Airport

Appendix B2: Permit-Specific Information – Daniel K. Inouye International Airport

1. Key Documents

Permit / Document	2. Honolulu International Airport Individual Permit HI S000005
2017 Annual Report	20170901.Transmittal-Certification for Reports and Documents-HI S000005.pdf Plus Attachments labeled 1-32
DOH Comments on 2017 Annual Report	None received.
Permit	HNL MS4 Permit.pdf
Public Education and Outreach Plan	Section A of SWMPP
Stormwater Website	http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/hnl-storm-water-program/
SWMPP	HNL SWMPP (June 2015).pdf

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 3**
2017 Annual Report *(20170901.Transmittal-Certification for Reports and Documents-HI S000005.pdf Plus Attachments labeled 1-32)*	Sections 3.2-3.6 Sections 5.2-5.3 Section 5.6 Attachments 2-11 Attachments 18-19 Attachment 27 Attachment 29
Permit *(HNL MS4 Permit.pdf)*	In entirety
Public Education and Outreach Plan *(Section A of SWMPP)*	Section A in entirety Including Attachments A.1-A.2
Stormwater Website *(http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/hnl-storm-water-program/)*	In entirety
SWMPP *[HNL SWMPP (June 2015).pdf]*	In entirety

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix B3

Permit-Specific Information – Honolulu Harbor

Appendix B3: Permit-Specific Information – Honolulu Harbor

1. Key Documents

Permit / Document	3. Honolulu Harbor Small MS4 Permit HI 03KB482
2011 Annual Report	2011-ACR-Honolulu.pdf
2017 Annual Report	2017_HarborsACR_Final-Complete
Best Management Practice Guidance	• 01_BMP_VehicleWashing_20140828.pdf • 02_BMP_VehicleFueling_20140828.pdf • 03_BMP_MaterialStorage_20140828.pdf • 04_BMP_General_20140828.pdf • 05_BMP_SolidandHazardousWasteManagement_20140828.pdf • 06_BMP_MaterialDeliveryHandling_20140828.pdf • 07_BMP_BuildingRemodeling_20140828.pdf • 08-BMP-Vessel-Maintenance-20140925.pdf • 09_BMP_BuildingPowerWashing_20140828.pdf • 10-BMP-Sidewalk-Power-Washing_20140822.pdf • 11-BMP-Storm-Drain-20140828.pdf
DOH Comments on 2017 Annual Report	None received.
New Tenant Information Package	HAR-PM-Env-Brochure-v19.pdf
Permit	December 2016 extension is here: 20161202.03KB482.EXT.16.pdf
Public Education and Outreach Plan	Section A of SWMPP
Stormwater Web site	http://hidot.hawaii.gov/harbors/library/storm-water-management/
SWMPP	Final HDOT Harbors SWMP-150325.pdf

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 3**
2011 Annual Report *(2011-ACR-Honolulu.pdf)*	Section 7.2.2
2017 Annual Report *(2017_HarborsACR_Final-Complete)*	Section 2 Sections 3.2-3.3 Section 4.2 Attachments 1-9 Section C, in entirety
Best Management Practice Guidance • *01_BMP_VehicleWashing_20140828.pdf* • *02_BMP_VehicleFueling_20140828.pdf* • *03_BMP_MaterialStorage_20140828.pdf* • *04_BMP_General_20140828.pdf* • *05_BMP_SolidandHazardousWasteManagement_20140828.pdf* • *06_BMP_MaterialDeliveryHandling_20140828.pdf* • *07_BMP_BuildingRemodeling_20140828.pdf* • *08-BMP-Vessel-Maintenance-20140925.pdf* • *09_BMP_BuildingPowerWashing_20140828.pdf* • *10-BMP-Sidewalk-Power-Washing_20140822.pdf* • *11-BMP-Storm-Drain-20140828.pdf*	In entirety
New Tenant Information Package *(HAR-PM-Env-Brochure-v19.pdf)*	In entirety
Permit *(20161202.03KB482.EXT.16.pdf)*	In entirety
Public Education and Outreach Plan *(Section A of SWMPP)*	Section A of SWMPP in entirety
Stormwater Web site *(http://hidot.hawaii.gov/harbors/library/storm-water-management/)*	In entirety
SWMPP *(Final HDOT Harbors SWMP-150325.pdf)*	(see Public Education and Outreach Plan) Section B, Attachment 1 Section B, Attachment 10, Part 9 Section D Table 3-4 Section E Part 4.0 Section E Attachment 1, Parts 1.1-1.2

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

Potential Violation Tracking #1 applies to this permit. Please see pages B3-4 through B3-9.

Notice of Potential Violation

Potential Violation Tracking #: 1

Determination of Potential Violation Date: 6/15/18

Potential Violation Notification Date: 6/19/18

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

Consent Decree Part 14.c.ii. states that "HDOT-Harbors shall inspect the legibility of the stencil or label nearest each inlet prior to the wet season every year, record all inlets with illegible stencils, and re-stencil or re-label the inlet 60 days after inspection." The Audit Team identified thirty-seven (37) instances in 2017 where the re-stenciling or relabeling of inlets occurred more than 60 days after inspection. For example, the inspection of Inlet Number SDIHO517884 occurred on July 12, 2017, and the re-stenciling was completed on September 29, 2017.

Description of Attachments (if applicable): Harbors Division's inlet inspection report for June 1 to December 30, 2017, filtered to show the 37 instances of interest.

Applicable Regulatory References

Consent Decree: Part 14.c.ii.: "HDOT-Harbors shall inspect the legibility of the stencil or label nearest each inlet prior to the wet season every year, record all inlets with illegible stencils, and re-stencil or re-label the inlet 60 days after inspection."

NPDES Permit No.: Not applicable.

SWMPP: Section 3.1.7: "Harbors will inspect the legibility of the stencil or label nearest each inlet prior to the wet season every year, recording all inlets with illegible stencils and re-stenciling or re-labeling the inlet 60 days after inspection."

Hawaii Administrative Rules (HAR): Not applicable.

Code of Federal Regulations (CFR): Not applicable.

State of Hawaii Department of Transportation
Harbors Division

Inlet / Trench Drain Inspection QC

for inspections conducted between 6/1/2017 and 12/31/2017
and work initiated after the inspection date

Inlet

SDIHO243522

Inspl 3330 - Storm Inlet Insp Screening 07/07/2017

Stenciling required Yes

Debris depth 6" - 12"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4304	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/25/17	9/25/17

Inspl 3852 - Storm Inlet Insp Screening 10/19/2017

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4304	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/25/17	9/25/17

SDIHO263592

Inspl 3329 - Storm Inlet Insp Screening 07/07/2017

Stenciling required Yes

Debris depth Cannot observe

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
3878	CLOSED	Inspect Comprehensive & Clean within 30 Da	7/14/17	7/14/17	7/19/17	7/19/17
4315	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/25/17	9/25/17

Inspl 3845 - Storm Inlet Insp Screening 10/19/2017

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
3878	CLOSED	Inspect Comprehensive & Clean within 30 Da	7/14/17	7/14/17	7/19/17	7/19/17
4315	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/25/17	9/25/17

Inlet

SDIHO313904

Inspl 7688 - Storm Inlet Insp Comprehensive 06/09/2017

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3731	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/5/17	6/5/17	6/9/17	6/9/17

3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4042	CLOSED	Inspect Comprehensive & Clean within 30 Da	8/8/17	8/8/17	10/5/17	10/5/17
4751	CLOSED	Replace Stencil / Medallion	11/7/17	11/2/17	11/22/17	1/9/18
4756	0 - INITIATED	Repair Grate	11/7/17	11/7/17		
4759	CLOSED	Inspect Comprehensive & Clean within 30 Da	11/8/17	11/8/17	11/29/17	11/29/17

Inspl 3341 - Storm Inlet Insp Screening 08/01/2017

Debris depth Cannot observe

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3731	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/5/17	6/5/17	6/9/17	6/9/17
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4042	CLOSED	Inspect Comprehensive & Clean within 30 Da	8/8/17	8/8/17	10/5/17	10/5/17
4751	CLOSED	Replace Stencil / Medallion	11/7/17	11/2/17	11/22/17	1/9/18
4756	0 - INITIATED	Repair Grate	11/7/17	11/7/17		
4759	CLOSED	Inspect Comprehensive & Clean within 30 Da	11/8/17	11/8/17	11/29/17	11/29/17

Inspl 3853 - Storm Inlet Insp Screening 11/02/2017

Stenciling required Yes

Grate condition Needs Repair or Replace

Debris depth Cannot observe

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3731	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/5/17	6/5/17	6/9/17	6/9/17
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4042	CLOSED	Inspect Comprehensive & Clean within 30 Da	8/8/17	8/8/17	10/5/17	10/5/17
4751	CLOSED	Replace Stencil / Medallion	11/7/17	11/2/17	11/22/17	1/9/18
4756	0 - INITIATED	Repair Grate	11/7/17	11/7/17		
4759	CLOSED	Inspect Comprehensive & Clean within 30 Da	11/8/17	11/8/17	11/29/17	11/29/17

SDIHO426972

Inspl 3180 - Storm Inlet Insp Screening 07/31/2017

Stenciling required Yes

Debris depth 12"+

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4268	CLOSED	Inspect Comprehensive & Clean within 10 Da	8/24/17	8/24/17		8/25/17
4303	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	10/9/17	10/9/17

SDIHO517884

Inspl '889 - Storm Inlet Insp Screening 07/12/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4311	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO517890

Inspl '885 - Storm Inlet Insp Screening 07/16/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4302	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO517896

Inspl '707 - Storm Inlet Insp Comprehensive 06/21/2017

Guard recommendation Replace

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3782	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/19/17	6/19/17	6/21/17	6/21/17
4340	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

Inspl 3342 - Storm Inlet Insp Screening 07/16/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3782	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/19/17	6/19/17	6/21/17	6/21/17
4340	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO517900

Inspl '742 - Storm Inlet Insp Comprehensive 06/21/2017

Guard recommendation Replace

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3782	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/19/17	6/19/17	6/21/17	6/21/17
4335	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

Inspl 3345 - Storm Inlet Insp Screening 07/16/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3782	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/19/17	6/19/17	6/21/17	6/21/17
4335	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO518152

Inspl '901 - Storm Inlet Insp Screening 07/17/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4310	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO518364

Inspl '909 - Storm Inlet Insp Screening 07/16/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4305	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO518370

Inspl '904 - Storm Inlet Insp Screening 07/13/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4323	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO518464

Inspl '890 - Storm Inlet Insp Screening 07/16/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4331	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO518466

Inspl '917 - Storm Inlet Insp Screening 07/16/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4327	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO528660

Inspl '942 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4300	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO528662

Inspl '922 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4342	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO528664

Inspl '923 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4338	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO528690

Inspl '925 - Storm Inlet Insp Screening 07/13/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4319	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO528692

Inspl '926 - Storm Inlet Insp Screening 07/13/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4316	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO528710

Inspl 272 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4301	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

Inlet

SDIHO528712

Inspl 273 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4339	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO528714

Inspl 274 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4336	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO528716

Inspl 3275 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4332	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO528718

Inspl 3276 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4328	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538668

Inspl '924 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4334	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO538670

Inspl '929 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4330	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO538672

Inspl '931 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4326	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

Inlet

SDIHO538696

Inspl '927 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4313	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO538698

Inspl '928 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4318	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538792

Inspl '933 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4320	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

Inlet

SDIHO538794

Inspl '934 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4309	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538796

Inspl '935 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4317	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538798

Inspl '936 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4314	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538868

Inspl '973 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4308	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

Inlet

SDIHO538890

Inspl 304 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4324	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538910

Inspl 270 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4322	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538912

Inspl 331 - Storm Inlet Insp Screening 07/11/2017

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4307	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

Inspl 857 - Storm Inlet Insp Screening 10/20/2017

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4307	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDOBP05002G

Inspl 3376 - Storm Inlet Insp Screening 08/07/2017

Stenciling required	Yes
Grate condition	Needs Repair or Replace
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4296	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	10/10/17	10/10/17

Result of HDOT PM Review:

- ☑ Confirmed Potential Violation
  - Email Notice of Corrective Action sent to EPA/DOH on: **7/3/2018** (Due Within 14 Calendar Days of Potential Violation Notification Date)
- ☐ Re-categorized as Deficiency (see rationale below)
  - Email Notice sent to EPA/DOH on:
- ☐ Summarily Dismissed (see rationale below)
  - Email Notice sent to EPA/DOH on:

Rationale for Re-Categorization or Summary Dismissal:

Notice of Corrective Action

Corrective Action in Response to:

☑ Potential Violation (complete Section A & C)

☐ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #: 1

Potential Violation Notification Date: **6/19/2018**
(from Notice of Potential Violation Form)

Corrective Action Notification Date: **7/3/2018**

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

Deficiency Tracking #:

HDOT Receipt of Draft PEAR Date:

Corrective Action Notification Date:

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action:

Immediately following issuance of this Notice of Potential Violation, HDOT Harbors Division reviewed the Consent Decree and the Storm Sewer System Operations & Maintenance Program Manual regarding the auditor's observations and findings of Potential Violations.

The Notice of Potential Violation refers to the HDOT Harbors Division's re-labelling of illegible stencils beyond the requisite 60 days after inspection.

A. Review and Findings.

The HDOT Harbors Division's review finds that there was a misunderstanding of the entry shown in the Asset Management System (Cityworks) report that is the date of inspection, the event that starts the 60-day timeline. The O`ahu Maintenance staff relied on the data input date as the start of the 60-day timeline—that is, the "Initiated" date associated with the event "Replace Stencil / Medallion" in the Cityworks report. Using the "Initiated" date

as the "date of inspection," 34 of the 37 re-stenciling viewed as potential violations would have occurred during the 60-day timeline and in most cases were completed within a week. However, the Consent Decree is clear in that the O`ahu Maintenance staff should have re-labelled illegible stencils 60 days after inspection. The remaining three potential violations involved re-stenciling that was delayed an additional 7 or more days due to employee safety concerns arising from weather conditions or congestion in our cargo yards.

1. Date of Inspection. In better understanding the nature of the potential violations, the HDOT Harbors Division reviewed the Storm Sewer System Operations & Maintenance Program Manual (O&M Program Manual) and finds that it does not contain provisions covering inlet inspections and timely re-stenciling pursuant to paragraph 14 of the Consent Decree.

Corrective Action 1: The corrective action to be taken is amendment of Section 6.7 of the O&M Program Manual to include a definition of "inspection" and clarification of the date that starts the 60-day period for timely re-stenciling to occur.

2. Monitoring of Work. The HDOT Harbors Division review recognized a continuing need for additional personnel to monitor the Asset Management System (Cityworks). The monitoring program infrastructure was developed with Asset Management System (Cityworks) and other related systems. However, the HDOT Harbors Division acknowledges there is need for dedicated staff comfortable and confident with computer technology to use the Asset Management System (Cityworks) input data, to access electronic mailboxes for work orders, and to monitor the status of work initiated. While the O`ahu Maintenance staff is very capable of completing work tasks, electronic software continues to pose challenges for them, despite training from time to time. During the fall of 2017, the HDOT Harbors Division did submit a supplemental legislative budget request for additional positions, which was approved by the Governor. Unfortunately, the request failed to secure Legislative approval.

Corrective Action 2: The corrective action is amendment of a current contract for environmental data entry to include assisting the Harbors Engineering Environmental Section with reports of work orders that have not been completed. The HDOT Harbors Division requests 60 working days to develop and submit a flow chart of the revised process.

In addition, with the retirement of the O`ahu Baseyard Maintenance Superintendent, the O`ahu District will be seeking a Superintendent who is proficient with computers.

3. Medallions. HDOT Harbors Division finds the need for frequent re-stenciling, especially due to Hawai`i's weather. To reduce this frequency in managing the

Storm Sewer System Operations & Maintenance Program, the O`ahu Harbor District Manager contacted the HDOT Highways Division and obtained information regarding that Division's procurement of medallions. Together with the Harbors Engineering Environmental Section, the O`ahu Harbor District has decided to install medallions to replace stenciling, using the same vendor procured by the HDOT Highways Division. The Port of Seattle has reported success using similar markers that have exceeded 3 years of useful life in their container yards.

Corrective Action 3: The stainless-steel storm drain medallions are on order, and the O`ahu Harbor District will install the medallions upon delivery, with completion expected by the end of 2018. Priority for medallion installation will be based on the frequency of re-labelling illegible stencils for each inlet based on information provided by the Asset Management System (Cityworks).

In summary, since our review, we have corrected our re-stenciling procedures to more accurately begin the 60-day re-stenciling window to be the day the Marine Cargo Specialist first observes the need for re-stenciling. The date the Marine Cargo Specialist first observes the need for re-stenciling, as entered into the Asset Management System (Cityworks), is the date of inspection that triggers the 60-day timeline for completion of this task. In addition, we have begun color-coding our reports to better identify the "date of inspection" as the start date of the 60-day timeline for our employees to complete the re-stenciling. Further, the HDOT Harbors Division believes the medallions will greatly reduce the hazardous demands of re-stenciling in container yards. This will ensure a better and safer public education and outreach program. HDOT Harbors Division will install these new storm drain inlet markers during the upcoming semi-annual storm drain inspection and maintenance cycle with completion targeted by the end of 2018.

Milestones for this Corrective Action are:

Change in Processes and Procedures

The HDOT Harbors Division has already instituted, or will soon institute, the following measures to avoid exceeding the 60-day re-stenciling timeline in the future.

a) The Asset Management System (AMS) inspection and notification process for re-stenciling work has been changed to ensure that the HDOT Harbors Division staff are alerted as soon as possible within the 60-day timeline.
b) Training on the improved inspection and maintenance procedures for HDOT Harbors Division personnel will be provided soon after the AMS is re-configured. Thereafter, regular user workshops will be used to reinforce familiarity with the revised procedures.
c) A "Stormdrain QC" tab and "Inspection QC Report" in the AMS were recently created to ensure that Harbors managers can review the progress of stenciling on a continuous basis.

These improvements to the AMS system will allow the Engineering Environmental Section to continuously monitor the status of stenciling and cooperatively coordinate with O`ahu Baseyard maintenance to meet the 60-day re-stenciling requirement. The Engineering Program Manager will alert the O`ahu Harbor District Manager of potential problems and to facilitate follow-on actions when needed.

4-Inch Stainless Steel Medallion Replacement Actions:

1. **Purchase order completion** for 4-inch stainless steel medallions:
   June 29, 2018
2. **Anticipated receipt of 4-inch stainless steel medallions** on Oahu:
   August 2018
   (NOTE: Illegible stencils will have to be spray-painted until the stainless-steel medallions are available for installation)
3. **Completion of installation of 4-inch stainless steel medallions:**
   December 2018
   (in place of painted stencils when safe access to container yard drain inlets is available)

AMS, Training & Notification Improvements:

1. **Re-configure AMS** inspection & notification process: **June 29, 2018**
2. **Initiation of initial training** on improved AMS procedures: **July 2018**

Description of Attached Photographs (if applicable): n/a

6. Deficiencies

Deficiency Tracking #1 and #2 apply to this permit. Please see pages B3-11 through B3-16.

Draft Notice of Deficiency

Deficiency Tracking #: 1
Related Permit(s): Honolulu Harbor

Deficiency Narrative Description:
Consent Decree Part 14.h.ii. states that "[a]n Inspection shall be completed within three months of the Tenant occupying an existing facility, or the Tenant's completion, construction, and occupancy of a newly constructed facility." Harbors Division reported that that Clean Islands Council started to utilize Pier 12 in late 2016 to park and stage equipment/ supplies/containers in support of their vessel operation. However, Harbors Division's inspection did not occur until March 30, 2017. The time between occupancy and inspection is more than the 3 months specified in the Consent Decree.

Harbors Division indicated that "strictly speaking, the Clean Island Council at Pier 12 is not considered a Harbors tenant per se" because they have not yet been issued a revocable permit. However, the facility was inspected as an "optional initiative" on the part of Harbors Division and was listed as a New Tenant Inspection for "record keeping purposes". The Audit Team believes this is an area of concern impeding effective program implementation.

Recommendations for Improvement:
Clean Islands Council at Pier 12 is referred to as a Harbors Division tenant in two sections of the 2017 Annual Compliance Report (Attachment 5F and Attachment 10). The presumed intent of the CD requirement is for Harbors Division to inspect their occupied facilities to ensure proper implementation of stormwater Best Management Practices. Harbors Division should inspect their tenants within 3 months of occupancy, regardless of the status of the tenant's revocable permit.

Description of Attachments (if applicable): Annotated pages from Attachment 5F and Attachment 10 of Harbors Division's 2017 Annual Compliance Report showing reference to Clean Islands Council at Pier 12 as a Harbors Division tenant.

Applicable Regulatory References

NPDES Permit No.: Not applicable.

Consent Decree: Part 14.h.ii.: "An Inspection shall be completed within three months of the Tenant occupying an existing facility, or the Tenant's completion, construction, and occupancy of a newly constructed facility."

SWMPP: Attachment 5F, Attachment 10, Tenant Inspection Manual (August 2014) Section 2.1

Hawaii Administrative Rules (HAR): Not applicable.

Code of Federal Regulations (CFR): Not applicable.

Attachment 5F.
Tenant Training: Questionnaires Results Summary and Completed Questionnaires

Harbors Tenant Training Questionnaire Summary

Name	Company	Company
Terry N. Qauino	Hawaiian Ice Company	9
Mark Wilkins	Clean Island Council	10
Jim Keumann	Wind & Sea Charles	10
Raymond Tavou	Matson	10
Raymond Rodigve	VAK Fisheries, LLC	9
Peter Pillone	HDOT Harbors Division	10
Kam Chun	Matson	9
David Lee	HDOT Harbors Division	9
Paul Descalso	AES Kalaeloa Venture	10

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Clean Islands Council		Kalaeloa	Pier 4	Low	Low	3/16/2017	Regular	Tim Sawyer, Pat Gillan, John Jacobi	(808) 536-5814; (808) 845-8465
		Honolulu	Pier 12	N/A	Low	3/30/2017	New	Patrick Gillen	(808) 845-8465, (808) 479-0702
Concrete Coring Company of Hawaii, Inc.	Keehi Facility	Honolulu	Former Foundation of Building 911; KIPA	Low	N/A	4/18/2017	Annual Recon	John Neff / Nathan Sabey	(808) 488-8222; (808) 330-7516
						11/22/2017	Final		
Dependable Hawaiian Express, Inc.	DHX, Inc.	Honolulu	Pier 21	Low	Medium	2/16/2017	Regular	Kane McEwen; Joe Vele	(808) 841-7311 ext. 1701
Erik Builders, Inc.		Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	James M. Sakata	(808) 845-7736
				Low	N/A	6/2/2017	Final		
Foss Maritime Company	Moana Pa'a Kai, Inc.; Subsiduary of Young Brothers	Honolulu	Piers 20, 21, and 22	Medium	Medium	12/14/2017	Regular	Nathan Kapule; Randal Lau	(808) 543-9398; (206) 276-1898
Frank P. White Jr. Properties	Container Storage Co.	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	Frank White; Gail Thometz	(808) 841-5555
Fresh Island Fish, LLC		Honolulu	Pier 38	Low	Low	4/18/2017	Annual Recon	Derek Higa	(808) 831-4911
Friends of Falls of Clyde		Honolulu	Pier 7	Low	Medium	3/21/2017	Regular	Chris Woolaway; Bruce Mcewan	(808) 753-3311; (808) 543-9311, (808) 543-9357
Friends of Hokule'a & Hawai'iloa		Honolulu	KIPA	Medium	N/A	In 2018	Final	Jay Dowsett	(808) 256-1841
Fukunaga, Paul N.	P.F. Marine	Honolulu	KIPA	Low	Low	3/28/2017	Regular	Paul N Fukunaga	(808) 842-1330, (808) 220-9425
Gillis, Eugene	Excavation Services	Honolulu	KIPA	Medium	N/A	In 2018	Final	Eugene Gillis	(808) 383-1959, (808) 292-7469
GLP Asphalt, LLC	Asphalt Hawaii	Kalaeloa	KBPH	Medium	Medium	10/19/2017	Regular	Sara Daniels	(808) 561-4121
Grace Pacific LLC	GP Kalaeloa HMA Plant	Kalaeloa	KBPH	Medium	Medium	10/17/2017	Regular	Joseph Shacat Scott Sevadjian	(808) 203-2805, (808) 348-4895

Result of HDOT PM Review:

- ☐ Confirmed Deficiency
  - o Email Notice of Corrective Action sent to EPA/DOH on:
    (Due Within 21 Calendar Days of Deficiency Notification Date)
- ☐ Re-categorized as Potential Violation (see rationale below)
  - o Email Notice sent to EPA/DOH on:
- ☐ Summarily Dismissed (see rationale below)
  - o Email Notice sent to EPA/DOH on:

Rationale for Re-Categorization or Summary Dismissal:

Notice of Corrective Action

Corrective Action in Response to:

- ☐ Potential Violation (complete Section A & C)
- ☐ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:

Potential Violation Notification Date:
(from Notice of Potential Violation Form)

Corrective Action Notification Date:

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

Deficiency Tracking #:

HDOT Receipt of Draft PEAR Date:

Corrective Action Notification Date:

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action:

Description of Attached Photographs (if applicable):

Draft Notice of Deficiency

Deficiency Tracking #: 2
Related Permit(s): Honolulu Harbor

Deficiency Narrative Description:
Consent Decree Part 16.e.ii states in part that "HDOT-Harbors shall inspect and conduct outreach at all Tenant facilities at a minimum of twice per year for high-risk Tenants and once per year for medium-risk Tenants…"

The Audit Team identified one tenant facility assigned a "High" risk ranking in 2016 which was inspected once during 2017. The Audit Team identified six tenant facilities assigned a "Medium" risk ranking in 2016 which were not inspected in 2017.

Harbors Division explained that these tenants were requested to vacate by November 30, 2017, and as a result, regular tenant inspections for this area were put on hold until the sites were cleared for final inspections, which did not occur until 2018. The Audit Team believes this is an area of concern impeding effective program implementation.

Recommendations for Improvement:
Harbors Division should perform inspections and outreach at tenant facilities as prescribed in the Consent Decree, regardless of whether tenants have been requested to vacate. Harbors Division should discontinue regular inspections and outreach only when tenants have officially vacated the facilities.

Description of Attachments (if applicable): Annotated pages from Attachment 10 of Harbors Division's 2017 Annual Compliance Report highlighting the inspection summary for seven (7) tenants of interest.

Applicable Regulatory References

NPDES Permit No.: Not applicable.

Consent Decree: Part 16.e.ii: "HDOT-Harbors shall inspect and conduct outreach at all Tenant facilities at a minimum of twice per year for high-risk Tenants and once per year for medium-risk Tenants, once every five years with annual reconnaissance for low-risk Tenants."

SWMPP: Attachment 10, Tenant Inspection Manual (August 2014) Section 2.2.2

Hawaii Administrative Rules (HAR): Not applicable.

Code of Federal Regulations (CFR): Not applicable.

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Aala Produce, Inc.	Aala Ship Service	Honolulu	Pier 32	Low	Low	1/24/2017	Regular	Rodney Tamamoto	(808) 522-0550, (808) 478-8732
AES Kalaeloa Venture, LLC	AES Corporation	Kalaeloa	KBPH	Medium	Medium	10/10/2017	Regular	Dan Hunter Priya Kumar	(808) 682-3434, (808) 781-3936
Aircraft Service International Group / Hawaii Fueling Facilities Corporation	ASIG/HFFC	Honolulu	Pier 51 A&B	Low	Low	3/14/2017	Regular	Glenn Jinbo	(808) 833-3291 x29
Aloha Agricultural Consultants, Inc.	Niu Nursery	Honolulu	KIPA	Low	N/A	3/28/2017	Regular	Sidney Goo	(808) 845-5991, (808) 225-3507
						3/14/2017	Final		
						12/6/2017	Final		
Aloha Marine Lines	Aloha Cargo Transport, Inc., ACT, Northland	Honolulu	Pier 29	Low	Low	3/24/2017	Regular	Jonathan Satre	(808) 748-8790; (206) 436-9687
Aloha Tower Marketplace	AHI Aloha Associates, LLC; PM Realty Group, Aloha Tower Development Corporation (ATDC)	Honolulu	Pier 9	Low	Low	2/9/2017	Regular	Marlene Daley	(808) 528-5700 or 566-2310 (Both not reachable)
Amazon Construction Company, Inc.	Amazon	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	Duston Onaga	(808) 841-6595
					N/A	10/3/2017	Final		
American Guard Services, Inc.		Honolulu	Piers 2/11	Low	Low	1/25/2017	Regular	Shun Almon	(808) 537-3201, (808) 271-8169
American Marine Corporation	American Workboats, Inc.	Honolulu	Pier 14	Medium	Medium	10/31/2017	Regular	DC Carter; Rusty Nall	(808) 425-3859, (808) 792-1181, (808) 479-3905; (808) 545-5190
		KIPA	Pier 60 Open Yard and Warehouse	Low	N/A	4/18/2017	Annual Recon		
						12/29/2017	Final		
Atlantis Submarines Hawaii, LLC	Atlantis Cruises and Atlantis Submarines	Honolulu	Pier 27	Medium	Medium	12/19/2017	Regular	Kekua "Kua" Keli'i	808-832-6606, 808-386-0123
			Pier 6	Low	Low	1/17/2017	Regular		
			Pier 23	N/A	N/A	10/6/2017	Final		
BEI Hawaii		Honolulu	Pier 32	Low	Low	4/18/2017	Annual Recon	Jonathan Sullivan	(808) 864-2615; (808) 532-7448; (808) 535-6025;
Bikeshare Hawaii	non-profit organization	Honolulu	Snug Harbor	N/A	N/A	11/20/2017	New/Final	John Nakange	
						11/28/2017	Follow Up		

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Clean Islands Council		Kalaeloa	Pier 4	Low	Low	3/16/2017	Regular	Tim Sawyer, Pat Gillan, John Jacobi	(808) 536-5814; (808) 845-8465
		Honolulu	Pier 12	N/A	Low	3/30/2017	New	Patrick Gillen	(808) 845-8465, (808) 479-0702
Concrete Coring Company of Hawaii, Inc.	Keehi Facility	Honolulu	Former Foundation of Building 911; KIPA	Low	N/A	4/18/2017	Annual Recon	John Neff / Nathan Sabey	(808) 488-8222; (808) 330-7516
						11/22/2017	Final		
Dependable Hawaiian Express, Inc.	DHX, Inc.	Honolulu	Pier 21	Low	Medium	2/16/2017	Regular	Kane McEwen; Joe Vele	(808) 841-7311 ext. 1701
Erik Builders, Inc.		Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	James M. Sakata	(808) 845-7736
				Low	N/A	6/2/2017	Final		
Foss Maritime Company	Moana Pa'a Kai, Inc.; Subsiduary of Young Brothers	Honolulu	Piers 20, 21, and 22	Medium	Medium	12/14/2017	Regular	Nathan Kapule; Randal Lau	(808) 543-9398; (206) 276-1898
Frank P. White Jr. Properties	Container Storage Co.	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	Frank White; Gail Thometz	(808) 841-5555
Fresh Island Fish, LLC		Honolulu	Pier 38	Low	Low	4/18/2017	Annual Recon	Derek Higa	(808) 831-4911
Friends of Falls of Clyde		Honolulu	Pier 7	Low	Medium	3/21/2017	Regular	Chris Woolaway; Bruce Mcewan	(808) 753-3311; (808) 543-9311, (808) 543-9357
Friends of Hokule'a & Hawai'iloa		Honolulu	KIPA	Medium	N/A	In 2018	Final	Jay Dowsett	(808) 256-1841
Fukunaga, Paul N.	P.F. Marine	Honolulu	KIPA	Low	Low	3/28/2017	Regular	Paul N Fukunaga	(808) 842-1330, (808) 220-9425
Gillis, Eugene	Excavation Services	Honolulu	KIPA	Medium	N/A	In 2018	Final	Eugene Gillis	(808) 383-1959, (808) 292-7469
GLP Asphalt, LLC	Asphalt Hawaii	Kalaeloa	KBPH	Medium	Medium	10/19/2017	Regular	Sara Daniels	(808) 561-4121
Grace Pacific LLC	GP Kalaeloa HMA Plant	Kalaeloa	KBPH	Medium	Medium	10/17/2017	Regular	Joseph Shacat Scott Sevadjian	(808) 203-2805, (808) 348-4895

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Hawaii Maritime Center	Donald Bell	Honolulu	Pier 7	Low	Low	1/19/2017	Regular	Donald Bell	(808) 392-5230, (808) 847-3511
Hawaii Stevedores, Inc.	Hawaii Stevedores, Inc.	Honolulu	Pier 1	Medium	Medium	12/6/2017	Regular	Frank Roznerski	(808) 842-5389, (808) 864-4638; (808) 527-3415
	Horizon Lines, LLC	Honolulu	Pier 51	High	N/A	5/4/2017	Final		
					High	6/21/2017	Regular		
						12/6/2017	Regular		
Hawaiian Aqua Products, Inc.	Foo W. Lim & Sons, Inc.	Honolulu	KIPA	Medium	N/A	In 2018	Final	Yal M. Lim, Foo W. Lim, Evelyn Lim	(808) 521-5468
Hawaiian Cement		Kalaeloa	KBPH	Medium	Medium	10/12/2017	Regular	Dane Wurlitzer	(808) 532-3407, (808) 330-3910
HC&D	Ameron Hawaii; 'Ameron International Corporation	Honolulu	KIPA	Medium	Low	10/27/2017	Regular	Linda Goldstein; June Ching	(808) 266-2672
Healy Tibbitts Builders, Inc.		Kalaeloa	KBPH	Low	Low	6/8/2017	Annual Recon	Glen Toyama	(808) 368-1581
Heumann, James	Wind & Sea Charters	Honolulu	Pier 34	Low	Low	1/25/2017	Regular	James M. Heumann	(808) 220-7675
Honolulu Marathon Association		Honolulu	Pier 2	Low	Low	1/19/2017	Regular	Ronald Chun; Jeanette Chun; Valerie Lawson	(808) 255-2602; (808) 946-0539; (808) 255-2600
HPBS, Inc.		Honolulu	Pier 19	Low	Low	2/21/2017	Regular	Fay Leong; Blare; Captain David Lyman; Captain Steven Baker	(808) 532-7233
Ishikawa, Norman & Dolores	Norman's Tractor Service	Honolulu	KIPA	Medium	N/A	In 2018	Final	William; Theresa Alcosiba; John Ishikawa	(808) 778-1084; (808) 689-3644, (808) 778-0344; (808) 218-9824
Island Beach Activities		Honolulu	Pier 2	Low	N/A	1/19/2017	Regular	John Salvio	(808) 223-8735
						2/28/2017	Final		
ISS Marine Services, Inc.	Inchcape Shipping	Honolulu	Pier 1	Low	Low	3/31/2017	Regular	Ali Wong	(808) 521-2111 ext. 18

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Jas W. Glover, Ltd.		Honolulu	KIPA	Low	Low	3/28/2017	Regular	Kyle Hirano	(808) 591-8977 ext. 321
Jems Enterprises, LLC	Hawaiian Ice Company	Honolulu	Pier 38	Medium	Low	11/2/2017	Regular	Joshua Ibrao	(808) 538-6918 (808) 255-2921
JFC International	Japan Food (Hawaii), Inc.; Davenport Hawaii Partners, LP	Honolulu	Pier 34	Low	Low	1/24/2017	Regular	Toshiaki Wada	(808) 537-9528
Kagami, Inc.		Honolulu	Pier 21	Low	Low	2/21/2017	Regular	Wayne Kagami	(808) 523-5700
Kirkwood, Clarke	Hawaiian Catamaran Multihull Design	Honolulu	KIPA	High	High	7/5/2017	Regular	Matt Buckman	(808) 306-6012
					N/A	In 2018	Final		
Kirby Offshore Marine	(Formerly Uaukewai Diving, Salvage & Fishing, Inc.) Formerly known as K-Sea Transportation Hawaii Division	Honolulu	Pier 21	Medium	Medium	12/5/2017	Regular	James Pontin; Bill Boland	(808) 462-4222, (808) 208-1089; (808) 522-1000 ext.108
Lansdown, Ian J.	Hawaii's Sailing Center; Ian J. Lansdown	Honolulu	KIPA	Medium	N/A	In 2018	Final	Jeff Lansdown	(808) 230-0940
Marisco, Ltd.		Kalaeloa	KBPH	High	High	6/22/2017	Regular	Stephen Hinton	(808) 306-5935, (808) 682-1333
						12/21/2017	Regular		
Maritime License Center, Inc.		Kalaeloa	Pier 6	Low	Low	3/16/2017	Regular	Paul Finley	(808) 589-0123
Mary Charles and Associates Inc		Honolulu	Pier 10	Low	Low	1/20/2017	Regular	Curtis Chee	
Matson Navigation Company, Inc.	Matson Terminals, Inc.	Honolulu	Pier 52	High	High	6/20/2017	Regular	Keahi Birch	(808) 848-1252; (808) 848-1280; (808) 848-8306
						12/12/2017	Regular		
McCabe, Hamilton & Renny		Honolulu	Pier 23	Medium	Medium	11/16/2017	Regular	Andrew Souza	(808) 479-0356
			Pier 23		N/A	10/6/2017	Final		
		Honolulu	Piers 19 & 29	Low	Low	4/18/2017	Annual Recon		
		Kalaeloa	Pier 5	Low	Low	6/8/2017	Annual Recon		

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Nanakuli Neighborhood Housing Services, Inc.	Nanakuli Housing Corporation Baseyard Hawaii	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	Wilbert Barber	(808) 842-0770
Norko Marine Agency, Inc.		Honolulu	Pier 33	Low	Low	4/18/2017	Annual Recon	Norman Cheu	(808) 216-4790, (808) 536-4568
Oceantronics, Inc.		Honolulu	Pier 24	Low	Low	3/30/2017	Regular	Fritz M. Amtsberg	(808) 522-5600; (808) 832-5590, (808) 216-0256
						9/14/2017	Final		
Ohai, Leo A.	Oceanic Libra Corporation	Honolulu	Pier 18	Medium	Medium	10/24/2017	Regular	Nephi Ohai	(808) 690-4030
P&R Water Taxi, Ltd.		Honolulu	Pier 36	Medium	Medium	11/28/2017	Regular	Ralph Dewitt	808) 554-3436
Pacific Environmental Corporation	Penco	Honolulu	Piers 33	Medium	Medium	11/7/2017	Regular	Justin, Shanyn	(808) 545-5190, (808) 479-3905; (808) 545-5195
		Honolulu; Kalaeloa	Pier 14; Pier 4	Low	Low	6/8/2017	Annual Recon		
Pacific Ocean Producers, Inc.	(Nico's) POP Fishing & Marine, LLC	Honolulu	Pier 38	Low	High	3/23/2017	Regular	Neil Kanemoto	(808) 537-2905
					Low	11/28/2017	Regular		
Pacific Shipyards International, LLC	Pacific Marine and Supply, Navatek, Unitek Contracting Group, Honolulu	Honolulu	Pier 41	High	High	6/16/2017	Regular	Greg Ball	(808) 848-6211, (808) 223-4946
					N/A	8/25/2017	Final		
			Pier 24/25	N/A	High	9/26/2017	New		
Pang, Sandra	SP Lunch Wagon; Sandy's Lunchwagon	Honolulu	Pier 51	Low	Low	3/30/2017	Regular	Sandra Pang	(808) 778-4686
Paradise Cruise, LTD	Star of Honolulu	Honolulu	Pier 8	Low	Low	4/18/2017	Annual Recon	Richard A. Davison	(808) 983-7765
Petrospect, Inc.		Honolulu	Pier 21	Low	Low	3/14/2017	Regular	Chad Miller, David Harrington	(808) 536-6626
Pioneer Machinery, Inc.		Honolulu	KIPA	Low	Low	5/5/2017	Regular	Rodney Yee	(808) 371-4892
Pryne, Ty	H.B.N. Yacht Rigging	Honolulu	Pier 21	Low	Low	6/9/2017	Annual Recon	Ty Pryne	(808) 479-8844, (808) 597-8120
Rebecca's Fine Collections, Inc.	R.F.C. Group	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	Rebecca Fan	(808) 478-6688
Resort Management Group LLC	(former Chevron Lot)	Honolulu	Pier 38	N/A	Low	1/5/2017	New	Reed Kishinami	(808) 478-7741
R & C Concrete Specialists, Inc.	Ron's Concrete Specialist, Ltd.	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	James Mainaaupo.	(808) 845-0467 (808) 429-2142

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Sause Bros., Inc.	Canopy and Office	Honolulu	Pier 27	Medium	Low	10/24/2017	Regular	Wayne Stachel	(808)306-2177; (808) 521-5082;
	Staging Yard at KBPH	Kalaeloa	Pier 4	Medium	Medium	3/30/2017	Follow Up	Reid Tamashiro	(808) 721-1667
						10/10/2017	Regular		
						12/27/2017	Follow Up		
	Shed at KBPH	Kalaeloa	Pier 5	Low	Low	6/8/2017	Annual Recon	Mike Leslie	(808) 690-3412 (808) 682-1082
Sea Engineering, Inc.		Honolulu	Pier 32	Medium	Medium	11/7/2017	Regular	W. Patrick Ross; Tor Harris	(808) 259-7966 ext 25; (603) 978-6800
Siu, Wai Lun	Pier 21 Lunchroom	Honolulu	Pier 21	Low	Medium	3/14/2017	Regular	Raymond Siu	(808) 597-8120
State of Hawaii Department of the Attorney General/Criminal	Attorney General-Asset Forfeiture	Honolulu	Pier 20	Low	Medium	3/21/2017	Regular	Kern Nishioka; Steven Davis	(808) 586-1383
			Pier 19	N/A	N/A	8/29/2017	Final		
Steinke Brothers, Inc.		Honolulu	KIPA	Low	Low	3/9/2017	Regular	Robert Steinke	(808) 478-9777 (808) 488-9668
					N/A	10/3/2017	Final		
Submarines Hawaii		Honolulu	Pier 41	Low	N/A	8/30/2017	Final	Jason Young	
The Gas Company, LLC		Honolulu	Pier 38	Medium	Medium	10/31/2017	Regular	Zoe Williams; AK Colburn	(808) 594-5637
The Pasha Group	Pasha hawaii	Honolulu	Pier 2	Low	Low	4/18/2017	Annual Recon	Darren Lee	(808) 590-3617
The Webe Corporation, Ltd.	Ali'I Kai Catamaran (Subsidiary of Robert's Hawaii)	Honolulu	Pier 5	Low	Low	1/23/2017	Regular	Bernie, Jason Young, Chad	(808) 539-9491 (808) 631-8671 (808) 636-5839
Travel Plaza Transportation, LLC		Honolulu	Pier 19 (Shed and Open Lot)	Medium	N/A	6/9/2017	Final	Shawna Nakachi	(808) 343-0853
Trouble Free Corp.		Kalaeloa	KBPH	Low	Low	6/8/2017	Annual Recon	Chris Boyles	(808) 864-8864
U.S. Bureau of Customs and Border Protection, Department of Homeland Security		Honolulu	Pier 1	Low	Low	1/20/2017	Regular	Gose; Peter F. Gonzales	(808) 522-8001 ext. 223; (808) 356-4175
Unify Recovery Service		Honolulu	KIPA	Medium	N/A	In 2018	Final	Gayle Saito	(808) 256-7266

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
United Fishing Agency, Ltd.		Honolulu	Pier 38	Medium	Low	11/2/2017	Regular	Daniel Otani; Nelson Otani	(808) 536-2148
University of Hawaii		Honolulu	Pier 35	Medium	Medium	11/2/2017	Regular	Ross Barnes	(808) 842-9815, (808) 864-0122
VAK Fisheries, LLC		Honolulu	Pier 19	Low	Low	4/18/2017	Annual Recon	Kim Lu	(808) 258-2990
Van, Kevin	Hi-Sea Hawaii Fishing Supply	Honolulu	Pier 20	Low	Low	6/9/2017	Annual Recon	Kevin Van	(808) 521-6076, (808) 282-1452
					N/A	10/6/2017	Final		
Welch, Jr., Darrell, G., AIA	Aloha Tower, 4th Floor	Honolulu	Pier 9	Low	Low	1/18/2017	Regular	Darrell G. Welch Jr.	(808) 585-8522
Wikoliana Educational Excursions, LLC		Honolulu	Pier 7	Low	N/A	5/24/2017	Final	Ian Jeffrey Landdown	(808) 230-0940
Young Brothers, Ltd.		Honolulu	Piers 39 and 40	High	High	6/23/2017	Regular	Nathan Kapule	(808) 543-9398
						12/14/2017	Regular		

Suspended for final inspection

Result of HDOT PM Review:

- ☐ Confirmed Deficiency
  - o Email Notice of Corrective Action sent to EPA/DOH on:
    (Due Within 21 Calendar Days of Deficiency Notification Date)
- ☐ Re-categorized as Potential Violation (see rationale below)
  - o Email Notice sent to EPA/DOH on:
- ☐ Summarily Dismissed (see rationale below)
  - o Email Notice sent to EPA/DOH on:

Rationale for Re-Categorization or Summary Dismissal:

Notice of Corrective Action

Corrective Action in Response to:

- ☐ Potential Violation (complete Section A & C)
- ☐ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:

Potential Violation Notification Date:
(from Notice of Potential Violation Form)

Corrective Action Notification Date:

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

Deficiency Tracking #:

HDOT Receipt of Draft PEAR Date:

Corrective Action Notification Date:

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action:

Description of Attached Photographs (if applicable):

Appendix B4

Permit-Specific Information – Kalaeloa Barbers Point Harbor

Appendix B4: Permit-Specific Information – Kalaeloa Barbers Point Harbor

1. Key Documents

Permit / Document	4. Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB482
2011 Annual Compliance Report	2011-ACR-Kalaeloa.pdf
2017 Annual Report	2017_HarborsACR_Final-Complete
Best Management Practice Guidance	• 01_BMP_VehicleWashing_20140828.pdf • 02_BMP_VehicleFueling_20140828.pdf • 03_BMP_MaterialStorage_20140828.pdf • 04_BMP_General_20140828.pdf • 05_BMP_SolidandHazardousWasteManagement_20140828.pdf • 06_BMP_MaterialDeliveryHandling_20140828.pdf • 07_BMP_BuildingRemodeling_20140828.pdf • 08-BMP-Vessel-Maintenance-20140925.pdf • 09_BMP_BuildingPowerWashing_20140828.pdf • 10-BMP-Sidewalk-Power-Washing_20140822.pdf • 11-BMP-Storm-Drain-20140828.pdf
DOH Comments on 2017 Annual Report	None received
New Tenant Information Package	HAR-PM-Env-Brochure-v19.pdf
Permit	December 2016 extension is here: 20161202.03KB488.EXT.16.pdf
Public Education and Outreach Plan	Section A of SWMPP
Stormwater Web site	http://hidot.hawaii.gov/harbors/library/storm-water-management/
SWMPP	Final HDOT Harbors SWMP-150325.pdf

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name *(Original File Name)*	**Sections/Pages Relevant to PEAR 3**
2011 Annual Report *(2011-ACR-Honolulu.pdf)*	Section 7.2.2
2017 Annual Report *(2017_HarborsACR_Final-Complete)*	Section 2 Sections 3.2-3.3 Section 4.2 Attachments 1-9 Section C, in entirety
Best Management Practice Guidance • *01_BMP_VehicleWashing_20140828.pdf* • *02_BMP_VehicleFueling_20140828.pdf* • *03_BMP_MaterialStorage_20140828.pdf* • *04_BMP_General_20140828.pdf* • *05_BMP_SolidandHazardousWasteManagement_20140828.pdf* • *06_BMP_MaterialDeliveryHandling_20140828.pdf* • *07_BMP_BuildingRemodeling_20140828.pdf* • *08-BMP-Vessel-Maintenance-20140925.pdf* • *09_BMP_BuildingPowerWashing_20140828.pdf* • *10-BMP-Sidewalk-Power-Washing_20140822.pdf* • *11-BMP-Storm-Drain-20140828.pdf*	In entirety
New Tenant Information Package *(HAR-PM-Env-Brochure-v19.pdf)*	In entirety
Permit *(20161202.03KB482.EXT.16.pdf)*	In entirety
Public Education and Outreach Plan *(Section A of SWMPP)*	Section A of SWMPP in entirety
Stormwater Web site (*http://hidot.hawaii.gov/harbors/library/storm-water-management/)*	In entirety
SWMPP *(Final HDOT Harbors SWMP-150325.pdf)*	(see Public Education and Outreach Plan) Section B, Attachment 1 Section B, Attachment 10, Part 9 Section D Table 3-4 Section E Part 4.0 Section E Attachment 1, Parts 1.1-1.2

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

Potential Violation Tracking #1 applies to this permit and has been presented and tracked in Appendix B3 (Honolulu Harbor).

6. Deficiencies

Deficiency Tracking #1 and #2 apply to this permit and have been presented and tracked in Appendix B3 (Honolulu Harbor).

Appendix B5

Permit-Specific Information – Highways Maui District

Appendix B5: Permit-Specific Information – Highways Maui District

1. Key Documents

Permit / Document	5. Maui District Small MS4 Permit HI 15KE674
2017 Annual Report	20180129.Contents of CD-Annual_Report_2017_HDOTMauiSWMP-v1-HI 15KE674.pdf Plus Parts 1 - 5
Best Management Practice Guidance	• KahuluiHarbor-Fueling.pdf • KahuluiHarbor-General.pdf • KahuluiHarbor-Storage.pdf • KahuluiHarbor-Washing.pdf • KahuluiHarbor-Waste.pdf
DOH Comments on 2017 Annual Report	Assumed no comments received
Permit	NGPC2015-04-02HI15KE674.pdf 20161122 NGPC Extension HI 15KE674 EXT 16.pdf
Public Education and Outreach Plan	OutreachTrainingStrategy_Dec2017 - Copy.pdf
Stormwater Web site	http://hidot.hawaii.gov/stormwater/storm-water-management/maui/swmp/ http://hidot.hawaii.gov/stormwater/storm-water-management/maui/ http://stormwatermaui.com/
SWMPP	MauiSWMP--Dec 2016 Final w-o Appendices.pdf Plus Appendices

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 3**
2017 Annual Report *(20180129.Contents of CD-Annual_Report_2017_HDOTMauiSWMP-v1-HI 15KE674.pdf* *Plus Parts 1 – 5)*	Section 2 Section 3 Section 4.2.4 Appendix A
Best Management Practice Guidance • *KahuluiHarbor-Fueling.pdf* • *KahuluiHarbor-General.pdf* • *KahuluiHarbor-Storage.pdf* • *KahuluiHarbor-Washing.pdf* • *KahuluiHarbor-Waste.pdf*	In entirety
Permit *(NGPC2015-04-02HI15KE674.pdf* *20161122 NGPC Extension HI 15KE674 EXT 16.pdf)*	In entirety
Public Education and Outreach Plan *(OutreachTrainingStrategy_Dec2017 - Copy.pdf)*	In entirety
Stormwater Web site *(http://hidot.hawaii.gov/stormwater/storm-water-management/maui/swmp/* *http://hidot.hawaii.gov/stormwater/storm-water-management/maui/* *http://stormwatermaui.com/)*	In entirety
SWMPP *(MauiSWMP--Dec 2016 Final w-o Appendices.pdf* *Plus Appendices)*	Sections 1.0-2.0 Section 3.2.5-3.2.6 Section 3.3 Appendix F.1

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix B6

Permit-Specific Information – Highways Oahu District

Appendix B6: Permit-Specific Information – Highways Oahu District

1. Key Documents

Permit / Document	6. Oahu District Individual Permit HI S000001
2017 Annual Report	20171101.Compliance Submission for Annual Report 2016-2017-HI S000001.pdf Plus Appendices in folder
DOH Comments on 2017 Annual Report	No comments received from DOH
Permit	20160318.Modified NPDES Permit HI S000001.PDF
Public Education and Outreach Plan	B.1_Public-Education-Plan_REV1_9.23.15.pdf
Stormwater Web site	http://www.stormwaterhawaii.com/ http://www.trashfreehawaii.com
SWMPP	SWMPP (April 2015).pdf Appendices at: http://www.stormwaterhawaii.com/about/hawaii-storm-water-program-plan/

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 3**
2017 Annual Report *(20171101.Compliance Submission for Annual Report 2016-2017-HI S000001.pdf* *Plus Appendices in folder)*	Chapter 2 Chapter 3 Chapter 4.5 Chapter 5.2.7 Chapter 6.2.4 Chapter 7.2.1.1 Appendix B
Permit *(20160318.Modified NPDES Permit HI S000001.PDF)*	Part A.6. Part D.1
Public Education and Outreach Plan *(B.1_Public-Education-Plan_REV1_9.23.15.pdf)*	In entirety
Stormwater Web site *(http://www.stormwaterhawaii.com/* *http://www.trashfreehawaii.com)*	In entirety
SWMPP *(SWMPP (April 2015).pdf* *Appendices at:* *http://www.stormwaterhawaii.com/about/hawaii-storm-water-program-plan/)*	Chapter 2 Chapter 3.2 Chapter 3.8 Chapter 4.7 Chapter 5.4 Chapter 6.4 Chapter 7.2 Chapter 10.3

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix C

Revised Audit Work Plan, November 2016

State of Hawaii Department of Transportation
Office of Environmental Compliance

Revised Audit Work Plan

State Project No. OSC-15-01

November 2016

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- B3: PEAR #3 – Public Outreach / Public Involvement
- B4: PEAR #4 – Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
- B5: PEAR #5 – Pollution Prevention / Good Housekeeping Program
- B6: PEAR #6 – Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

C1 - C6 PEAR 1 - 6 Schedule

- C1: PEAR #1 – Schedule for Post-Construction / Permanent Best Management Practices
- C2: PEAR #2 – Schedule for Construction Site Runoff Control
- C3: PEAR #3 – Schedule for Public Outreach / Public Involvement
- C4: PEAR #4 – Schedule for Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
- C5: PEAR #5 – Schedule for Pollution Prevention / Good Housekeeping Program
- C6: PEAR #6 – Schedule for Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

D1 – D3 Notices to EPA & DOH

- D1: Draft Notice of Potential Violation
- D2: Final Notice of Potential Violation
- D3: Notice of Corrective Action

List of Acronyms

ACR	Annual Compliance Report
AWPC	Audit Work Plan Commencement
BMP	best management practice
CD	Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC)
CFR	Code of Federal Regulations
DOH	Department of Health
EPA	United States Environmental Protection Agency
HAR	Hawaii Administrative Rules
HARP	Hazard Appraisal and Recognition Plan
HDOT	State of Hawaii Department of Transportation
MEP	maximum extent practicable
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
PEAR	Program Element Audit Report
PM	Project Manager
QA	quality assurance
QC	quality control
SWMPP	Storm Water Management Program Plan

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Section 1: Introduction, Purpose, and Goals

Under Paragraph 10.d of the Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC) entered on 5 November 2014 (CD) with the United States Environmental Protection Agency (EPA) and the State of Hawaii (State) Department of Health (DOH), the State of Hawaii Department of Transportation (HDOT) is required to perform compliance audits of Municipal Separate Storm Sewer System (MS4)[1] permits issued to HDOT's Airports, Highways, and Harbors Divisions (referred to herein as the singular "MS4 Permit Audit"). Specific requirements for the MS4 Permit Audit are defined in Appendix A of the CD and included in Appendix A of this document. The MS4 Permit Audit will be conducted in accordance with this Audit Work Plan (AWP) by Kennedy/Jenks Consultants (Kennedy/Jenks), the selected independent third-party audit firm.

This AWP was conditionally approved by EPA & DOH on 31 October 2016. As memorialized in the conditional approval letter, HDOT will begin the audit on 15 March 2017. This date is hereafter referred to as the AWP Commencement date (AWPC). This AWP includes project milestones with defined dates in some cases (e.g., "15 April 2017") while other dates may be specified relative to the AWPC (e.g., "30 days after AWPC"). All "days" in this AWP refer to calendar days as opposed to business days.

The defined purpose of the MS4 Permit Audit is to assess HDOT's current regulatory and administrative compliance with its MS4 permits, DOH National Pollutant Discharge Elimination System (NPDES) General Permit Coverage Authorizing Discharges of Storm Water and Certain Non-Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Hawaii Small MS4 General Permit), applicable Storm Water Management Program Plans (SWMPPs), and the CD.

The defined goals of the MS4 Permit Audit focus on meeting the requirements listed in Appendix A of the CD, including:

- Evaluating compliance with HDOT MS4 permits and the CD
- Identifying information gathered during the MS4 Permit Audit that may be used to promote information and technology transfer between HDOT Divisions
- Identifying Potential Violations (areas where the evaluation found the permittee not in compliance with a specific permit requirement or SWMPP commitment) and Deficiencies (items which, if not corrected, may be anticipated to lead to Potential Violations) in HDOT's stormwater programs and assisting with timely self-correction of identified Potential Violations and Deficiencies by HDOT.

[1] The MS4 refers to the conveyance system in addition to the jurisdiction(s) which own/operate the system.

In addition to meeting the CD requirements and EPA & DOH expectations, the overarching goal of the MS4 Permit Audit is to develop internal trust and collaboration within HDOT. The Audit Team will seek HDOT-wide opportunities for improvement rather than focusing on minor issues of non-compliance.

Reporting requirements of the MS4 Permit Audit are defined in Appendix A Section D.7. of the CD and include:

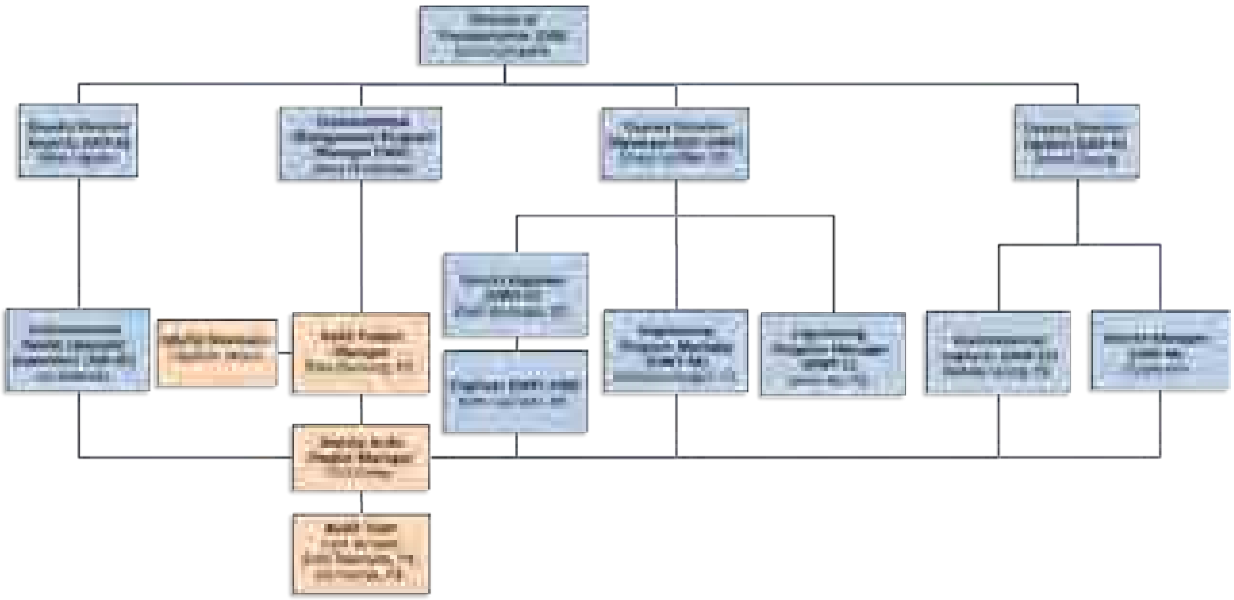
- A specific statement of the procedures followed, HDOT sites and activities visited, and all materials reviewed during the MS4 Permit Audit
- Retrospective analysis of activities that may be outmoded, ineffective, insufficient, or excessively burdensome, and providing recommendations to modify, streamline, or augment them in accordance with what has been learned during the MS4 Permit Audit, as appropriate.
- Identification of Potential Violations and Deficiencies and of MS4 permit conditions, applicable SWMPPs, the CD, and/or other applicable regulations, and providing recommendations for improvements as found to be appropriate
- Identification of best practices and opportunities for information/technology transfer to be applied across the three HDOT Divisions
- An analysis of the practices implemented for each HDOT Division's program elements and a determination as to whether identified best practices can be universally implement across all three Divisions. If best practices cannot be universally implemented, the report will clearly describe impediments identified.

In accordance with requirements defined in Appendix A of the CD, EPA's *MS4 Program Evaluation Guidance* (hereinafter EPA (2007) guidance) was consulted in the development of this AWP. The audit protocols included herein are intended to promote consistency among regulated facilities when conducting environmental audits and to validate that the MS4 Permit Audit is conducted in a thorough and comprehensive manner. Program evaluation worksheets (included in Appendix B) were developed to guide the Audit Team while performing the MS4 Permit Audit. Each worksheet addresses a separate program element, and includes key questions derived from the EPA (2007) guidance document recommended to be considered during an MS4 evaluation. While this AWP is based on the EPA (2007) guidance for auditing small MS4s, HDOT has adapted the guidance to focus some aspects of the audit process to reflect the unique nature of HDOT operations.

Section 2: Audit Team and HDOT Personnel

Figure 2-1 provides an organizational chart defining the Audit Team and HDOT staff that will be involved in the MS4 Permit Audit.

Figure 2-1 Organizational Chart



Additional information describing key MS4 Permit Audit personnel is provided below.

HDOT Project Manager – Anna Fernandez

In her role as Environmental Program Manager, Anna Fernandez reports directly to the HDOT Director. She serves as the HDOT Project Manager (PM) for this project. In this role, she administers and manages Kennedy/Jenks in performing the MS4 Permit Audit and their contact with HDOT leaders and stakeholders.

Deputy Director(s)

Deputy Directors report directly to the HDOT Director. They are responsible for facilitating the Audit Team's access to HDOT personnel and facilities within their respective Divisions as appropriate. The following Deputy Directors will be directly involved in the MS4 Permit Audit process:

Airports (DEP-A) – Ross Higashi
Highways (DEP-HWY) – Edwin Sniffen, P.E.
Harbors (DEP-H) – Darrell Young

MS4 Permit Coordinator(s)

MS4 Permit Coordinators are those HDOT personnel responsible for managing compliance with the MS4 permit for each Division, district, or designated MS4 permitted area. The following MS4 Permit Coordinators will be directly involved in the MS4 Permit Audit process:

Airports (AIR-EE) – Joy Masuda (Environmental Health Specialist Supervisor)
Oahu Highways (HWY-OW) – Kelly Lee Sato, P.E. (Engineer)
Maui Highways (HWY-M) – Ferdinand Cajigal, P.E. (Engineering Program Manager)
Oahu Harbors (HAR-EE) – Randal Leong, P.E. (Environmental Engineer)
Maui Harbors (HAR-M) – Duane Kim (District Manager)

Additional Key MS4 Permit Audit Personnel

The following key staff will also be consulted throughout the MS4 Permit Audit Process:

District Engineer (HWY-O) - Pratt Kinimaka, P.E.
Engineering Program Manager (HWY-C) - Jamie Ho, P.E.

Audit Project Manager – Ross W. Dunning, P.E. / Principal (Kennedy/Jenks)

Ross is a Principal of Kennedy/Jenks and leads their companywide stormwater practice. He has assisted many Western U.S. Port authorities for almost 20 years with development of strategies and stormwater management plans to address Clean Water Act and NPDES regulations. He is Kennedy/Jenks' point of contact for the HDOT PM, and manages the Audit Team to verify that MS4 Permit Audit procedures and reports meet CD requirements and are on schedule. The Audit PM is responsible for updating this Audit Work Plan (with the approval of the HDOT PM), producing schedules, preparing audit reports, and maintaining audit records.

Lead Quality Assurance/Quality Control (QA/QC) Reviewer: Heather Wood (Kennedy/Jenks)

Heather is the former Director of Sustainability for the Port of Virginia, responsible for development of their environmental programs and permit compliance (including NPDES). Heather is also the former Chair of the American Association of Port Authorities Environmental Committee. She is Kennedy/Jenks' Ports and Harbors Sector Leader. In her role as the Lead QA/QC Reviewer, she will direct the review of MS4 Permit Audit work products, including draft and final audit reports, by qualified Kennedy/Jenks staff.

Deputy Audit Project Manager – Phil Potter (Kennedy/Jenks)

Phil is based in Kennedy/Jenks' Honolulu office and leads the firm's stormwater practice in Hawaii. For over 8 years, he has assisted municipal clients including the HDOT Highways Oahu District and the City and County of Honolulu with development and implementation of their NPDES compliance programs. In his role as the Deputy Audit PM, Phil is responsible for assisting the Audit PM in the execution of the Audit Work Plan and will directly coordinate with the HDOT MS4 Permit Coordinators and other stakeholders.

Auditors – Cale Yamada; Brad Takenaka, P.E.; Jon Honda P.E. (Kennedy/Jenks)

Cale, Brad, and Jon are experienced stormwater professionals in Kennedy/Jenks' Honolulu office. Among their many stormwater projects, they currently assist the City and County of Honolulu with ongoing development and implementation of its municipal stormwater program including, but not limited to, providing periodic MS4 program compliance inspections for hundreds of City and County industrial facilities throughout the island of Oahu.

Auditors are responsible for performing inspections of HDOT facilities and documentation, and performing interviews with HDOT employees responsible for MS4 program implementation and management in order to assess compliance with applicable MS4 program and CD requirements. Auditors are also responsible for coordinating with the Audit PM and Deputy Audit PM regarding any Potential Violations and Deficiencies identified. Hereinafter, the "Audit Team" refers to the Kennedy/Jenks' staff introduced above.

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Section 3: Audit Notes and Guidelines

This Section addresses various topics intended to guide the Audit Team in completing the MS4 Permit Audit in a safe and efficient manner.

3.1 Health, Safety, and Site Access Considerations

Prior to initiating onsite evaluations (see Section 5.2), the Audit PM will lead the Audit Team in developing a Hazard Appraisal and Recognition Plan (HARP), following Kennedy/Jenks' standard safety program. The HARP describes how to identify and analyze safety risks associated with field activities, operations, and facilities; approaches for mitigating identified risks; and processes for documenting and reporting accidents, near misses, and potentially unsafe conditions which may be encountered in the field. The HARP is a "living document" which will be updated as appropriate throughout the term of the MS4 Permit Audit. The Audit Team will wear appropriate personal protective equipment (hard hat, safety vest, safety shoes, protective eyewear, and hearing protection as appropriate) while performing the onsite evaluations.

<u>Harbors Facilities</u>

At this time, no special security clearances or requirements are defined to be necessary at Harbors facilities and/or project sites, as long as the Audit Team is escorted by personnel with valid Transportation Worker Identification Credentials (TWIC) and documentation of Maritime Security (MARSEC) Facility Security Awareness training certification. Active loading or unloading of cargo may necessitate additional safety requirements at certain pier locations.

<u>Airports Facilities</u>

At this time, Airports Division facilities to be evaluated are anticipated to be outside secured air operations areas; therefore, no special requirements or clearances are defined to be necessary. Adequate notice will be provided to the Airports Division MS4 Permit Coordinator to arrange security escort as found to be necessary.

<u>Highways Facilities</u>

At this time, there are no defined security restrictions to access Oahu District or Maui District Highway facilities as the Audit Team will be escorted by HDOT personnel at all times.

3.2 Quality Control Procedures

The Audit PM is responsible for ensuring that Kennedy/Jenks' effort and deliverables meet their company's professional mandate to consistently perform work in a technically correct manner, meeting the standard of care for their profession. The standard of care is defined to represent the watchfulness, attention, caution, prudence, and skill that other qualified professionals in the same or similar circumstances would exercise.

Kennedy/Jenks' quality assurance (QA) program includes processes and procedures developed over their near century-old history to achieve and maintain a rigorous level of quality, planning,

application, and verification. Its quality control (QC) program implements this process and QC reviewers will continuously monitor their effort and work products on this project to meet contract and CD requirements, Kennedy/Jenks' QA/QC standards, and HDOT's expectations.

3.3 Photographs

Digital photographs collected and archived during the course of the MS4 Permit Audit will be managed in accordance with EPA's *Digital Camera Guidance for EPA Civil Inspections and Investigations* (2006). Photographs taken will be organized into photograph logs with each photograph numbered with the date and time included. A brief photograph caption will identify the facility or site name, describe what is depicted in the photograph, the location, direction, and other pertinent data (e.g., the location within the facility or site) as appropriate.

3.4 "Maximum Extent Practicable" Concept

Unlike NPDES industrial wastewater permits which typically contain specific end-of-pipe effluent limits based on water quality standards or available treatment technology, HDOT's MS4 permits include programmatic requirements involving the implementation of BMPs in order to reduce pollutants discharged to the "maximum extent practicable" (MEP). In addition, HDOT's permits allow flexibility in the types of BMPs and activities implemented to meet permit requirements. There is also added complexity in evaluating several similar permits applicable to the very different operations conducted at HDOT Highways, Airports, and Harbors facilities. This makes it challenging to assess the true effectiveness of HDOT's several MS4 stormwater programs and how they may be integrated.

Per EPA (2007) guidance, HDOT is considered a non-traditional MS4 permittee, and as such, the evaluation of its MS4 programs will be specific to their particular circumstances and applicable permit requirements. Some HDOT MS4 permits contain broad requirements that outline the basic SWMPP components the permittee is required to implement, giving the permittee the flexibility to develop a program to meet these broad requirements. Other MS4 permits are more prescriptive and specify in detail the minimum activities and best management practices (BMPs) for each program element.

Given these inherent operational differences and challenges, each HDOT permittee has traditionally applied different approaches to comply with specific permit requirements based on MS4-specific traits or issues. For example, EPA regulations require permittees to develop "procedures for site inspection and enforcement" for addressing construction activities. Few MS4 permits specify how the permittee should inventory their active construction projects or track enforcement activities. A permittee with only a few construction projects a year may be able to use a paper system to inventory and track construction projects. A permittee with hundreds or thousands of construction projects would likely need a database or similar electronic tracking system to ensure it was implementing the program to a level considered to meet MEP.

It is relatively straightforward to assess whether HDOT has developed certain programs and conducted various activities that are called for and within the timeframes specified in each of the permits under consideration, as well as activities or programs specified under SWMPPs or other documents prepared by HDOT. The challenge for the Audit Team and HDOT is to assess

whether the programs and activities implemented have or will constitute MEP. EPA (2007) guidance will assist with this determination, but is not definitive. Determination requires application of the Audit Team's best professional judgment.

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Section 4: Audit Structure and Schedule

For each of the six program elements required to be reviewed by the CD, Kennedy/Jenks will review the six permitted MS4 programs concurrently, developing six Program Element Audit Reports (Final PEARs) that represent the culmination of the auditing efforts across the three HDOT Divisions.

Appendix A of the CD defines various project milestones and deadlines, described for ease of reference below:

Table 4-1 CD Appendix A Deadlines

Program Element	Evaluation Complete: [a]	Draft PEAR to HDOT: [d]	HDOT Review of Draft PEAR: [e]	Final PEAR to HDOT: [f]
PEAR #1: Post-Construction Runoff Control / Permanent Best Management Practices	3 Months (90 Days) [b] After AWPC[c] 13 June 2017	135 Days After AWPC 28 July 2017	165 Days After AWPC 27 August 2017	210 Days After AWPC 11 October 2017
PEAR #2: Construction Site Runoff Control	9 Months (270 Days) After AWPC 10 December 2017	315 Days After AWPC 24 January 2017	345 Days After AWPC 23 February 2017	390 Days After AWPC 9 April 2018
PEAR #3: Public Outreach / Public Involvement	15 Months (450 Days) After AWPC 8 June 2018	495 Days After AWPC 23 July 2018	525 Days After AWPC 22 August 2018	570 Days After AWPC 8 October 2018
PEAR #4: Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Programs	21 Months (630 Days) After AWPC 5 December 2018	675 Days After AWPC 19 January 2019	705 Days After AWPC 18 February 2019	750 Days After AWPC 4 April 2019
PEAR #5: Pollution Prevention / Good Housekeeping	27 Months (810 Days) After AWPC 3 June 2019	855 Days After AWPC 18 July 2019	885 Days After AWPC 17 August 2019	930 Days After AWPC 1 October 2019
PEAR #6: Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability	33 Months (990 Days) After AWPC 30 November 2019	1035 Days After AWPC 14 January 2020	1065 Days After AWPC 13 February 2019	1110 Days After AWPC 29 March 2020

Notes:

(a) "Evaluation" as referenced in CD Appendix A Section B.5. is defined in this AWP to represent the conclusion of the Post-Onsite Evaluation Review Period (See Section 5.2.3) for PEARs #1, 2, 4, and 5. For PEARs #3 and 6, no onsite evaluation is required and therefore "evaluation" is defined to represent the date of conclusion of the Records Review period. Please refer to Appendix C for more detail.

(b) “Months” are based on 30-day months in this AWP.
(c) AWPC = Audit Work Plan Commencement (15 March 2017)
(d) Pursuant to CD Appendix A Section D.2., Kennedy/Jenks will complete a draft audit report and transmit it to HDOT within 45 days of completing an audit of a program element (defined in this AWP as the conclusion of “evaluation”, as discussed in Note (a)).
(e) Pursuant to CD Appendix A Section D.3., HDOT will review the draft PEAR to correct any factual inaccuracies within 30 days of receipt.
(f) Pursuant to CD Appendix A Section D.4., Kennedy/Jenks will complete a final PEAR within 120 days of completing an audit of a program element (defined in this AWP as the conclusion of “evaluation”, as discussed in Note (a)).

Section 5: Program Element Audits

Each program element audit will follow a similar schedule and structure, discussed generally in this section. The Program Element Audits will occur over a 37-month period depicted graphically below (Figure 5-1):

Figure 5-1 Program Element Audit Schedule

Appendices B1 - B6 list the basic information anticipated to be reviewed for each MS4 program element to be audited. The Audit Team will utilize worksheets provided in Appendices B1 - B6 to collect and track information for each MS4 permit and element. References to Appendices C1 - C6 are also included, defining specific schedules for each of the six PEARs. Each Program Element Audit will include three phases (Pre-Audit, Onsite Evaluation, and Reporting), detailed in the following sections.

5.1 Pre-Audit

This Section describes the first phase of each Program Element Audit.

5.1.1 Notice of Audit

The Audit Team will schedule events, confirm appropriate participants, and begin planning the upcoming program element audit with the HDOT PM prior to initiating each Program Element Audit (Appendices C1 - C6 Item 1). The HDOT PM will coordinate with the MS4 Permit Coordinators to provide the following for each of the six MS4 permits:

- Facility or Division-specific SWMPPs
- Recent Annual Reports
- Documentation of required training, inspection reports, legal enforcement correspondence, if any, etc.
- Relevant memoranda of understanding with adjacent of contributing agencies, municipalities, etc.
- Organizational charts specifically listing HDOT staff with MS4 permit authority and responsibility.

The HDOT PM will coordinate with the MS4 Permit Coordinators to identify individuals and stakeholders that should be engaged during the MS4 Permit Audit.

5.1.2 Records Request

The Audit Team will review those sections of the NPDES permits, SWMPPs, guidance documents, the CD, etc. pertinent to the each individual audit element. Based on this review, the Audit Team will develop a records request and submit it to the HDOT PM (Appendices C1 - C6 Item 2). Where documentation is required (completed forms, logs, sign-in sheets, etc.), the Audit Team will request a subset of relevant records for verification. Electronic records are preferred, but physical copies of hard copy records are also acceptable. The HDOT PM will work with the MS4 Permit Coordinators to acquire and provide requested records to the Audit Team (Appendices C1 - C6 Item 3).

5.1.3 Records Review

The Audit Team will compare the program element requirements and commitments identified in the NPDES permits, SWMPPs, CD, annual reports, etc. and the records obtained in the record review (Appendices C1 - C6 Item 4). This review will be informed to the extent appropriate by the interview questionnaire provided in Appendices B1 - B6. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators may be conducted during this period.

5.2 Onsite Evaluation

This Section describes the second phase of each Program Element Audit.

5.2.1 Pre-Onsite Evaluation Conference Call

The Audit Team and HDOT PM will contact each MS4 Permit Coordinator to confirm schedules, address questions and security concerns, confirm personnel safety equipment needed, and organize training and orientation briefings that may be required (Appendices C1 - C6 Item 5).

5.2.2 Onsite Evaluation

For work planning purposes, it is assumed that onsite evaluations for each Program Element will be conducted over the course of five (5) days (except for PEAR #4, which requires an extra day). Detailed activity descriptions and schedules are included in Appendices C1 - C6 (Item 6). It should be noted that following EPA (2007) guidance, PEAR #3 and PEAR #6 do not require onsite evaluations[2]. The onsite evaluations for each Program Element are tentatively scheduled during the following time periods (Table 5-1):

[2] Although no on-site evaluation is required for PEAR #3 (Public Outreach / Public Involvement Program), the Audit Team will endeavor to identify and attend events such as Harbors' tenant outreach in order to gain a well-rounded understanding of this program.

Table 5-1 Tentative On-Site Evaluation Dates

PEAR	On-Site Evaluation
PEAR #1: Post-Construction / Permanent Best Management Practices	Tuesday 30 May 2017 to Monday 5 June 2017
PEAR #2: Construction Site Runoff Control	Monday 27 November 2017 to Friday 1 December 2017
PEAR #3: Public Outreach / Public Involvement Program	[none required]
PEAR #4: Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program	Monday 19 November 2018 to Wednesday 28 November 2018
PEAR #5: Pollution Prevention / Good Housekeeping Program	Monday 20 May 2019 to Friday 24 May 2019
PEAR #6: Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability	[none required]

5.2.3 Post-Onsite Evaluation Review Period

Following the Onsite Evaluations, the Audit Team will review the findings of the Pre-Audits and Onsite Evaluations and address final evaluation-related tasks that may have been noted (Appendices C1 - C6 Item 7). This review period completes the evaluation of the program element, as referenced in CD Appendix A Section B.5.

5.3 Reporting

This Section describes the third phase of each Program Element Audit.

5.3.1 Draft PEARs

Pursuant to the CD, the Audit Team will prepare draft PEARs documenting the procedures followed, sites and activities visited, materials reviewed, and a summary of major findings from the program element audits of the six HDOT NPDES permits (Appendices C1 - C6 Item 8). The PEARs will be structured so that they may be easily incorporated into each Division's Annual Compliance Report (ACR) (see Section 7).

The Audit Team will endeavor to draw defensible conclusions based on the NPDES permit requirements and conditions, the SWMPP developed to meet the permit goals, measurable achievement of those goals, and the Audit Team's best professional judgment interpretation of compliance with the NPDES regulations.

EPA (2007) guidance describes that, in some cases, it may not be possible to assess compliance with a program component because of the limitations of the MS4 program evaluation process. If this is found to be the case, the draft PEAR for the program element will state that this is the case and provide as much supporting information as possible. Similarly, if there were no findings of note for a particular SWMPP or NPDES component, this fact will be stated in the PEAR.

If the Audit Team identifies what may be a Potential Violation or Deficiency at any point during the Pre-Audit, Onsite Evaluation, or Reporting periods, actions will be taken in accordance with the decision tree defined in Section 6 for the Audit Team, HDOT PM, and MS4 Permit Coordinators to follow. The draft PEAR will describe the two findings as follows:

- Findings reviewed per Section 6 and found to be Potential Violations, reported to DOH/EPA and addressed via Corrective Actions.
- Findings found to be Deficiencies, for which recommendations for improvement will be included.

Each draft PEAR will identify BMPs and opportunities for information/technology transfer that may be considered for application across the three HDOT Divisions. The draft PEARs will also analyze the practices implemented for each HDOT Division's program elements and assess whether identified best practices can be universally implemented across the three HDOT Divisions. If best practices cannot be universally implemented, the draft PEAR report will describe identified impediments (such as legal barriers). The draft PEAR will also identify positive program elements considered to exceed the NPDES requirements and SWMPP. Finally, the draft PEAR will include a retrospective analysis of activities that are considered to be potentially outmoded, ineffective, insufficient, or excessively burdensome. Recommendations to modify, streamline, or expand them in accordance with what has been learned will be listed.

The Audit Team will complete the draft PEAR within 45 days of the completion of the evaluation for each program element. The Audit Team will provide five (5) copies of the draft PEAR and one electronic file copy in Word (Version 2007 or earlier) to the HDOT PM.

5.3.2 HDOT Review

Upon receipt, the HDOT PM will distribute copies of the draft PEARs to the appropriate MS4 Permit Coordinators, who will be responsible for reviewing the reports and distributing the reports to key personnel for their review. The MS4 Permit Coordinators will submit to the HDOT PM a consolidated written request for clarification and corrections to the draft PEAR for their respective permit as found to be necessary (Appendices C1 - C6 Item 9). The HDOT PM will then submit the consolidated requests and corrections to the Audit PM (Appendices C1 - C6 Item 10).

5.3.3 Final Audit Report

Upon receipt of the consolidated requests and corrections, the Audit Team will make appropriate changes to the draft PEARs and submit the final PEARs (Appendices C1 - C6 Item 11).

For PEARs #1 - 5, the Final PEAR is scheduled to be submitted approximately 25 days in advance of the CD deadline. This is intended to afford additional time for the Divisions in each subsequent Program Element Audit. The CD is structured such that, if followed strictly, only 60 calendar days are afforded for Steps 1 to 7 of PEARs #2 - 6. For example, Final PEAR #1 is due at 210 days following AWPC and the evaluation of PEAR #2 is due at 270 days following AWPC. By reducing the time it takes Kennedy/Jenks to write the Final PEAR, an additional 25 days are afforded to the Divisions to fulfill the records request for the subsequent audit (Appendices C2 - C6 Item 3).

The Audit Team will provide five (5) copies of the final PEARs and one electronic file copy in Word (Version 2007 or earlier) to the HDOT PM.

5.3.4 Post-Audit Report Review

The HDOT PM and Audit PM will meet after the submission of each PEAR to discuss QC procedures and potential improvements to be made prior to the subsequent PEAR.

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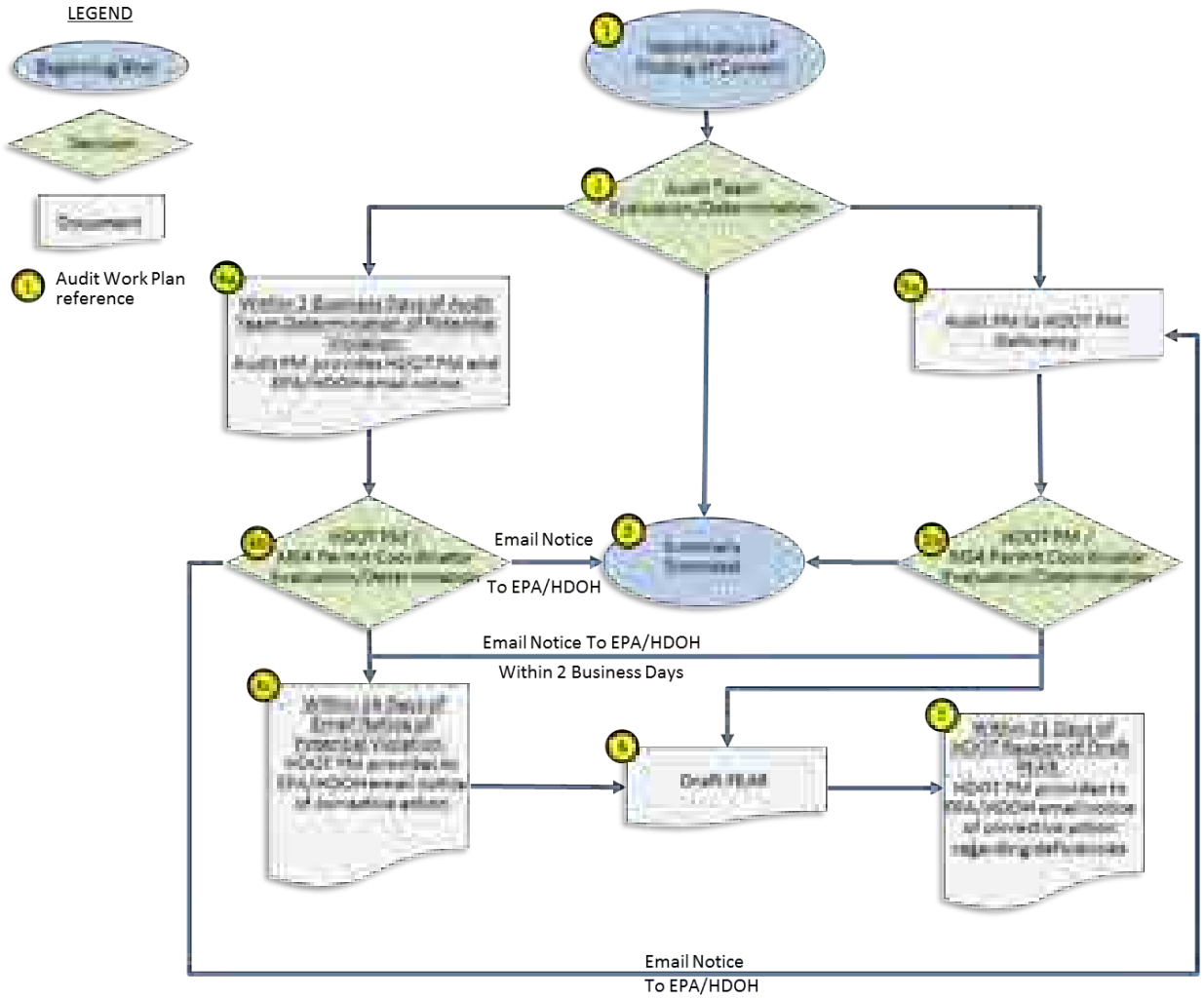
Section 6: Potential Violations and Deficiencies

If at any point during the Pre-Audit, Onsite Evaluation or Reporting Periods the Audit Team identifies what may represent a Potential Violation or Deficiency (hereinafter "Finding of Concern"), the Audit Team, HDOT PM, and MS4 Permit Coordinators will follow the decision tree shown on Figure 6-1.

Figure 6-1 Potential Violation and Deficiency Decision Tree



1 6.1 Identification of Finding of Concern

2 6.2 Audit Team Consultation

Upon identification of a Finding of Concern, the Audit Team will consult internally to assess whether the Finding of Concern may represent a Potential Violation, a Deficiency, or whether it summarily merits dismissal.

Potential Violation - The Audit Team will categorize the Finding of Concern as a Potential Violation if it meets the EPA (2007) guidance definition of an "area where the evaluation found the permittee not in compliance with a specific permit requirement or SWMPP commitment". These occurrences would follow the procedures listed in Section 6.3.

Deficiency – The Audit Team will categorize the Finding of Concern as a Deficiency if it meets the Consent Decree definition of an "item which, if not corrected, will lead to potential violations"[1]. These occurrences would follow the procedures listed in Section 6.4.

3 Summary Dismissal – The Audit Team will dismiss the Finding of Concern if it does not meet either the definition of a Potential Violation or a Deficiency. No further action will be required.

[1] EPA (2007) guidance further elaborates that deficiencies are areas of concern impeding effective program implementation. They are typically areas where the permit or SWMPP does not describe specifically how the permittee should conduct an activity, yet the evaluator believes the permittee may consider altering how they conduct the activity to meet water quality goals. Deficiencies can also be areas where future permit violations could result if the permittee continues on its present path. The Audit Team will look for opportunities to enhance program elements (e.g. recommending that MS4 Coordinators perform required annual reviews earlier in the year, thereby allowing time for self-correction).

6.3 Potential Violation Decision Tree

Notification: Audit PM to HDOT PM and EPA & DOH

If the Finding of Concern is categorized by the Audit Team as a Potential Violation, the Audit PM will notify the HDOT PM and EPA & DOH via email[1] within 2 business days of making the determination using the form presented in Appendix D1. Additionally, the HDOT PM will be notified via telephone. These notifications will include the following information:

1. Specific details of the Potential Violation
2. Related photographs, if any
3. Applicable regulatory references [i.e., NPDES permit, SWMPP, Hawaii Administrative Rules (HAR), or Code of Federal Regulations (CFR) references, as applicable].

Evaluation/Determination

The HDOT PM will consult with the appropriate MS4 Permit Coordinator to further investigate the factual accuracy of the Potential Violation determination. Based on that consultation, the Potential Violation may be summarily dismissed (if found to be factually inaccurate) or re-categorized as a Deficiency (if incorrectly categorized as a Potential Violation). Both of these scenarios would be accompanied by email notification from the HDOT PM to EPA & DOH using the form presented in Appendix D2. The time required for this consultation is included in the 14-day timeline described in Item 4c, below.

Determination of Potential Violation

If the Finding of Concern is confirmed to be a Potential Violation, the HDOT PM will then work with the appropriate MS4 Permit Coordinator to assess suitable corrective actions.

Unless otherwise agreed upon with EPA & DOH, HDOT will correct the Potential Violation within 14 days of initial Audit Team email notification to EPA & DOH (see Item 4a above). Email notification of the Corrective Action will be provided to EPA & DOH by the HDOT PM using the forms presented in Appendix D2 and Appendix D3. The Consent Decree allows HDOT the option to request an extension to this reporting deadline. In order for EPA & DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA & DOH.

[1] Per EPA & DOH request, Connor Adams (EPA) and Matthew Kurano (DOH) will be copied on all email notifications to EPA & DOH.

6.4 Deficiency Decision Tree

5a **Notification: Audit PM to HDOT PM**

If a Finding of Concern is categorized as a Deficiency, the Audit PM will notify the HDOT PM via telephone and email and include the following information:

1. Specific details of the Deficiency
2. Related photographs, if any
3. Applicable regulatory references (i.e., NPDES permit, SWMPP, HAR, or CFR references, as applicable).

5b **Evaluation/Determination**

The HDOT PM will consult with the appropriate MS4 Permit Coordinator to further investigate the factual accuracy of the Deficiency determination. Based on that consultation, the Deficiency may be summarily dismissed (if found to be factually inaccurate) or re-categorized as a Potential Violation (if incorrectly categorized as a Deficiency). The latter scenario will be accompanied by an email notification to EPA & DOH within 2 business days of making the determination using the form presented in Appendix D2.

6 **Deficiency**

If the finding is confirmed to be a Deficiency, this finding (along with confirmed Potential Violations) will be documented in the appropriate draft PEAR. The HDOT PM will work with the appropriate MS4 Permit Coordinator to assess the appropriate corrective actions.

7 Unless otherwise agreed upon with EPA & DOH, HDOT will correct Deficiencies within 21 days of receiving the draft PEAR (Appendices C1 - C6 Item 8). Email notification of the Corrective Action will be provided to EPA & DOH by the HDOT PM using the form included in Appendix D3. The CD allows HDOT the option to request an extension to this reporting deadline. In order for EPA & DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA & DOH.

Section 7: Annual Compliance Report

Due to the differences in Division operations, not all portions of each PEAR will be applicable to all MS4 permittees. As such, the PEARs will be structured so that they may be easily incorporated into each Division's Annual Compliance Report (ACR). The HDOT PM will work with each permittee to ensure that the appropriate PEAR content is included in each individual ACR. Each ACR will include a detailed summary of actions taken as a result of the audit reports and dates at which corrective actions, if warranted, were taken.

Additionally, pursuant to CD Appendix A Section D.5., the HDOT PM will submit each original draft and final PEAR to EPA & DOH at the same time that ACRs are submitted. Within the draft and final PEAR, an authorized HDOT official will certify that, to the best of the official's knowledge and information, the MS4 Permit Audit was conducted in accordance with this AWP. If items have not been corrected, HDOT will provide a schedule for implementing corrective measures.

References

United States Environmental Protection Agency. 2005. Small SM4 Stormwater Program Overview. December. Accessed online at <https://www3.epa.gov/npdes/pubs/fact2-0.pdf>.

United States Environmental Protection Agency. 2006. Digital Camera Guidance for EPA Civil Inspections and Investigations. July. Accessed online at <https://www.epa.gov/sites/production/files/2013-09/documents/digitalcameraguide.pdf>.

United States Environmental Protection Agency. 2007. *MS4 Program Evaluation Guidance.* Accessed online at <https://www3.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf>.

Appendix A

Consent Decree Sections Pertaining to Audit
(10.d Page and Appendix A)

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APPENDIX A

ENVIRONMENTAL COMPLIANCE AUDITS

A. General Provisions

1. This Appendix provides details of the NPDES MS4 compliance audits required by Paragraph 10.d of the Consent Decree. The audits shall include evaluation of common stormwater program elements at each of HDOT's three divisions (Airports, Highways and Harbors), as stated in Paragraph A.3 below, throughout the state on a per element schedule. The audits shall be completed to fulfill the following goals:
    a. Determine compliance with the federal regulations and state MS4 permits and regulations and this Consent Decree (see Paragraph A.2, below);
    b. Ensure information gathered during the audits is used to promote information and technology transfer between divisions; and
    c. Identify deficiencies and potential violations that are discovered by the third party auditor and allow for timely self-correction of the deficiencies and potential violations by HDOT.
2. The audits shall be designed to assess current regulatory and administrative compliance with the following items throughout each of HDOT's divisions:
    a. The Hawaii NPDES General Permit Authorizing Discharges of Storm Water and Certain Non-Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Hawaii Small MS4 General Permit), Hawaii Administrative Rules, chapter 11-55, Appendix K;
    b. NPDES permit, Permit No. HI S000001, MS4 Permit for the HDOT-Highways, Oahu District;
    c. NPDES Permit, Permit No. HIS000005, MS4 Permit for the HDOT-Airports, Honolulu International Airport;
    d. Applicable Storm Water Management Plans (SWMPs); and
    e. This Consent Decree.
    f. Future NPDES MS4 permits and SWMPs issued to HDOT. This obligation shall not delay or prevent termination of the Consent Decree.
3. The audits shall include, but not be limited to, an evaluation of the following MS4 Program Elements as they relate to compliance at each of HDOT's three divisions:
    a. Public Education/Outreach and Participation/Involvement
    b. Illicit Discharge Detection and Elimination (including commercial/tenant oversight programs)
    c. Construction Site Runoff Control
    d. Post-Construction Runoff Control/ Permanent BMPs
    e. Pollution Prevention/ Good Housekeeping
    f. An analysis of how Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability impact MS4 compliance
4. HDOT shall audit Program Elements for the Harbors, Airports and Highways Divisions in accordance with the schedule defined in the Work Plan described in Paragraph B.1, below.

5. The audits shall be conducted by a qualified third party environmental consulting firm retained by HDOT and selected by a committee consisting of representatives of the HDOH and HDOT. The selection committee shall choose an audit firm which is experienced with environmental auditing and the permits and regulations described in Paragraph A.2, above.
6. The requirements of this Appendix related to the consulting firm's qualifications, authority to conduct the audits, and production of the HDOT Audit Reports (Audit Reports) shall be incorporated in any contract relating to the audits entered into by HDOT and the selected consulting firm to the extent allowed by State Procurement Code.
7. Any violations by HDOT discovered though the execution of the Environmental Compliance Audit detailed in this Appendix are neither "voluntarily discovered" within the terms of EPA's revised *Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations Policy* (Audit Policy) nor voluntarily disclosed to EPA under EPA penalty policies. Accordingly, any such violations are ineligible for penalty mitigation or other favorable treatment under the Audit Policy.
8. HDOT agrees not to attempt to use any state audit and/or privilege laws to restrict EPA's or HDOH's ability to review the Audit Reports at HDOT facilities to determine if the audits have been properly completed and HDOT has corrected any uncorrected non-compliance, potential violation, or deficiency as per its certification (see Paragraph F below). Also, HDOT agrees not to attempt to use any state audit and/or privilege laws to restrict EPA's or HDOH's ability to obtain, review and/or use the Audit Reports in any action to enforce the audit provisions of the Consent Decree. Neither information contained in the Audit Reports, nor underlying information upon which the Audit Reports relied, that indicates regulatory violations at any HDOT facility, shall be claimed as confidential business information by HDOT or its consulting firm.

B. Procurement of Services/Audit Work Plan

1. HDOT shall advertise a Request for Qualifications from third party audit firms to conduct the audits. Advertisement for the Request for Qualifications shall not exceed forty-five (45) days.
2. Within thirty (30) days of the end of the Request for Qualifications period, the HDOT and HDOH selection committee shall conduct the professional services selection of an audit firm and provide the recommendation to the Director.
3. Within fifteen (15) days of the selection committee recommendation to the Director of Transportation, or another length of time agreed to by EPA and HDOH, HDOT shall notify the potential audit firm with a letter of selection, pending negotiation of fees.
4. Within thirty (30) days or another length of time agreed to by EPA and HDOH, HDOT shall, as approved by the Director of Transportation, award the selected audit firm and proceed to process the contract for the audit work. Within seven (7) days of each milestone, HDOT shall notify EPA and HDOH by email that the following milestones were completed:
    a. Request for Qualifications advertisement;
    b. Awarding of contract between HDOT and the selected audit firm;
    c. Notice to Proceed on the Audit.
5. On or before September 16, 2016, HDOT shall submit a draft audit work plan (Audit Work Plan) to EPA and HDOH for review and approval. In developing the Audit Work Plan, HDOT shall consult EPA's guidance on auditing small MS4s:

http://www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf The Audit Work Plan shall include the following audit schedule and describe each task necessary to accomplish the Audit Scope with targeted time frames for the consulting firm to complete:

a. 3 months after the Audit Work Plan is approved: Evaluation of Post Construction/Permanent BMP programs for all three HDOT divisions;
b. 9 months after the Audit Work Plan is approved: Evaluation of Construction Site Runoff Control programs for all three HDOT divisions;
c. 15 months after the Audit Work Plan is approved: Evaluation of Public Outreach/Public Involvement for all three HDOT divisions;
d. 21 months after the Audit Work Plan is approved: Evaluation of Illicit Discharge Detection and Elimination, Industrial Commercial Activities/Tenant Programs for all three HDOT Divisions;
e. 27 months after the Audit Work Plan is approved: Evaluation of Pollution Prevention/Good Housekeeping for all three HDOT Divisions;
f. 33 months after the Audit Work Plan is approved: Evaluation of Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability for all three HDOT divisions.

6. The Audit Work Plan shall include, but is not limited to: the minimum documents to be reviewed (e.g. SWMPs, training records, inspection reports, etc.), minimum number of field verifications, as necessary, for each program element evaluated, deliverables (notices of potential violations, draft and final audit reports), and reporting deadlines.
7. EPA, after consultation with HDOH, may reject the draft Audit Work Plan in whole or in part. If EPA rejects the Audit Work Plan or any portion of it, EPA shall identify the reason(s) in writing to HDOT for such rejection and may require HDOT to redraft the Audit Work Plan in its entirety or part. EPA shall provide any comments to HDOT within forty-five (45) days.
8. If EPA and HDOH reject the Audit Work Plan in whole or part, HDOT shall resubmit a revised Audit Work Plan within one hundred and twenty (120) days. After submission of the revised Audit Work Plan, EPA, after consultation with HDOH, shall provide any comments to HDOT within forty-five (45) days. HDOT will review all comments and make all required modifications to the revised Audit Work Plan. If EPA does not provide written comments, the revised Audit Work Plan shall be deemed approved by EPA and HDOH.

C. Audits

1. HDOT shall take all appropriate measures to facilitate the audit firm in performing the audits in accordance with the approved Audit Work Plan.
2. HDOT shall grant the audit firm full access to and unrestricted review of all HDOT records, documents and information that the audit firm requires to complete the audits.

D. Reporting/Audit Reports

1. HDOT shall require the audit firm to provide preliminary written notice of any potential violations identified in any audit to HDOT, EPA and HDOH within 2 business days following an audit of a program element in Paragraph B.1, above.
2. HDOT shall require the audit firm to complete a draft audit report to HDOT within 45 days of completing an audit of a program element.
3. HDOT shall review the draft audit report to correct any factual inaccuracies within 30 days after receiving the draft audit report.
4. HDOT shall require the audit firm to complete a final audit report within 120 days, or another length of time agreed to by EPA and DOH, of completing an audit of a program element.
5. HDOT shall submit original draft and final audit reports to EPA and HDOH with the Annual Compliance Report (ACR).
6. HDOT shall provide a detailed summary of any actions taken as a result of the audit reports and dates at which those actions were taken with the ACR.
7. The HDOT Audit Reports shall contain:
    a. A specific statement of the procedures followed, HDOT sites and activities visited and all materials reviewed during the audits;
    b. Retrospective analysis of activities that may be outmoded, ineffective, insufficient, or excessively burdensome, and recommendations to modify, streamline, or expand them in accordance with what has been learned;
    c. An identification of deficiencies (items which, if not corrected, will lead to potential violations) and potential violations with the applicable SWMPs, this Consent Decree, and/or applicable permit and regulations, and recommendations for improvement;
    d. Identification of best practices and opportunities for information/technology transfer to be applied across all divisions; and
    e. An analysis of the practices implemented for each Division's program elements and a determination as to whether identified best practices can be universally implement across all three Divisions. If best practices cannot be universally implemented, the report shall clearly describe the identified impediments.
8. HDOT shall correct any deficiency or potential violation identified in the Audit Reports or otherwise discovered by HDOT as part of the audit process set forth herein within the time frames identified in Paragraph E below.

E. Corrections of Potential Violations and Deficiencies

1. HDOT shall correct any potential violations within 14 days of notification as described in D.1 of this Appendix, or another period of time agreed to by EPA and DOH. In order for EPA and DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA and HDOH.
2. HDOT shall correct any deficiencies within 21 days of receiving the draft Audit Report, or another period of time agreed to by EPA and HDOH. In order for EPA and HDOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA and HDOH.
3. If HDOT corrects any violation discovered through the Audit process within the time frames described above, it shall not be subject any related stipulated penalties under Paragraph 30.

4. Notwithstanding anything in E.3 of this Appendix, the United States and HDOH reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree or to obtain penalties or injunctive relief under the Act or its implementing regulations, or under other federal or State laws, regulations, or permit conditions, if HDOH or EPA independently discovers a violation of a permit, law, or statute.
5. Similarly, United States and HDOH, reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree or to obtain penalties or injunctive relief under the Act or its implementing regulations, or under other federal or State laws, regulations, or permit conditions, if an activity or violation poses an immediate threat to human health or the environment.

F. Certifications

1. HDOT shall provide the following information and certifications to EPA and HDOH regarding completion of each audit and correction of any non-compliance or potential violation identified in the Audit Reports or otherwise discovered by HDOT as part of the audit process within an Environmental Compliance Audit section of the ACR. An authorized HDOT official shall certify that, to the best of the official's knowledge and information, the audits were conducted in accordance with the Work Plan described above, the Audit Reports are submitted to HDOT, EPA and HDOH in the ACR as described above, and all items of non-compliance identified in the Audit Reports have been corrected or steps have been taken to correct them. If all items have not been corrected, HDOT must include a schedule for correcting the issue.

Appendix B

PEAR 1 through 6 Guiding Questions

B1: PEAR #1 – Post-Construction / Permanent Best Management Practices

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Overall Approach**						
A1	Discuss the process chronologically in the order that a project would occur. Walk us through the process as if we were a developer proposing a project.						
B	**Laws/Rules/Regulations/Policies**						
B1	What legal authority does the permittee have to require post-construction BMPs on development sites and to ensure maintenance?						
B2	Does the permittee's legal authority address post-construction requirements for all projects disturbing one acre or more?						
B3	Does the legal authority require site design, source control, and stormwater treatment BMPs?						
B4	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
B5	What procedures for alternative compliance (i.e., planning-level BMPs and other non-structural controls) are allowed?						
B6	Does the legal authority authorize the permittee to require stormwater management plans to address post-construction impacts?						
B7	Do the laws/rules/regulations/policies outline the contents of an approvable plan and responsibilities for operation and maintenance of approved BMPs?						
C	**Post-Construction BMP Standards**						
C1	What technical guidance (e.g., BMP manual) does the permittee use as the standard for design and selection of post-construction BMPs? Note: It is not necessary to do a thorough review of the manual or standards used by the permittee.						
C2	Are project proponents required to follow a technical guidance manual?						
C3	Does the guidance provide siting and use criteria for the BMPs to ensure proper and adequate BMPs are being selected and implemented?						
C4	Does the guidance provide siting and use criteria for BMP selection based on the development context (i.e., BMP selection appropriate for ultra urban-areas versus those more appropriate for more rural settings with larger parcels)?						
C5	Are pollutants of concern that are typically generated by the proposed development type considered when selecting or approving BMPs?						
C6	Does the technical manual provide guidance on sizing, performance, and location of BMPs?						
C7	When was the BMP manual last updated?						
C8	Does the permittee have different requirements or standards for different types of developments (e.g., specific post-construction requirements for gas stations or automobile repair facilities)?						
C9	Does the permittee have design manuals related to land-efficient site designs (e.g. better site design, better models for large retailers)?						
C10	Does the permittee promote source control and site design standards to reduce the generation of pollutants in addition to treatment BMPs?						
C11	Does the permittee include in standards and manuals specifications for innovative site design practices, such as low-impact development and other techniques that manage runoff on-site?						

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C12	Are project applicants encouraged or required to use vegetative BMPs that promote infiltration, such as swales, biofiltration practices, etc., where possible?						
C12	Does the permittee offer financial incentives to support post-construction stormwater goals (e.g., programs to support redevelopment, such as enterprise zones, or stormwater utility credits)?						
D	**Plan Review and Approval Procedures**						
D1	Which Division/District is responsible for post-construction stormwater plan review?						
D2	How many plan reviewers are there?						
D3	How many plans submitted for review (private and public projects) each year?						
D4	What is the project size threshold for the permittee to require post-construction BMPs?						
D5	Does the permittee apply standard conditions that incorporate post-construction installation and maintenance requirements into its plan review process?						
D6	Do plan reviewers use specific criteria or a checklist when reviewing plans?						
D7	Does the permittee consider pollutants of concern or whether the project discharges to a 303(d) listed impaired water when determining which BMPs are required?						
D8	Does the permittee consider such regional concerns as smart growth initiatives, watershed master plans, and other larger-scale planning efforts to ensure that each new development and redevelopment plan is consistent with the goals of these initiatives?						
D9	For up to three sets of post-construction plans provided by permitee:						
D9a	Are adequate BMPs included on plans, details, and drawings?						
D9b	What types of standard conditions or notes are included?						
D9c	Are maintenance requirements specified?						
D9d	Do the location of BMPs hinder maintenance?						
D10	What types of projects must be reviewed by the permittee for post-construction stormwater controls?						
D11	Does the permittee have a process to identify priority projects identified in the MS4 NPDES permit?						
D12	What types of standards or technical guidance do the permittee's reviewers use to review projects?						
D13	Does the permittee condition improvements to existing developments with requirements for post-construction stormwater controls? How are these redevelopment requirements triggered?						
E	**Post-Construction BMP Inventory**						
E1	How does the permittee track the installation and maintenance of post-construction BMPs?						
E2	Is your post-construction BMP inventory managed in a database and/or linked to GIS?						
E3	What information is collected?						
F	**BMP Inspection & Maintenance**						
F1	Does the permittee require maintenance agreements for all projects with post-construction BMPs?						
F2	Are as-built inspections conducted at the conclusion of a project to ensure the BMP has been built properly? What Division/District is responsible for this?						
F3	Do staff conduct these inspections or are they self-certified?						
F4	Does the permittee inspect private facilities or require inspections by owner/operators?						

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F5	If the permittee performs the inspections, how often are they performed?						
F6	If owner/operators are required to inspect and maintain their BMPs, how is this authorized? Through a MOU? Through conditions of approval? Through another type of agreement?						
F7	How does the permittee ensure inspections are occurring? Reminder notices? Inspection reports?						
F8	Who is responsible for structural stormwater BMP maintenance (public and private)? Permitee? Owner?						
G	**Enforcement**						
G1	How does the permittee require proper maintenance and repair after the inspection?						
G2	What types of enforcement actions are provided by laws/rules/regulations/policies (e.g., notices of violation, abatement)?						
G3	Is the permittee's enforcement authority limited (e.g., limits on the dollar amount of fines, inability to issue civil penalties)?						
G4	How many enforcement actions have been taken in the past year due to lack of BMP maintenance?						
H	**Public Construction Projects**						
H1	For staff:						
H1a	Are plan reviewers trained on post-construction BMPs and requirements?						
H1b	What type of training do staff performing "as built" and post-construction inspections receive?						
H1c	How often are the trainings conducted?						
H1d	How many staff have been trained?						
H1e	What type of training or education does the permittee provide to developers and engineers on post-construction requirements?						
H2	For developers and plan designers:						
H2a	What types of educational materials have been developed and distributed to developers and designers regarding post-construction BMPs and application requirements?						
H2b	How are the materials distributed? At the permit desk? During inspections?						
H2c	What type of training does the permittee provide or advertise to local developers and designers?						
H2d	How often is this training conducted?						
H2e	How many developers and designers have been trained?						
H2f	Are they required to attend?						
I	**Consent Decree Questions**						
I1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
I1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
I2a	Have deficiencies or potential violations been identified?						
I2b	What are recommendations for correcting these deficiencies or potential violations?						
I4	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						

Question Number	Question	Airports		Harbors		Highways	
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I5	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
I6	If best practices cannot be universally implemented, what are the identified impediments?						

B2: PEAR #2 – Construction Site Runoff Control

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Laws/Rules/Regulations/Policies**						
A1	What legal authority does the permittee have to require erosion and sediment control BMPs on construction sites and to ensure compliance?						
A2	Does the permittee's legal authority address stormwater quality for all projects disturbing at least 1 acre?						
A3	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
A4	Does the legal authority authorize the permittee to require erosion and sediment control plans?						
B	**Construction Site Inventory**						
B1	How does the permittee track construction projects?						
B2	Is the following information collected?						
B2a	The number and status (active/inactive/completed) of construction sites						
B2b	The number, frequency, results, and follow-up actions resulting from inspections						
B2c	The actions taken to resolve the issues and dates when compliance was achieved.						
B2d	The number and type of enforcement actions taken at sites in violation						
B2e	Complaints submitted by the public						
B3	Does the inventory include construction sites disturbing less than 1 acre?						
B4	What is the threshold for tracking projects?						
B5	Does the inventory track which sites have submitted an NOI for coverage under a state/EPA construction general permit?						
B6	How is the inventory updated? How often?						
B7	Does the permittee prioritize projects for more frequent or targeted inspections? If yes, based on what criteria?						
C	**Construction Requirements and BMPs**						
C1	What technical guidance (e.g., BMP manual or fact sheets) does the permittee use as the standard for design and selection of nonstructural and structural construction BMPs?						
C2	Are project applicants required to follow these technical manuals?						
C3	Does the guidance set minimum operation and maintenance requirements for BMPs?						
C4	Does the guidance include installation requirements for the BMPs?						
C5	Does the guidance provide proper siting and use criteria for BMPs to ensure that adequate BMPs are being selected and implemented?						
C6	Does the permittee provide guidance as to recommended BMPs to be used?						
C7	Does the permittee have different requirements or standards for different times of the year (i.e., during the rainy season vs. the dry season)?						
D	**Plan Review Procedures**						
D1	Does the permittee hold pre-application meetings on any construction project? Are stormwater and erosion and sediment control requirements addressed at these meetings?						
D2	What is the permittee's threshold for plan review? (For example, does the permittee review plans for all projects disturbing greater than 1 acre, or do they use another threshold?)						

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D3	Does the permittee apply standard conditions that incorporate erosion and sediment control requirements into its plan review process?						
D4	Do the plan reviewers verify whether the project applicant has submitted an NOI to the state or EPA? Is evidence of NOI submission required before a plan can be approved or a local permit issued?						
D5	Do plan reviewers use specific criteria or a checklist when reviewing plans?						
D6	Does the permittee consider during the review process whether the construction project discharges to a TMDL/impaired water?						
D7	For up to two construction plans provided:						
D7a	Are adequate BMPs included on plans?						
D7b	What types of standard conditions or notes are included?						
D7c	Are maintenance requirements specified?						
D7d	Are BMPs addressing other construction activities, such as materials storage and waste disposal, incorporated into the construction plans?						
D7e	Do the plans include notes addressing the prohibition of non-stormwater discharges?						
D7f	Were comments provided by the permittee to the project proponent reasonable and appropriate?						
E	**Construction Site Inspections**						
E1	Does the permittee adequately inspect the following phases of construction?						
E1a	Clearing and grubbing and site preparation						
E1b	Mass grading and public infrastructure/utility construction						
E1c	Building construction and final grading						
E1d	Final stabilization						
E2	What group is charged with erosion and sediment control inspections?						
E3	Do the inspectors use a checklist or inspection form during each inspection?						
E4	How many inspectors does the permittee use to verify erosion and sediment control compliance at construction sites?						
E5	Does this number appear adequate to assess active construction occurring in the permitted area? Compare this to the total number of construction sites that need to be inspected at any one time (number of inspections per construction site per year). Consider project durations and phasing, local conditions (e.g., dry vs. wet seasons), and additional duties assigned to inspectors.						
E6	Does the permittee have an established prioritization process for establishing inspection frequency? If so, on what factors is the prioritization based (i.e., size, proximity to water body, sensitive areas)?						
E7	How often are sites inspected?						
E8	Does the permittee target inspections during and immediately after wet weather events? If so:						
E8a	What size rain event triggers an inspection?						
E8b	How soon after a rain event?						
E9	Is there an established rainy season for the area? Are sites inspected prior to the start of the rainy season to determine preparedness?						

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F	**Program Support and Resources**						
F1	Does the program have a dedicated source of funding to support plan review staff and inspectors?						
G	**Enforcement**						
G1	What types of enforcement actions are provided for in applicable laws/rules/regulations/policies (e.g., notices of violation, “stop work” orders, fines)?						
G2	Is use of these actions outlined in an established, escalating enforcement policy?						
G3	Review with the permittee statistics on enforcement of construction site erosion and sediment controls.						
G3a	How many enforcement actions are taken per year?						
G3b	Are follow-up inspections conducted to verify compliance?						
G4	Are there limitations on the permittee’s enforcement authority (e.g., limits on the dollar amount of fines, inability to issue civil penalties)?						
G5	Do staff feel that their enforcement authority is adequate to achieve compliance on construction projects?						
H	**Training and Education**						
H1	For staff:						
H1a	What type of training do construction inspectors receive? Are plan reviewers trained on erosion and sediment control BMPs and requirements?						
H1b	How often is training conducted?						
H1c	How many staff have been trained?						
H1d	What type of follow-up is conducted by the permittee to verify that the training is effective?						
H2	For construction operators:						
H2a	What types of educational materials have been developed and distributed to construction operators?						
H2b	How are the educational materials distributed?						
H2c	What type of training does the permittee provide or advertise to local construction operators?						
H2d	How often is this training conducted? How many construction site operators have been trained?						
H2e	Are contractors and developers required to attend?						
H2f	Are training sessions held in cooperation with other local permittees or regional authorities?						
I	**Public Construction Projects**						
I1	Do RFPs or contracts include language specifying stormwater requirements?						
I2	Are inspection and maintenance requirements specified in the contract?						
I3	What oversight does the permittee implement to ensure the contractor is implementing all requirements appropriately and adequately?						
I4	What penalties are in place to require compliance from the permittee’s contractors?						
J	**Consent Decree Questions**						
J1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						

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J1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
J2a	Have deficiencies or potential violations been identified?						
J2b	What are recommendations for correcting these deficiencies or potential violations?						
J3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
J4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
J5	If best practices cannot be universally implemented, what are the identified impediments?						

B3: PEAR #3 – Public Outreach / Public Involvement

Question Number	Question	Airports		Harbors		Highways	
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A	**Goals and Objectives**						
A1	Does the permittee have a strategy document for education and participation?						
A2	Does the document include specific goals?						
A3	On what are the goals based?						
A4	Are the goals measurable? How?						
B	**Message Development**						
B1	Have specific messages been developed for stormwater outreach?						
B2	On what are the messages based? Pollutants of concern? General awareness? Problem target audience? All of the above?						
B3	Are different messages used for different target audiences (i.e., children, homeowners, industry, etc.) or is one central message used for all?						
B4	Do the messages encourage participation in stormwater-related activities?						
B5	Do the messages educate about behavior changes that the audience can make to contribute to a solution?						
B6	Have messages been developed specific to reducing illicit discharges with information about how to report them to the appropriate authorities?						
B7	Have messages been developed to educate pesticide, fertilizer, and herbicide applicators (including homeowners) about ways to reduce stormwater pollution?						
C	**Target Audiences**						
C1	Has the permittee identified target audiences for outreach efforts? How are these target audiences selected? What are the target audiences?						
C2	What land use groups (i.e., industry, commercial businesses) has the permittee targeted?						
C3	Have certain ethnic groups or nationalities been identified as audiences to be targeted based on an evaluation of local demographics?						
C4	Have the target groups been reevaluated based on evaluation of the strategy and progress that has been made?						
C5	For Phase I permittees: have they targeted pesticide, herbicide, and fertilizer applicators (including homeowners) and construction site operators for outreach?						
C6	For Phase II permittees: have they targeted industries or commercial businesses of concern for outreach?						
D	**Message Packaging**						
D1	Does the permittee have a variety of written educational materials?						
D2	Does the permittee have a variety of other packages (i.e., Web site, presentations, displays) for educational materials?						
D3	Did the permittee produce the education and outreach materials in the different languages that are spoken in the community?						
D4	Do the permittee's materials explain stormwater issues in easy-to-understand terms?						

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E	**Distribution Mechanisms**						
E1	Does the permittee track distribution of materials to measure effectiveness?						
E2	Is the permittee focused solely on distribution or is an effort made to evaluate the impact of the messages?						
E3	Does the permittee use a variety of distribution mechanisms to target various audiences?						
F	**Evaluation Methods**						
F1	How does the permittee evaluate the effectiveness of the outreach strategy?						
F2	Has the permittee conducted a public awareness survey?						
F3	Which outreach materials have been the most effective in soliciting public involvement and participation? Changing audience behaviors? Increasing general stormwater awareness?						
F4	Have any changes been made to the outreach strategy or materials based on an evaluation of effectiveness?						
G	**Public Participation Activities**						
G1	What opportunities does the permittee give to the public to review and comment on any changes to the SWMP, such as public comment via a Web site, a public meeting, or a stormwater advisory group?						
G2	What volunteer opportunities (i.e., stream cleanups, storm drain stenciling) does the permittee coordinate or publicize to encourage the public to participate in stormwater-related activities?						
G3	Does the permittee sponsor or promote any of the following activities?						
G3a	Beach/stream/lake cleanups						
G3b	Volunteer stream monitoring						
G3c	Stream clean-ups or equivalent activities						
G3d	Stormwater citizen panel						
H	**Consent Decree Questions**						
H1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
H1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
H2a	Have deficiencies or potential violations been identified?						
H2b	What are recommendations for correcting these deficiencies or potential violations?						
H3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
H4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
H5	If best practices cannot be universally implemented, what are the identified impediments?						

B4: PEAR #4 – Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program

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A	**Legal Authority (IDDE)**						
A1	Does the permittee have laws/rules/regulations/policies to prohibit illicit discharges and dumping to the MS4?						
A2	What exclusions are included in laws/rules/regulations/policies?						
A3	What enforcement mechanisms are authorized in the event of an illicit discharge being detected?						
A4	Has an enforcement escalation plan been developed?						
B	**Mapping (IDDE)**						
B1	Does the permittee have a map showing storm drain pipes, outfalls, and storm drain inlets?						
B2	Is the map readily available to the personnel who would respond to an illicit discharge incident?						
B3	Does the permittee have a map of the storm drain system showing the locations of outfalls and municipally maintained structural stormwater controls?						
C	**Field Screening (IDDE)**						
C1	How are field screening areas identified?						
C2	Are areas of the MS4 prioritized based on incidents of illicit discharges, land use, dumping reports, etc.?						
C3	How often are field screening areas evaluated?						
C4	Are outfalls inspected during dry weather to identify any potential dry-weather discharges? What does the inspection include?						
C5	If dry-weather flows are present, are they being sampled to determine potential sources of pollutants? For what parameters?						
C6	Does the permittee have a database (or other method) to track locations of illicit discharges, spills, and illegal dumping?						
C7	Does the database track dry-weather monitoring or screening data?						
D	**Investigation of Potential Illicit Discharges (IDDE)**						
D1	Does the permittee have a procedure for tracing the source of an active illicit discharge?						
D2	Who performs the investigations?						
D3	Are these procedures written in a document or plan?						
D4	What equipment does the permittee use to find illicit discharges?						
D5	Does the permittee have equipment to videotape storm drains, or can it quickly contract out this work?						
D6	How are investigations tracked?						
D7	Has an enforcement response plan been adopted for use when an illicit discharge source has been located?						
E	**Spill Response and Prevention (IDDE)**						
E1	Does the permittee have a clear set of procedures in place that details who is responsible for responding to spills and emergency situations?						
E2	Do field staff have spill containment supplies in their vehicles, and are they trained to contain minor spills?						

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E3	Is a contractor or other entity available for larger spills?						
E4	Does the permittee have the ability to collect cleanup and abatement costs from the responsible party?						
E5	How are spills and spill response tracked to ensure adequate reporting?						
F	**Public Awareness and Reporting Program (IDDE)**						
F1	Does the permittee prioritize subwatersheds or neighborhoods and assign resources for educational efforts based on frequency and types of illicit discharge incidents?						
F2	Is there a general phone number or “hotline” in the phone book or Web site that people can call to report a spill or dumping?						
F3	What types of public outreach materials are available to publicize public reporting?						
F4	Does the permittee track the number of public calls or complaints reporting illicit discharges?						
G	**Preventing Sanitary Sewer Discharges (IDDE)**						
G1	Has the permittee conducted any studies or evaluations to determine whether sanitary sewers are contributing pollutants to the MS4?						
G2	What is the extent of infiltration and inflow into the sanitary sewer system? How is this impacting discharge from the MS4?						
G3	If the permittee also operates a sanitary sewer system, do they have procedures to prevent sewage spills and SSOs to the MS4?						
H	**Education and Training (IDDE)**						
H1	What type of training do field staff (e.g., storm sewer maintenance crews, street sweepers) receive on spill response and IDDE?						
H2	Are staff generally educated about what illicit discharges are and how to report them?						
I	**Legal Authority (I/C)**						
I1	Does the Phase I permittee have the authority to require industrial and commercial facilities to implement stormwater BMPs?						
I2	Does the Phase I permittee have the authority to conduct inspections and enforce requirements?						
I3	What laws/rules/regulations/policies provide this legal authority?						
I4	What types of facilities are covered under this legal authority?						
I5	Who (e.g., specific staff, Division/District, etc.) has the authority to enforce the laws/rules/regulations/policies and/or inspect the facilities?						
I6	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
J	**Facility Inventory (I/C)**						
J1	Has the permittee completed an inventory of industrial/commercial facilities discharging to the stormwater system?						
J2	What types of facilities are included on the inventory?						
J3	What sources were used to create the inventory?						
J3A	Facilities that filed NOIs for EPA MSGP or state industrial general permit coverage?						
J3B	Significant industrial users within the pretreatment program?						

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J3C	Business licenses?						
J3D	Phone book?						
J3E	"Windshield" survey?						
J4	Does the inventory include all the industrial/commercial facilities subject to the industrial general permit?						
J5	Does the permittee periodically check to see if new facilities that must be covered by an industrial stormwater general permit have filed an NOI?						
J6	What is the process for notifying the permitting authority of non-filers?						
J7	If applicable, does the inventory include all the facilities specified as required in the MS4 NPDES permit?						
J8	How is the inventory updated? How often?						
J9	What information is maintained about the facilities?						
J10	How is the inventory maintained and stored?						
J11	Does the permittee prioritize the facilities?						
J12	Is the prioritization based on facility type, past inspection or enforcement results, proximity to receiving waters, potential pollutant sources on-site, and so forth?						
J13	Is the prioritization used to determine frequency of inspections?						
J14	Has the permittee mapped the locations of prioritized facilities to cross-reference reports of dumping, illicit discharges, or other water quality issues?						
K	**Standards, BMPs and Outreach (I/C)**						
K1	Has the permittee adopted standards or BMPs that industrial/commercial facilities are required to implement (e.g., all car dealerships must install a wash rack plumbed to the sanitary sewer)?						
K2	Are the requirements for new developments only or are they triggered by improvements of existing facilities? Are there schedules for implementing retrofits?						
K3	Are these standards applicable to existing facilities, new facilities, or both?						
K4	Does the permittee refer facility operators to specific stormwater BMP or standards guidance documents?						
K5	What type of educational program has been developed for industrial and commercial facility operators?						
K6	What type of brochures, handouts, or guidance on BMPs is provided to these facilities by the permittee?						
K7	When is this information provided? During inspections? During training events? During professional organization presentations?						
L	**Staff Training (I/C)**						
L1	What type of training do the industrial and commercial inspectors receive?						
L2	How often?						
L3	If additional inspectors are used (e.g., food safety inspectors for restaurant inspections, pretreatment inspectors), are they trained specifically on stormwater BMPs and requirements? By whom?						

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M	**Inspections (I/C)**						
M1	Who performs inspections and for what types of facilities (e.g., health inspectors for restaurants, pretreatment inspectors for industrial facilities with a pretreatment permit)						
M2	How often are industrial and commercial facilities inspected? How is the frequency determined?						
M3	Does the permittee's industrial/commercial inspector(s) use a standard checklist during inspections?						
M4	Is a report written after the inspection? How is the inspection documented in the file?						
M5	Does the permittee verify NPDES permit coverage for facilities?						
M6	For industrial facilities, does the inspector review the SWPPP and monitoring data during the inspection?						
M7	Does the permittee refer non-filers to the permitting authority?						
M8	Do inspectors provide educational materials during inspections? What types?						
M9	If multiple Divisions/Districts perform inspections, how is information transferred or cataloged?						
N	**Program Support and Resources (I/C)**						
N1	Does the program have a dedicated source of funding to support inspectors?						
O	**Enforcement (I/C)**						
O1	In instances of noncompliance, do the inspection staff use a formalized, approved enforcement escalation procedure?						
O2	How was the enforcement escalation procedure developed? Is it used? Is it effective?						
O3	Who is authorized to apply various enforcement procedures (e.g., NOVs, fines)?						
O4	What types of penalties are readily available to the inspection staff?						
O5	What is the most common method of gaining compliance (e.g., NOVs, fines, abatement)?						
O6	Can the permittee describe a recent non-compliance issue at an industrial/commercial facility? If so, how was compliance achieved?						
O7	At what point are non-compliance cases referred to the NPDES permitting authority? How many have been referred in the last 12 months?						
P	**Consent Decree Questions**						
P1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
P1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
P2a	Have deficiencies or potential violations been identified?						
P2b	What are recommendations for correcting these deficiencies or potential violations?						
P3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
P4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
P5	If best practices cannot be universally implemented, what are the identified impediments?						

B5: PEAR #5 – Pollution Prevention / Good Housekeeping Program

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A	**Infrastructure Mapping and Characterization**						
A1	Does the permittee have a map showing all inlets, outfalls, storm drain conduits, stormwater management facilities, and receiving water bodies?						
A2	Does this map include catch basins and structural stormwater controls?						
A3	Is the map readily available and used by maintenance field staff when performing maintenance activities?						
A4	Is the map in hard copy format only or is it also in a geographic information system (GIS)?						
A5	Are infrastructure assets or components named or numbered to better track necessary maintenance and repairs?						
A6	Is information regarding stormwater infrastructure maintained in a database or mapping system? What types of data are maintained?						
A6a	Type of structure or asset						
A6b	Location (address, latitude/longitude)						
A6c	Photo						
A6d	Date built						
A6e	Date last inspected						
A6f	Date last cleaned/maintained						
B	**Catch Basin Cleaning**						
B1	Does the permittee have a schedule for routine maintenance or cleaning of catch basins?						
B1a	How many are cleaned and how often?						
B1b	Has the permittee targeted certain areas for more frequent maintenance?						
B1c	Does the permittee set goals for how many basins are inspected and cleaned each year?						
B1d	How does the permittee track and record cleaning and maintenance needs?						
B1e	What information is documented? Does the permittee track which catch basins are cleaned, how much material is removed, and so forth?						
B1f	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency? Are they used to identify areas for targeted outreach?						
B2	What are the permittee's procedures for disposing of waste removed from catch basins or storm drains?						
B2a	Does the permittee flush material that could potentially discharge to surface water?						
B2b	If the material is removed using a wet vacuum, how is the material dewatered? How is the decanted water disposed?						
B3	Does the permittee have a schedule for routine maintenance or inspection of storm drain pipes?						
B4	What are the permittee's maintenance procedures for cleaning clogged storm drain pipes?						
C	**Stormwater Management Structures**						
C1	Are catch basins and other inlet structures marked so that the public knows they drain to surface waters?						

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C2	Has the permittee inventoried the type and location of public stormwater management structures in its jurisdiction? How are the data collected and stored?						
C2a	Pump stations						
C2b	Drainage structures (debris basins, detention basins, regional ponds, etc.)						
C2c	Structural treatment controls						
C2d	Open channels						
C3	How is vegetation maintained in grassed swales, rain gardens, pond perimeters, and other vegetated stormwater controls?						
C4	Has the permittee mapped private stormwater management structures?						
C5	How often are these facilities inspected?						
C6	Are the stormwater management structures regularly maintained by the permittee?						
C6a	Are records kept of material and debris removed during maintenance?						
C6b	How is maintenance conducted? Are chemicals used to maintain vegetation and pests?						
C7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency? Are they used to identify areas for targeted outreach based on type and volume of materials removed?						
D	**Street Sweeping**						
D1	Does the permittee regularly sweep streets? Public parking lots?						
D2	What is the schedule for street sweeping?						
D3	Are areas scheduled for sweeping based on aesthetics only or is consideration given for reducing impacts on the stormwater management infrastructure and surface water?						
D4	What types of sweepers are used? Wet or dry?						
D5	How is street-sweeping debris disposed? If the debris is dewatered, how is this done? How is the decanted water disposed?						
D6	Are records kept of the amount of debris collected?						
D7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency?						
E	**Public Streets, Roads and Highway Maintenance**						
E1	What types of public streets, roads, and highways operation and maintenance practices and procedures are performed by the permittee?						
E2	Are BMPs used by field crews to minimize stormwater impacts during road maintenance or repair activities?						
E3	What types of BMPs are used? Discuss BMPs used for such activities as:						
E3a	Ditch cleaning						
E3b	Sidewalk repair						
E3c	Asphalt patching						
E3d	Curb and gutter repair						
E3e	Street striping						

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E3f	Sign painting						
E3g	Maintaining dirt and gravel roads (preventing erosion, dust control)						
F	**Facility Inventory**						
F1	Does the permittee have an inventory of public facilities? At a minimum, this list should include the following, as applicable:						
F1a	Public works yards						
F1b	Public transit facilities						
F1c	Wastewater and domestic water treatment plants						
F1d	Sanitary sewer system overflow locations						
F1e	Public parks/open areas						
F1f	Public parking lots						
F1g	Public buildings						
F1h	Landfills and hazardous waste disposal sites, transfer locations, or storage facilities						
F2	Have the facilities been inspected and assessed for water quality impacts?						
F3	Are any facilities required to apply for coverage under a general industrial permit? Do these facilities have SWPPPs?						
G	**Chemical and Hazardous Material Use and Disposal**						
G1	What types of chemicals or hazardous materials are used by the permittee?						
G2	Where are these materials stored?						
G3	Has the permittee implemented an alternative materials program to reduce the use of hazardous materials?						
G4	Has the permittee implemented an inventory reduction program to reduce the quantity of chemicals and hazardous materials stored and used?						
G5	Does the permittee have a household hazardous waste collection center for the public?						
G5a	Are records of the quantity of materials collected maintained by type of material?						
G5b	How does the permittee notify the public of these sites?						
G6	Does the permittee have special household hazardous waste collection days?						
G7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize maintenance frequency? Are they used to identify areas of targeted outreach?						
H	**Pesticide, Herbicide and Fertilizer Application and Management**						
H1	What kind of program has been established to address pollutants associated with the application of pesticides, herbicides, and fertilizer at public facilities?						
H2	Are the permittee's fertilizer/pesticide applicators certified? Are permits or other certifications required?						
H3	Where are the chemicals stored? Are appropriate procedures and secondary containment followed?						
H4	Is there a pesticide/fertilizer application plan?						
H5	Does the permittee practice integrated pest management (IPM) or use alternatives to pesticides?						

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H6	How does the permittee implement alternative landscaping to minimize the use of fertilizers and pesticides?						
H7	What types of educational activities does the permittee conduct for applicators?						
H8	What types of BMPs are used during application of pesticides in public rights-of-way?						
H9	What types of BMPs are used during application of pesticides at municipal facilities such as parks?						
I	**Municipal Staff**						
I1	Have standard operating procedures or their equivalent been developed to ensure that municipal field staff integrate stormwater quality BMPs into their daily activities?						
I2	Have BMPs or standards been officially adopted by the permittee for use by municipal field staff?						
I3	What reference materials or guidance documents are provided to field staff regarding BMP specifications and details?						
I4	How does the permittee ensure that staff are fulfilling their responsibilities as outlined in standard operating procedures? Do managers provide oversight on a regular basis?						
J	**Contracted Services Staff**						
J1	Does the permittee require contractors to incorporate stormwater quality BMPs into their activities?						
J2	How are BMPs required? Are the requirements outlined in requests for proposals? Are they included in contracts?						
J3	Have BMPs or standards been officially adopted by the permittee for use by contractual staff?						
J4	What reference materials or guidance documents are provided to contractual staff regarding BMP specifications and details?						
J5	How does the permittee ensure that contractors are fulfilling their responsibilities as outlined in their contracts? Are inspections performed? Are periodic reports submitted?						
K	**Training and Education**						
K1	What type of general stormwater training is provided to staff that are not involved in field activities? How often?						
K2	How are new employees trained?						
K3	What types of activity-specific training is provided to field staff? Is information on specific BMPs provided?						
K4	Is any training provided to contract staff?						
L	**Consent Decree Questions**						
L1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
L1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
L2a	Have deficiencies or potential violations been identified?						
L2b	What are recommendations for correcting these deficiencies or potential violations?						
L3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						

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L4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
L5	If best practices cannot be universally implemented, what are the identified impediments?						

B6: PEAR #6 – Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

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A	**SWMP Planning Documents**						
A1	Has a SWMP Plan been developed? If so, when? Last revised?						
A2	Is there a schedule for revision of the SWMP plan?						
A3	Is there an additional MS4-wide document, plan, or program? Who developed it?						
A4	How were internal and external stakeholders included in the development or revision of the SWMP plan?						
B	**Staff Inventory and Organization**						
B1	Does the permittee have a person designated to lead and coordinate the stormwater program and activities?						
B2	Does the SWMP planning document include an organization chart listing responsible parties for each SWMP component?						
C	**Performance Standards or Goals**						
C1	Has the permittee established measurable goals or performance standards for program components?						
C2	If performance standards have been established, are they measurable or are they essentially BMP recommendations with level of service (i.e., number of miles swept) requirements?						
C3	Does the permittee attempt to quantify or assess a program or a BMP's water quality impact or effectiveness as opposed to merely tracking level of service?						
D	**Prioritization of Resources**						
D1	Has the permittee identified specific pollutants of concern for its local water bodies?						
D2	Are these pollutants of concern consistent with priorities identified in the 303(d)-listed impairments for local water bodies?						
D3	Are these pollutants of concern consistent with any water quality monitoring data or studies conducted by the permittee or another agency?						
D4	Has the permittee developed strategies to specifically address those pollutants?						
D5	How does the permittee decide on program priorities? Are these reassessed periodically?						
D6	Does the SWMP include a schedule of activities?						
D7	Does the MS4 discharge to a water body on the state's list of impaired waters?						
D7a	What pollutants are identified on the list?						
D7b	Has stormwater been identified as a source?						
D7c	Does the SWMP specifically address this pollutant?						
D7d	Does the SWMP identify BMPs specifically for sources or discharges to the listed water body						
D8	Has a TMDL been developed for a water body to which the MS4 discharges and for which stormwater has been identified as a pollutant source?						
D8a	What pollutants are addressed in the TMDL?						
D8b	Does the TMDL specifically address (or include wasteload allocations for) stormwater?						
D8c	Has the corrective action plan or other planning to address TMDLs been reviewed for integration with the SWMP?						

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D8d	Does the permittee's stormwater program address the pollutants of concern identified in the TMDL?						
D9	Is the permittee participating in any watershed planning efforts?						
D10	Have any goals been developed based on watershed issues, strategies, or challenges?						
D11	Has the permittee established a set of indicators or parameters to assess progress toward meeting the goal(s) of the watershed plan?						
D12	Is the permittee's stormwater program implemented on a watershed basis?						
E	**Assessment and Evaluation of Programs**						
E1	Does the permittee regularly measure progress against the established performance standards and goals?						
E2	Are the goals quantifiable?						
E3	Is the permittee analyzing data in the annual report to identify program activities that may need to change to address problem areas?						
E4	Has the SWMP been altered based on this evaluation?						
F	**Assessment and Evaluation of BMPs**						
F1	Is the permittee able to track both structural BMPs and non-structural BMPs and activities?						
F2	Has the permittee set measurable goals or performance standards to evaluate individual BMPs and activities or suites of BMPs that address a particular pollutant source?						
F3	Is there a process to evaluate or revise individual BMPs and suites of BMPs when receiving water outcomes or endpoints are not being met?						
F4	Do assessments evaluate impacts of BMPs on ground water?						
F5	Is the permittee analyzing data in the annual report to identify individual BMPs or suites of BMPs that may need to change to address problem areas?						
G	**Assessment and Evaluation of Water Quality**						
G1	Has the permittee documented environmental, water quality, stream corridor, habitat, or other types of improvements?						
G2	Has the permittee estimated reductions in pollutant loadings from the MS4 or other quantifiable water quality benefits expected as the result of the municipal stormwater program?						
H	**Dry & Wet Weather Outfall Screening and Monitoring (If Applicable)**						
H1	Does the permittee conduct dry or wet weather screening at outfalls to characterize stormwater flows from the MS4?						
H2	Does the permittee have written screening procedures?						
H3	What is the permittee's schedule for screening the sites?						
H4	Are parts of the permit area prioritized for screening based on incidents of illicit discharges, land use, dumping reports, etc.?						
H5	What parameters are being tested?						
H6	How does the permittee prioritize sites for follow-up (e.g., magnitude and nature of suspected discharge)?						

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H7	Who conducts the sampling? What kind of training have sampling personnel received?						
H8	What type of records are kept?						
H8a	Analytical results						
H8b	Date and duration (in hours) of the storm events sampled (rainfall data)						
H8c	Rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff (rainfall data)						
H8d	Duration (in hours) of the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (rainfall data)						
H8e	Estimate of the total flow of the discharge sampled (stage and velocity)						
H9	What analytical methods are used (i.e., 40 CFR Part 136)?						
H10	What are the results of the initial sampling and analysis?						
H11	Has the permittee made any changes to the monitoring program based on past results and experience?						
H12	How have monitoring results been used to assess program components?						
H13	Are monitoring data used to estimate pollutant loads for a TMDL?						
I	**Biological Monitoring (If Applicable)**						
I1	Does the permittee perform biological sampling?						
I2	Has a plan been developed to conduct biological sampling? If so, does the plan include the following:						
I2a	Identification of sampling stations and rationale for selection						
I2b	Location of known major MS4 outfalls discharging to water bodies in which sampling stations were chosen						
I2c	Land use activities near sampling stations						
I2d	Frequency of monitoring						
I3	Who conducts biological sampling and what training have they received?						
I4	Has the permittee made any changes to the monitoring program based on past results and experience?						
I5	How have monitoring results been used to assess program components?						
J	**Ambient Monitoring (If Applicable)**						
J1	Does the permittee conduct ambient monitoring to characterize water quality conditions in receiving waters?						
J2	How were the sampling sites selected?						
J3	Is sampling conducted both during dry weather and wet weather?						
J4	What is the frequency of sampling?						
J5	What parameters are analyzed? What sampling and analytical methods have been used?						
J6	Does the permittee have a written protocol or procedures for this sampling program?						
J7	Who conducts the sampling and what training have they received?						
J8	Has the permittee made any changes to the monitoring program based on past results and experience?						

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
J9	How have monitoring results been used to assess program components?						
J10	Are monitoring data used to estimate pollutant loads for a TMDL?						
K	**Data Collection and Reporting**						
K1	What reporting requirements are included in the MS4 NPDES permit?						
K2	For co-permittees or Phase II permittees that rely on other entities to implement required elements of the program, how are data provided or reported?						
K3	How are the required data collected, tracked, and reported?						
K3a	Is there a database?						
K3b	Are there reporting forms?						
K4	Are there internal reporting deadlines within the municipal program structure?						
K5	Are the appropriate data being collected by the permittee to be able to measure effectiveness and determine if performance standards are being met?						
K6	How are data disseminated to those who use them, if at all?						
L	**Consent Decree Questions**						
L1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
L1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
L2a	Have deficiencies or potential violations been identified?						
L2b	What are recommendations for correcting these deficiencies or potential violations?						
L3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
L4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
L5	If best practices cannot be universally implemented, what are the identified impediments?						

Appendix C

PEAR 1 through 6 Schedule

C1: PEAR #1 – Schedule for Post-Construction / Permanent Best Management Practices

Appendix C1: Schedule for PEAR #1 – Post-Construction / Permanent Best Management Practices

1. Notice of Audit

- Within 7 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 22 March 2017

2. Records Request

- Within 14 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 29 March 2017

3. Fulfillment of Records Request

- Within 43 Days of AWPC
- Within 29 Days of Last Milestone
- By Thursday 27 April 2017

4. Records Review Complete

- Within 57 Days of AWPC
- Within 14 Days of Last Milestone
- By Thursday 11 May 2017

5. Pre-Onsite Evaluation Conference Call

- Within 64 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 18 May 2017

6. Completion of Onsite Evaluation

- Within 82 Days of AWPC
- Within 18 Days of Last Milestone
- By Monday 5 June 2017

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C1: Schedule for PEAR #1 – Post-Construction / Permanent Best Management Practices

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
76 Days After AWPC Tuesday 30 May 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* OGG CONRAC, location tentative *BMP 2:* Wash rack, location tentative [An additional BMP will be inspected only if one is installed by this time] **11am – 12pm** Debrief Meeting [See Note (c)]	77 Days After AWPC Wednesday 31 May 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* Pervious pavement and bioswale systems, NDWP New Employee Parking Lots at Elliott St. *BMP 2:* Contech CDS 2025 System and FloGuard drop inlet filtration insert, NDWP Diamondhead Site Improvements, GSE Lot fronting Hardstand 3 *BMP 3:* Bioswale system, Kalewa St Storage Lots 1-6, Corner of Lagoon and Kalewa St. **11am – 12pm** Debrief Meeting [See Note (c)]	79 Days After AWPC Friday 2 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1*: Alaska Marine Lines, Pier 29 *BMP 2:* Matson Auto Facility, Pier 32 *BMP 3:* HC&D Facility, Pier 60 Replaced with UH Marine Center Pier 35, per 4-18-17 Call with Spencer Yim **11am – 12pm** Debrief Meeting [See Note (c)]	82 Days After AWPC Monday 5 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* GLP Asphalt Facility [Additional BMPs will be inspected only if they are installed by this time] Spencer Yim confirmed via phone on 4-18-17 that no additional BMPs have been installed. **11am – 12pm** Debrief Meeting [See Note (c)]	76 Days After AWPC Tuesday 30 May 2017 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] [BMPs will be inspected only if they are installed by this time] See Records Request. No BMPs to inspect. Meeting only. **4pm – 5pm** Debrief Meeting [See Note (c)]	78 Days After AWPC Thursday 1 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* University Ave. Bioswales, In median of H-1 ramps to University Ave. on makai side of freeway *BMP 2:* Fort Weaver Rd. CDS Units, Fort Weaver Rd., Ewa *BMP 3:* Luluku Storm Water Treatment System, H-3/Likelike interchange, Kaneohe **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) The Audit Team will then verify that up to three (3) structural and source control BMPs approved by each permittee and subject to post-construction requirements were installed and are being maintained properly in the field. Approved plans and inspection records for each BMP will have been reviewed ahead of the onsite evaluation (during the records review period). The BMPs identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 90 Days of AWPC
- **Consent Decree Deadline:** Within 90 Days of AWPC
- Within 8 Days of Last Milestone
- By Tuesday 13 June 2017

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 135 Days of AWPC
- **Consent Decree Deadline:** Within 135 Days of AWPC
- Within 45 Days of Last Milestone
- By Friday 28 July 2017

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 162 Days of AWPC
- Within 27 Days of Last Milestone
- By Thursday 24 August 2017

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 163 Days of AWPC[1]
- **Consent Decree Deadline:** Within 165 Days of AWPC
- Within 1 Days of Last Milestone
- By Friday 25 August 2017

11. Completion of Final PEAR

- Within 183 Days of AWPC[2]
- **Consent Decree Deadline:** 210 Days of AWPC
- Within 20 Days of Last Milestone
- By Thursday 14 September 2017

[1] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.
[2] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C2: PEAR #2 – Schedule for Construction Site Runoff Control

1. Notice of Audit
- Within 190 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 21 September 2017

2. Records Request
- Within 197 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 28 September 2017

3. Fulfillment of Records Request
- Within 226 Days of AWPC
- Within 29 Days of Last Milestone
- By Friday 27 October 2017

4. Records Review Complete
- Within 239 Days of AWPC
- Within 13 Days of Last Milestone
- By Thursday 9 November 2017

5. Pre-Onsite Evaluation Conference Call
- Within 246 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 16 November 2017

6. Completion of Onsite Evaluation
- Within 261 Days of AWPC
- Within 15 Days of Last Milestone
- By Friday 1 December 2017

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C2: Schedule for PEAR #2 - Construction Site Runoff Control

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
257 Days After AWPC Monday 27 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* OGG Consolidated Rent A Car Facility, Kahului Airport, Near Hemaloa St and Keolani Pl. *Construction Site #2:* OGG Vehicle Washrack Installation, AOA side, Near Cargo Building and Triturator **11am – 12pm** Debrief Meeting [See Note (c)]	258 Days After AWPC Tuesday 28 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Corner of Aolele, Rodgers, Paiea St. *Construction Site #2:* HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal **11am – 12pm** Debrief Meeting [See Note (c)]	260 Days After AWPC Thursday 30 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* New Kapalama Container Yard, Kapalama, Honolulu Harbor *Construction Site #2:* Piers 24-29 Utilities **11am – 12pm** Debrief Meeting [See Note (c)]	261 Days After AWPC Friday 1 December 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] [Unable to forecast construction projects; will be re-contacted by Kennedy/Jenks Consultants closer to the date] **11am – 12pm** Debrief Meeting [See Note (c)]	257 Days After AWPC Monday 27 November 2017 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] *Construction Site #1:* Kuihelani Highway Resurfacing [An additional construction site will be inspected only if one is active at this time] **4pm – 5pm** Debrief Meeting [See Note (c)]	259 Days After AWPC Wednesday 29 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] [Unable to forecast construction projects; will be re-contacted by Kennedy/Jenks Consultants closer to the date] **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) The Audit Team will then accompany construction inspectors as they conduct up to two (2) inspections. The purpose of the field evaluation is to assess the permittee's construction inspection program—how knowledgeable the inspectors are about stormwater requirements and BMPs, how thorough of an inspection they conduct, and how they handle problems identified at construction sites. The construction sites identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 268 Days of AWPC[1]
- **Consent Decree Deadline:** Within 270 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 8 December 2017

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 313 Days of AWPC[2]
- **Consent Decree Deadline:** Within 315 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 22 January 2018

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 338 Days of AWPC
- Within 25 Days of Last Milestone
- By Friday 16 February 2018

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 342 Days of AWPC[2]
- **Consent Decree Deadline:** Within 345 Days of AWPC
- Within 4 Days of Last Milestone
- By Tuesday 20 February 2018

11. Completion of Final PEAR

- Within 362 Days of AWPC[3]
- **Consent Decree Deadline:** 390 Days of AWPC
- Within 20 Days of Last Milestone
- By Monday 12 March 2018

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[1] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.
[2] The deadline is ahead of the CD Deadline due to the required shift in the #7 deadline.
[3] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C3: PEAR #3 – Schedule for Public Outreach / Public Involvement

Appendix C3: Schedule for PEAR #3 - Public Outreach / Public Involvement Program

1. Notice of Audit

- Within 369 Days of AWPC
- Within 7 Days of Last Milestone
- By Monday 19 March 2018

2. Records Request

- Within 377 Days of AWPC
- Within 8 Days of Last Milestone
- By Tuesday 27 March 2018

3. Fulfillment of Records Request

- Within 420 Days of AWPC
- Within 43 Days of Last Milestone
- By Wednesday 9 May 2018

4. Records Review Complete

- Within 450 Days of AWPC
- **Consent Decree Deadline:** Within 450 Days of AWPC
- Within 30 Days of Last Milestone
- By Friday 8 June 2018

For this Program Element, the end of the records review period represents the completion of evaluation. No onsite evaluation will occur for this program element. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators may be conducted during the records review period. If requested by the Audit Team or MS4 Permit Coordinator, an in-person meeting may be scheduled during this period.

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.

5. – 7. Not Applicable (See #4)

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 495 Days of AWPC
- **Consent Decree Deadline:** Within 495 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 23 July 2018

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM

- Within 523 Days of AWPC
- Within 28 Days of Last Milestone
- By Monday 20 August 2018

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM

- Within 525 Days of AWPC
- **Consent Decree Deadline:** Within 525 Days of AWPC
- Within 2 Days of Last Milestone
- By Wednesday 22 August 2018

11. Completion of Final PEAR

- Within 545 Days of AWPC[1]
- **Consent Decree Deadline:** 570 Days of AWPC
- Within 20 Days of Last Milestone
- By Tuesday 11 September 2018

[1] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C4: PEAR #4 – Schedule for Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program

Appendix C4: Schedule for PEAR #4 - Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program

1. Notice of Audit

- Within 552 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 18 September 2018

2. Records Request

- Within 559 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 25 September 2018

3. Fulfillment of Records Request

- Within 583 Days of AWPC
- Within 24 Days of Last Milestone
- By Friday 19 October 2018

4. Records Review Complete

- Within 597 Days of AWPC
- Within 14 Days of Last Milestone
- By Friday 2 November 2018

5. Pre-Onsite Evaluation Conference Call

- Within 604 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 9 November 2018

6. Completion of Onsite Evaluation

- Within 623 Days of AWPC
- Within 19 Days of Last Milestone
- By Wednesday 28 November 2018

The table below provides a preliminary schedule for the onsite evaluation period.

Appendix C4: Schedule for PEAR #4 - Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
614 Days After AWPC Monday 19 November 2018	616 Days After AWPC Wednesday 21 November 2018	621 Days After AWPC Monday 26 November 2018	622 Days After AWPC Tuesday 27 November 2018	615 Days After AWPC Tuesday 20 November 2018	623 Days After AWPC Wednesday 28 November 2018
8am – 9am IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]
9am – 11am IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]
Outfall #1: Near baseyard, Keolani Place *Outfall #2:* Sampling #G, Basin G	*Outfall #1:* Near Iolana Place, Off Lagoon Drive *Outfall #2:* Aolewa Place, Near Access A	*Outfall #1:* SDDH035050, Pier 38 *Outfall #2:* SDDH0517960, Pier 51	*Outfall #1:* SDDBP043660, Pier P-4 [Outfall #1 is the only accessible outfall at this harbor, due to safety concerns]	*Outfall #1:* Outlet No. 1 *Outfall #2:* DP3	*Outfall #1:* PID 304162 Jarrett White Rd., north of Mahiole St., *Outfall #2:* PID 301831, Kaahele St., north of Moanalua Rd.
11am – 12pm IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]
12pm – 1pm LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH
1pm – 2pm I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	[I/C Program not evaluated, as Maui Highways does not have an I/C Program]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]
2pm – 4pm I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]		**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]
I/C Facility #1: UPS, 9682 Hemaloa Pl. *I/C Facility #2:* ASIC-HFFC, 761 Kaonawai Pl.	*I/C Facility #1:* UPS, 128 Mokuea Pl. *I/C Facility #2:* United Airlines, 110 Lauhoe Pl.	*I/C Facility #1:* Young Brothers Maintenance Facility, Pier 39 *I/C Facility #2:* Matson Maintenance Facility, Piers 52-53	*I/C Facility #1:* Marisco *I/C Facility #2:* Grace Pacific		*I/C Facility #1:* First Hawaiian Bank, 94-205 Leoku St., Waipahu, HI *I/C Facility #2:* CM Recycling, 204 Sand Island Access Rd., Honolulu, HI
4pm – 5pm I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]		**4pm – 5pm** I/C Debrief Meeting [See Note (d)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meetings. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) Illicit Discharge Detection and Elimination (IDDE) Program: The Audit Team will accompany inspectors in the field as they conduct up to two (2) dry-weather outfall screenings. The outfalls identified in this Appendix are preliminary and are subject to modification.

(c) Industrial/Commercial (I/C) Program: The Audit Team will accompany inspectors in the field as they inspect up to two (2) industrial/commercial facilities. The facilities identified in this Appendix are preliminary and are subject to modification.

(d) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period
- Within 630 Days of AWPC
- **Consent Decree Deadline:** Within 630 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 5 December 2018

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators
- Within 674 Days of AWPC[1]
- **Consent Decree Deadline:** Within 675 Days of AWPC
- Within 44 Days of Last Milestone
- By Friday 18 January 2019

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM
- Within 700 Days of AWPC
- Within 26 Days of Last Milestone
- By Wednesday 13 February 2019

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM
- Within 702 Days of AWPC[2]
- **Consent Decree Deadline:** Within 705 Days of AWPC
- Within 2 Days of Last Milestone
- By Friday 15 February 2019

11. Completion of Final PEAR
- Within 723 Days of AWPC[3]
- **Consent Decree Deadline:** 750 Days of AWPC
- Within 21 Days of Last Milestone
- By Friday 8 March 2019

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.
[2] The deadline is ahead of the CD Deadline due to the required shift in the #8 deadline.
[3] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C5: PEAR #5 – Schedule for Pollution Prevention / Good Housekeeping Program

Appendix C5: Schedule for PEAR #5: Pollution Prevention / Good Housekeeping Program

1. Notice of Audit

- Within 730 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 15 March 2019

2. Records Request

- Within 737 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 22 March 2019

3. Fulfillment of Records Request

- Within 762 Days of AWPC
- Within 25 Days of Last Milestone
- By Tuesday 16 April 2019

4. Records Review Complete

- Within 776 Days of AWPC
- Within 14 Days of Last Milestone
- By Tuesday 30 April 2019

5. Pre-Onsite Evaluation Conference Call

- Within 783 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 7 May 2019

6. Completion of Onsite Evaluation

- Within 800 Days of AWPC
- Within 17 Days of Last Milestone
- By Friday 24 May 2019

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C5: Schedule for PEAR #5: Pollution Prevention / Good Housekeeping Program

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
796 Days After AWPC Monday 20 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* OGG Baseyard, Keolani Pl. *Facility #2:* ARFF Station, Onsite **11am – 12pm** Debrief Meeting [See Note (c)]	797 Days After AWPC Tuesday 21 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* HNL Baseyard, 2919 Aolele St. *Facility #2:* Crash Fire Station 2, off Lagoon Drive **11am – 12pm** Debrief Meeting [See Note (c)]	799 Days After AWPC Thursday 23 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Sand Island Baseyard, 48 Sand Island Access Road [DOT-HAR only operates one maintenance facility at Honolulu Harbor] **11am – 12pm** Debrief Meeting [See Note (c)]	800 Days After AWPC Friday 24 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Kalaeloa Storage Facility [DOT-HAR only operates one maintenance facility at Kalaeloa Harbor] **11am – 12pm** Debrief Meeting [See Note (c)]	796 Days After AWPC Monday 20 May 2019 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] *Facility #1:* HWY-M Kahului Baseyard, 650 Palapapa Dr. *Facility #2:* HAR-M Kahului Harbor, 103 Ala Luina St. **4pm – 5pm** Debrief Meeting [See Note (c)]	798 Days After AWPC Wednesday 22 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Kakoi Baseyard, 727 Kakoi St. *Facility #2:* Windward Baseyard, 45-889 Pookela St. **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) After the Kickoff Meeting, the Audit Team will conduct a walk-through of up to two (2) permittee owned or operated facilities (maintenance yards, chemical storage facilities, etc.) with a facility supervisor and/or other key staff to verify that activities are performed as described in the SWMPP. The facilities identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 810 Days of AWPC
- **Consent Decree Deadline:** Within 810 Days of AWPC
- Within 10 Days of Last Milestone
- By Tuesday 3 June 2019

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 855 Days of AWPC
- **Consent Decree Deadline:** Within 855 Days of AWPC
- Within 45 Days of Last Milestone
- By Thursday 18 July 2019

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 882 Days of AWPC
- Within 27 Days of Last Milestone
- By Wednesday 14 August 2019

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 884 Days of AWPC[1]
- **Consent Decree Deadline:** Within 885 Days of AWPC
- Within 2 Day of Last Milestone
- By Friday 16 August 2019

11. Completion of Final PEAR

- Within 905 Days of AWPC[2]
- **Consent Decree Deadline:** 930 Days of AWPC
- Within 21 Days of Last Milestone
- By Friday 6 September 2019

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.
[2] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C6: PEAR #6 – Schedule for Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

Appendix C6: Schedule for PEAR #6 - Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

1. Notice of Audit

- Within 912 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 13 September 2019

2. Records Request

- Within 919 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 20 September 2019

3. Fulfillment of Records Request

- Within 961 Days of AWPC
- Within 42 Days of Last Milestone
- By Friday 1 November 2019

4. Records Review Complete

- Within 989 Days of AWPC[1]
- **Consent Decree Deadline:** Within 990 Days of AWPC
- Within 28 Days of Last Milestone
- By Friday 29 November 2019

For this Program Element, the end of the records review period represents the completion of evaluation. No onsite evaluation will occur for this program element. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators will be conducted during the records review period. If requested by the Audit Team or MS4 Permit Coordinator, an in-person meeting may be scheduled during this period.

Airports		**Harbors**		**Highways**	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.

5. – 7. Not Applicable (See #4)

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 1034 Days of AWPC[2]
- **Consent Decree Deadline:** Within 1035 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 13 January 2020

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM

- Within 1058 Days of AWPC
- Within 24 Days of Last Milestone
- By Thursday 6 February 2019

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM

- Within 1064 Days of AWPC[2]
- **Consent Decree Deadline:** Within 1065 Days of AWPC
- Within 6 Days of Last Milestone
- By Wednesday 12 February 2020

11. Completion of Final PEAR

- Within 1108 Days of AWPC[3]
- **Consent Decree Deadline:** 1110 Days of AWPC
- Within 44 Days of Last Milestone
- By Friday 27 March 2020

[2] The deadline is ahead of the CD Deadline due to the required shift in the #4 deadline.
[3] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.

Appendix D

Notices to EPA & DOH

D1: Draft Notice of Potential Violation

State of Hawaii Department of Transportation
MS4 Permit Audit
Draft Notice of Potential Violation

Potential Violation Tracking #: _____

Determination of Potential Violation Date: _____

Potential Violation Notification Date:_____
(Today's Date)

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

_____

_____

_____

_____

_____

_____

_____

Description of Attached Photographs (if applicable):

_____

_____

_____

_____

Applicable Regulatory References

NPDES Permit No.: _____

SWMPP: _____

Hawaii Administrative Rules (HAR): _____

Code of Federal Regulations (CFR):_____

DRAFT

D2: Final Notice of Potential Violation

State of Hawaii Department of Transportation
MS4 Permit Audit
Final Notice of Potential Violation

Potential Violation Tracking #: _____

Determination of Potential Violation Date: _____

Potential Violation Notification Date: _____
(Today's Date)

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

_____
_____
_____
_____
_____
_____
_____

Description of Attached Photographs (if applicable):

_____
_____
_____
_____

Applicable Regulatory References

NPDES Permit No.: _____

SWMPP: _____

Hawaii Administrative Rules (HAR): _____

Code of Federal Regulations (CFR):_____

Result of HDOT PM Review:

- ☐ Confirmed Potential Violation
  - o Email Notice of Corrective Action sent to EPA/DOH on: _____
    (Due Within 14 Calendar Days of Potential Violation Notification Date)
- ☐ Re-categorized as Deficiency
  - o Email Notice sent to EPA/DOH on: _____
- ☐ Summarily Dismissed
  - o Email Notice sent to EPA/DOH on: _____

FINAL

D3: Notice of Corrective Action

State of Hawaii Department of Transportation
MS4 Permit Audit
Notice of Corrective Action

Corrective Action in Response to:

☐ Potential Violation (complete Section A & C)

☐ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:____ Potential Violation Notification Date:_____
(from Notice of Potential Violation Form)

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

HDOT Receipt of Draft PEAR Date:_____

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action

_____

_____

_____

_____

_____

_____

_____

_____

_____

Description of Attached Photographs (if applicable):

_____

_____

_____

_____

_____

FINAL Program Element Audit Report (PEAR) No. 3

Public Outreach / Public Involvement

State Project No. OSC-15-01

September 2018

Prepared by

Kennedy/Jenks Consultants

Prepared for

State of Hawaii
Department of Transportation
Office of Environmental Compliance
869 Punchbowl Street
Honolulu, Hawaii 96813

K/J Project No. 1696025*00

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List of Acronyms

AWP	Audit Work Plan
BMP	best management practice
CD	Consent Decree
DOH	State of Hawaii Department of Health
EPA	United States Environmental Protection Agency
HDOT	State of Hawaii Department of Transportation
I/C	Industrial Commercial Activities/Tenant
IDDE	Illicit Discharge Detection and Elimination
MS4	Municipal Separate Storm Sewer System
PEAR	Program Element Audit Report
PM	Project Manager
SWMPP	Stormwater Management Program Plan

Section 1: Introduction

Under Paragraph 10.d of the Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC) entered on 5 November 2014 (CD) with the United States Environmental Protection Agency (EPA) and the State of Hawaii Department of Health (DOH), the State of Hawaii Department of Transportation (HDOT) was required to perform compliance audits of Municipal Separate Storm Sewer System (MS4) permits issued to HDOT's Airports, Highways, and Harbors Divisions (referred to herein as the singular "MS4 Permit Audit"). The ongoing MS4 Permit Audit is being conducted in accordance with an Audit Work Plan (AWP) approved by EPA and DOH on 31 October 2016 and provided as Appendix C of this report. The MS4 Permit Audit consists of individual audits of six program elements:

1. Post-Construction Runoff Control / Permanent Best Management Practices (BMPs)
2. Construction Site Runoff Control
3. Public Outreach / Public Involvement
4. Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
5. Pollution Prevention / Good Housekeeping Program
6. Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

This Program Element Audit Report (PEAR) 3 documents procedures and findings of the Public Outreach / Public Involvement program element.

Section 2: Methods (CD Appendix A Section D.7.a.)

As required in CD Appendix A Section D.7.a., this section includes a specific statement of the procedures followed, HDOT sites visited and related activities (if any), and materials reviewed during the MS4 Permit Audit. Additional details on specific dates can be found in Appendix A. Additional permit-specific details can be found in Appendices B1 through B6. The Audit Team reviewed the individual program element for the six permitted MS4 programs concurrently, developing a PEAR that represents the culmination of the auditing efforts across the three HDOT Divisions. The MS4 Permit Audit included two phases (Pre-Audit and Reporting), detailed in the following sections. Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations. The Audit Team attended the 2017 Protect Our Waters conference and a Harbors tenant training event to gain a well-rounded understanding of this program.

2.1 Pre-Audit

2.1.1 Notice of Audit

The Audit Team began by providing a Notice of Audit to the MS4 Permit Coordinators via email. The Audit Team requested that the MS4 Permit Coordinators review two key documents.

First, the Audit Team created a table of Governing Regulations applicable to PEAR 3, which included sections of the federal regulations, HDOT's MS4 permits, and the CD. This table was used by the Audit Team in conjunction with the guiding questions in Appendix B of the AWP to informally track the results from the evaluation. The MS4 Permit Coordinators provided comments on this table to the Audit Team.

Second, the Audit Team developed a draft list of documents to be reviewed to generate the Records Request. The Audit Team asked the MS4 Permit Coordinators to confirm that the Audit Team had identified the most updated and suitable documents. The Audit Team finalized this list of documents based on feedback from the MS4 Permit Coordinators. This list is provided in Section 1 of Appendices B1 through B6.

2.1.2 Records Request

The Audit Team reviewed the key documents and identified those sections relevant to PEAR 3 (provided in Section 2 of Appendices B1 through B6). Based on this review, the Audit Team developed a Records Request that was shared with the MS4 Permit Coordinators.

2.1.3 Records Review

The MS4 Permit Coordinators responded to the Records Request and the Audit Team completed an initial review of the records received. The Audit Team next sent Requests for Clarification, as appropriate. The Audit Team also conducted in-person meetings with selected MS4 Permit Coordinators during this timeframe, as appropriate. MS4 Permit Coordinators provided additional information and records in response to this second request, as appropriate.

The Audit Team then completed their review of records received. For this Program Element, the end of the records review period represented the completion of evaluation.

2.2 Reporting

2.2.1 Draft PEAR

Pursuant to the CD, the Audit Team prepared a draft PEAR 3 and transmitted it to the HDOT Project Manager (PM), who distributed copies of the draft PEAR to the appropriate MS4 Permit Coordinators. The MS4 Permit Coordinators reviewed the draft PEAR and distributed the report to key personnel for their review (at the discretion of the MS4 Permit Coordinators). The MS4 Permit Coordinators submitted to the HDOT PM a consolidated written request for clarification and corrections to the draft PEAR for their respective permit. The HDOT PM then submitted the consolidated requests and corrections to the Audit PM.

2.2.2 Final PEAR

The Audit Team made appropriate changes to the draft PEAR and submitted the final PEAR.

Section 3: Key Findings (CD Appendix A Section D.7.b. – e.)

As required in CD Appendix A Section D.7.b. – e., this section includes details on the key findings of the MS4 Permit Audit for PEAR 3.

Compliance with program components for Airports Division and Highways Oahu District could not be determined, as discussed below. Specifically, Part D.1.a. of both HI S000001 and S000005 state the following:

> *The [public education and outreach] program should create: changes in attitude, knowledge, and awareness; BMP implementation; pollutant load reduction; and changes in discharge and receiving water quality.*

The Audit Team has concluded that this permit language requires further consultation between HDOT and DOH. The Audit Team noted that both Airports Division and Highways Oahu District track changes in these items via questionnaires, water quality monitoring, and other types of quantification. It would be preferable if this permit language were revised to use the term "promote" instead of "create", and/or set clear metrics by which the permittees can be assessed. Absent those revisions, compliance with this permit requirement could not be determined.

Aside from the limitations discussed above and unless otherwise noted in this report, the Audit Team found HDOT's permittees to be in compliance with their permit obligations.

3.1 Identification of Potential Violations and Deficiencies (CD Appendix A Section D.7.c.)

As required in CD Appendix A Section D.7.c., this section includes an identification of Potential Violations and Deficiencies and recommendations for improvement.

3.1.1 Potential Violations

A Potential Violation is defined in the AWP as an area where the evaluation found the permittee not in compliance with a specific Stormwater Management Program Plan (SWMPP) commitment, the CD, and/or permit and regulations. The Audit Team identified one Potential Violation related to Harbors Division. More details on the Potential Violation and associated Corrective Actions proposed by HDOT are provided in Section 5 of Appendix B3.

3.1.2 Deficiencies

A Deficiency is defined in the AWP as an item which, if not corrected, may lead to Potential Violations.

The Audit Team identified two (2) Deficiencies related to Harbors Division. Deficiency details and associated Corrective Actions proposed by HDOT are provided in Section 6 of Appendix B3. For each Deficiency, the Audit Team's recommendations for improvement are

also provided. Section 6.4 of the AWP further discusses HDOT's response to these Deficiencies, as required by CD Appendix A Section E.2.

3.2 Best Practices and Opportunities (CD Appendix A Section D.7.d.)

As required in CD Appendix A Section D.7.d., this section includes identification of best practices and opportunities for information/technology transfer to be applied across the Divisions.

During the MS4 Permit Audit, the Audit Team noted several areas where best practices and technologies may be considered across the Divisions. Findings include the following:

1. Each Division should continue their efforts to actively solicit public input in developing and revising their respective SWMPPs. The Audit Team observed the use of newspaper postings, website postings, public meetings, and a variety of other forms of outreach. Additional efforts could involve the establishment of a Department-wide or permit-specific citizen advisory group. Highways Oahu District's permit indicates that they may organize a citizen advisory group (though they are not required to do so and have not done so to date). The Audit Team understands that Highways Oahu District currently gathers informal input from users of their MS4.

   In our research related to this recommendation, the Audit Team identified an example of such an advisory group. The Advisory Committee on Transportational Storm Water Management was created in 2015 to "work cooperatively with the Nevada Division of Environmental Protection (NDEP) to monitor the status and efficacy of the Nevada Department of Transportation's storm water program, and ensure its sound implementation and functioning"[1]. The Advisory Committee is made up of five members, including one from the general public.

   The Audit Team acknowledges that convening such a group would require additional HDOT time and resources. HDOT may consider reaching out to other state DOTs such as Nevada to assess the costs and benefits of convening such a group.

2. Airports Division may consider implementing a formal tenant environmental awards program like the program implemented by Harbors Division. Airports Division's individual permit for Daniel K. Inouye International Airport indicates that they may do so (though they are not required to do so and have not done so to date).

3. Highways Oahu District maintains an excellent social media presence. Airports Division posts its training videos on YouTube, but otherwise has not pursued a social media presence. Highways Maui District, Harbors Division, and Airports Division may consider implementing some of the social media practices used by Highways Oahu District. The Audit Team is aware that Harbors Division maintains reservations with the use of social media, as documented in their latest annual report: "With cyber-security at the forefront

[1] https://ndep.nv.gov/water/advisory-committee-on-transportational-storm-water-management

of protecting government information, proposed social media approaches to promoting stormwater compliance have not progressed… The social media initiative was suspended by Harbors due to concerns regarding vulnerabilities involving false information and misreporting information." HDOT may consider developing one social media policy related to stormwater outreach, and/or developing one social media campaign that covers all three Divisions' efforts. This consideration by HDOT must address various constraints facing the Divisions such as individual permit requirements, operational/administrative parameters, and division/district policies.

4. Highways Oahu District tailors their public outreach based on seasonality – for example, in the wintertime, they provided "Rainy Season Tips" for residents to consider. The Audit Team believes this is a best practice that could be more widely implemented throughout the Department's public outreach efforts related to stormwater.

3.3 Retrospective Analysis (CD Appendix A Section D.7.b.)

As required in CD Appendix A Section D.7.b., this section includes a retrospective analysis of activities that maybe outmoded, ineffective, insufficient, or excessively burdensome, and recommendations to modify, streamline, or expand them in accordance with what has been learned. Findings include the following:

1. The CD requires that Harbors Division update and maintain its stormwater management website to include the Tenant Environmental Manager of the Year award. At present, that award listing is embedded within a PDF file which must be downloaded to be viewed. Harbors Division may consider adding the Tenant Environmental Manager of the Year award as a stand-alone item on their website for additional recognition and visibility.

2. Each Division maintains a hotline where HDOT staff and the public can report stormwater concerns such as illicit discharge. Highways Oahu District has equipped vehicles with a spill response packet which includes spill response procedures, emergency spill contact information, spill response documentation form, and spill response product descriptions. To further encourage reporting by HDOT personnel, Highways Maui District, Airports Division and Harbors Division may consider creating educational cards to place in locations such as the visor of maintenance vehicles to remind HDOT personnel to report violations.

3. The Kahului Airport SWMPP states that Airports Division will "record distribution of [Tenant Brochures / Fact Sheets] on inspection form[s]." Airports Division's current inspection form does not accommodate this kind of tracking; instead, they have implemented an alternate tracking system that achieves the same result. As such, this item was not deemed to be a Finding of Concern by the Audit Team. However, Airports Division should revise their SWMPP accordingly.

4. Harbors Division communicated to the Audit Team that it has been challenging for maintenance staff to complete certain stormwater compliance assignments, utilize CityWorks, and maintain adequate records of their activities. These are relatively new

job responsibilities for these staff and may require additional training and management oversight to achieve Harbors Division's stormwater compliance goals.

5. While not mandated in permits, the Audit Team was unable to find examples of the Divisions generating public outreach materials in other languages commonly spoken in Hawaii. The Divisions may consider investigating whether doing so would be practical and/or effective.

3.4 Implementation (CD Appendix A Section D.7.e)

As required in CD Appendix A Section D.7.e., this section includes an analysis of the practices implemented for each Division's program elements and a determination as to whether identified best practices can be universally implemented across all three Divisions. If best practices cannot be universally implemented, this section describes identified impediments.

Several recommendations for universally implementing best practices have been identified in Sections 3.2 and 3.3. For HDOT staff to champion such implementation from within the organization, the Audit Team believes that a compelling case must be made for why the proposed changes will lead to improvements in permit compliance and stormwater quality. Absent that compelling case, HDOT staff may understandably maintain that their time and attention should remain focused on implementing their current programs. The Audit Team has concluded that this represents the greatest impediment to universally implementing these recommendations.

3.5 Positive Program Elements

HDOT staff were helpful and cooperative in responding to requests for information. HDOT staff were receptive to MS4 Permit Audit findings shared to date and interested in improving their MS4 programs. The Audit Team identified the following positive program elements:

1. Highways Oahu District exceeded several of their outreach-related goals set for 2017. These goals were related to the Adopt-A-Highway Program, school programs, and participation in special events.

2. In their Annual Report, Highways Oahu District provided effective tracking and analysis of traffic related to their stormwater websites.

3. Harbors Division disseminated six (6) forms of stormwater awareness information to their tenants and the public, which exceeds the CD decree requirement of three (3) forms of information.

4. All four permittees have made various training materials available on their websites so the materials can be easily accessed at any time.

5. Airports Division has implemented the Audit Team's PEAR 1 recommendation to implement educational signage at the Elliot Street pervious pavement installation. Hawaiian Airlines staff have been observed reading the signage.

6. Highways Oahu District has lent training resources to Airports Division for their use, which is an example of increased collaboration amongst the Divisions.

7. The Audit Team observed that Divisions have been effectively partnering with non-profit organizations as shown in the following examples:

    - Airports Division has partnered with 808 Cleanups to undertake waste removal along Lagoon Drive
    - Highways Division runs the Adopt-A-Highway program which typically uses non-profit volunteers
    - Highways Maui District has partnered with Hands On Maui and the County of Maui for storm drain stenciling
    - Highways Oahu District partnered with the Waikiki Aquarium for several community outreach events and promotes events from other non-profits in its social media
    - Harbors Division asked a representative of the Surfrider Foundation to speak at their annual Tenant Training.

Appendix A

Project Milestones and Deadlines

Appendix A: PEAR 3 Project Milestones and Deadlines

Appendix A of the Consent Decree (CD) defines various project milestones and deadlines, described for ease of reference below:

Program Element	Evaluation Complete: [(a)]	Draft PEAR to HDOT: [(b)]	HDOT Review of Draft PEAR: [(c)]	Final PEAR to HDOT: [(d)]
PEAR 3: Public Outreach / Public Involvement Program	15 Months (450 Days)[(e)] After AWPC[(f)] 8 June 2018	495 Days After AWPC 23 July 2018	525 Days After AWPC 22 August 2018	545 Days After AWPC 11 September 2018

Notes:

(a) For Program Element Audit Report (PEAR) 3, no onsite evaluation is required and therefore, "evaluation" is defined to represent the date of conclusion of the Records Review period.
(b) Pursuant to CD Appendix A Section D.2., Kennedy/Jenks Consultants completed a draft audit report and transmitted it to State of Hawaii Department of Transportation (HDOT) within 45 days of completing the audit of this program element [defined as the conclusion of "evaluation", as discussed in Note (a)].
(c) Pursuant to CD Appendix A Section D.3., HDOT reviewed the draft PEAR to correct any factual inaccuracies within 30 days of receipt.
(d) Pursuant to CD Appendix A Section D.4., Kennedy/Jenks Consultants completed a final PEAR within 120 days of completing the audit of the program element [defined as the conclusion of "evaluation", as discussed in Note (a)].
(e) "Months" are based on 30-day month.
(f) AWPC = Audit Work Plan Commencement (15 March 2017)

Milestone	Date Completed
Notice of Audit	19 March 2018
Records Request	27 March 2018
Response to Records Request	9 May 2018
Completion of Records Review	8 June 2018
Draft Potential Violations to HDOT PM	19 June 2018
Notice of Corrective Action to EPA/DOH	3 July 2018
Draft PEAR to HDOT PM	23 July 2018
MS4 Permit Coordinator Comments to HDOT PM	20 August 2018
HDOT PM Comments to Audit Team	22 August 2018
Final PEAR to HDOT PM	11 September 2018

Notes:

PM = project manager
EPA = United States Environmental Protection Agency
DOH = State of Hawaii Department of Health
MS4 = Municipal Separate Storm Sewer System

Appendix B1

Permit-Specific Information – Kahului Airport

Appendix B1: Permit-Specific Information – Kahului Airport

1. Key Documents

Permit / Document	1. Kahului Airport Small MS4 Permit HI 14KE349
2017 Annual Report	20180126.Compliance Submission for Reports & documents-HI 14KE349.pdf Plus Parts 1 – 3
DOH Comments on 2017 Annual Report	None received.
Permit	OGG-MS4-permit-20140721.14KE349.FNL_.14.pdf Plus 2016 extension
Stormwater Website	http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/ogg-storm-water-program/
SWMPP	OGG-SWMPP_20141023.pdf

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 3**
2017 Annual Report *(20180126.Compliance Submission for Reports & documents-HI 14KE349.pdf Plus Parts 1 – 3)*	Section 2.5 Section 3.1 Section 3.2 Section 4.2 Attachments 1-5
Permit *(OGG-MS4-permit-20140721.14KE349.FNL_.14.pdf Plus 2016 extension)*	In entirety
Stormwater Website (*http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/ogg-storm-water-program/)*	In entirety
SWMPP (OGG-SWMPP_20141023.pdf)	Public Education and Outreach section Public Involvement section

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix B2

Permit-Specific Information – Daniel K. Inouye International Airport

Appendix B2: Permit-Specific Information – Daniel K. Inouye International Airport

1. Key Documents

Permit / Document	2. Honolulu International Airport Individual Permit HI S000005
2017 Annual Report	20170901.Transmittal-Certification for Reports and Documents-HI S000005.pdf Plus Attachments labeled 1-32
DOH Comments on 2017 Annual Report	None received.
Permit	HNL MS4 Permit.pdf
Public Education and Outreach Plan	Section A of SWMPP
Stormwater Website	http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/hnl-storm-water-program/
SWMPP	HNL SWMPP (June 2015).pdf

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 3**
2017 Annual Report *(20170901.Transmittal-Certification for Reports and Documents-HI S000005.pdf Plus Attachments labeled 1-32)*	Sections 3.2-3.6 Sections 5.2-5.3 Section 5.6 Attachments 2-11 Attachments 18-19 Attachment 27 Attachment 29
Permit *(HNL MS4 Permit.pdf)*	In entirety
Public Education and Outreach Plan *(Section A of SWMPP)*	Section A in entirety Including Attachments A.1-A.2
Stormwater Website *(http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/hnl-storm-water-program/)*	In entirety
SWMPP *[HNL SWMPP (June 2015).pdf]*	In entirety

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix B3

Permit-Specific Information – Honolulu Harbor

Appendix B3: Permit-Specific Information – Honolulu Harbor

1. Key Documents

Permit / Document	3. Honolulu Harbor Small MS4 Permit HI 03KB482
2011 Annual Report	2011-ACR-Honolulu.pdf
2017 Annual Report	2017_HarborsACR_Final-Complete
Best Management Practice Guidance	• 01_BMP_VehicleWashing_20140828.pdf • 02_BMP_VehicleFueling_20140828.pdf • 03_BMP_MaterialStorage_20140828.pdf • 04_BMP_General_20140828.pdf • 05_BMP_SolidandHazardousWasteManagement_20140828.pdf • 06_BMP_MaterialDeliveryHandling_20140828.pdf • 07_BMP_BuildingRemodeling_20140828.pdf • 08-BMP-Vessel-Maintenance-20140925.pdf • 09_BMP_BuildingPowerWashing_20140828.pdf • 10-BMP-Sidewalk-Power-Washing_20140822.pdf • 11-BMP-Storm-Drain-20140828.pdf
DOH Comments on 2017 Annual Report	None received.
New Tenant Information Package	HAR-PM-Env-Brochure-v19.pdf
Permit	December 2016 extension is here: 20161202.03KB482.EXT.16.pdf
Public Education and Outreach Plan	Section A of SWMPP
Stormwater Web site	http://hidot.hawaii.gov/harbors/library/storm-water-management/
SWMPP	Final HDOT Harbors SWMP-150325.pdf

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 3**
2011 Annual Report *(2011-ACR-Honolulu.pdf)*	Section 7.2.2
2017 Annual Report *(2017_HarborsACR_Final-Complete)*	Section 2 Sections 3.2-3.3 Section 4.2 Attachments 1-9 Section C, in entirety
Best Management Practice Guidance • *01_BMP_VehicleWashing_20140828.pdf* • *02_BMP_VehicleFueling_20140828.pdf* • *03_BMP_MaterialStorage_20140828.pdf* • *04_BMP_General_20140828.pdf* • *05_BMP_SolidandHazardousWasteManagement_20140828.pdf* • *06_BMP_MaterialDeliveryHandling_20140828.pdf* • *07_BMP_BuildingRemodeling_20140828.pdf* • *08-BMP-Vessel-Maintenance-20140925.pdf* • *09_BMP_BuildingPowerWashing_20140828.pdf* • *10-BMP-Sidewalk-Power-Washing_20140822.pdf* • *11-BMP-Storm-Drain-20140828.pdf*	In entirety
New Tenant Information Package *(HAR-PM-Env-Brochure-v19.pdf)*	In entirety
Permit *(20161202.03KB482.EXT.16.pdf)*	In entirety
Public Education and Outreach Plan *(Section A of SWMPP)*	Section A of SWMPP in entirety
Stormwater Web site *(http://hidot.hawaii.gov/harbors/library/storm-water-management/)*	In entirety
SWMPP *(Final HDOT Harbors SWMP-150325.pdf)*	(see Public Education and Outreach Plan) Section B, Attachment 1 Section B, Attachment 10, Part 9 Section D Table 3-4 Section E Part 4.0 Section E Attachment 1, Parts 1.1-1.2

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

Potential Violation Tracking #1 applies to this permit. Please see pages B3-4 through B3-9.

Notice of Potential Violation

Potential Violation Tracking #: 1

Determination of Potential Violation Date: 6/15/18

Potential Violation Notification Date: 6/19/18

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

Consent Decree Part 14.c.ii. states that "HDOT-Harbors shall inspect the legibility of the stencil or label nearest each inlet prior to the wet season every year, record all inlets with illegible stencils, and re-stencil or re-label the inlet 60 days after inspection." The Audit Team identified thirty-seven (37) instances in 2017 where the re-stenciling or relabeling of inlets occurred more than 60 days after inspection. For example, the inspection of Inlet Number SDIHO517884 occurred on July 12, 2017, and the re-stenciling was completed on September 29, 2017.

Description of Attachments (if applicable): Harbors Division's inlet inspection report for June 1 to December 30, 2017, filtered to show the 37 instances of interest.

Applicable Regulatory References

Consent Decree: Part 14.c.ii.: "HDOT-Harbors shall inspect the legibility of the stencil or label nearest each inlet prior to the wet season every year, record all inlets with illegible stencils, and re-stencil or re-label the inlet 60 days after inspection."

NPDES Permit No.: Not applicable.

SWMPP: Section 3.1.7: "Harbors will inspect the legibility of the stencil or label nearest each inlet prior to the wet season every year, recording all inlets with illegible stencils and re-stenciling or re-labeling the inlet 60 days after inspection."

Hawaii Administrative Rules (HAR): Not applicable.

Code of Federal Regulations (CFR): Not applicable.

State of Hawaii Department of Transportation
Harbors Division

Inlet / Trench Drain Inspection QC

for inspections conducted between 6/1/2017 and 12/31/2017
and work initiated after the inspection date

Inlet

SDIHO243522

Inspl 3330 - Storm Inlet Insp Screening 07/07/2017

Stenciling required Yes

Debris depth 6" - 12"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4304	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/25/17	9/25/17

Inspl 3852 - Storm Inlet Insp Screening 10/19/2017

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4304	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/25/17	9/25/17

SDIHO263592

Inspl 3329 - Storm Inlet Insp Screening 07/07/2017

Stenciling required Yes

Debris depth Cannot observe

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
3878	CLOSED	Inspect Comprehensive & Clean within 30 Da	7/14/17	7/14/17	7/19/17	7/19/17
4315	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/25/17	9/25/17

Inspl 3845 - Storm Inlet Insp Screening 10/19/2017

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
3878	CLOSED	Inspect Comprehensive & Clean within 30 Da	7/14/17	7/14/17	7/19/17	7/19/17
4315	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/25/17	9/25/17

Inlet

SDIHO313904

Inspl 7688 - Storm Inlet Insp Comprehensive 06/09/2017

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3731	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/5/17	6/5/17	6/9/17	6/9/17

3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4042	CLOSED	Inspect Comprehensive & Clean within 30 Da	8/8/17	8/8/17	10/5/17	10/5/17
4751	CLOSED	Replace Stencil / Medallion	11/7/17	11/2/17	11/22/17	1/9/18
4756	0 - INITIATED	Repair Grate	11/7/17	11/7/17		
4759	CLOSED	Inspect Comprehensive & Clean within 30 Da	11/8/17	11/8/17	11/29/17	11/29/17

Inspl 3341 - Storm Inlet Insp Screening 08/01/2017

Debris depth Cannot observe

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3731	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/5/17	6/5/17	6/9/17	6/9/17
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4042	CLOSED	Inspect Comprehensive & Clean within 30 Da	8/8/17	8/8/17	10/5/17	10/5/17
4751	CLOSED	Replace Stencil / Medallion	11/7/17	11/2/17	11/22/17	1/9/18
4756	0 - INITIATED	Repair Grate	11/7/17	11/7/17		
4759	CLOSED	Inspect Comprehensive & Clean within 30 Da	11/8/17	11/8/17	11/29/17	11/29/17

Inspl 3853 - Storm Inlet Insp Screening 11/02/2017

Stenciling required Yes

Grate condition Needs Repair or Replace

Debris depth Cannot observe

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3731	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/5/17	6/5/17	6/9/17	6/9/17
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4042	CLOSED	Inspect Comprehensive & Clean within 30 Da	8/8/17	8/8/17	10/5/17	10/5/17
4751	CLOSED	Replace Stencil / Medallion	11/7/17	11/2/17	11/22/17	1/9/18
4756	0 - INITIATED	Repair Grate	11/7/17	11/7/17		
4759	CLOSED	Inspect Comprehensive & Clean within 30 Da	11/8/17	11/8/17	11/29/17	11/29/17

SDIHO426972

Inspl 3180 - Storm Inlet Insp Screening 07/31/2017

Stenciling required Yes

Debris depth 12"+

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4268	CLOSED	Inspect Comprehensive & Clean within 10 Da	8/24/17	8/24/17		8/25/17
4303	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	10/9/17	10/9/17

SDIHO517884

Inspl '889 - Storm Inlet Insp Screening 07/12/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4311	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO517890

Inspl '885 - Storm Inlet Insp Screening 07/16/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4302	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO517896

Inspl '707 - Storm Inlet Insp Comprehensive 06/21/2017

Guard recommendation Replace

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3782	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/19/17	6/19/17	6/21/17	6/21/17
4340	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

Inspl 3342 - Storm Inlet Insp Screening 07/16/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3782	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/19/17	6/19/17	6/21/17	6/21/17
4340	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO517900

Inspl '742 - Storm Inlet Insp Comprehensive 06/21/2017

Guard recommendation Replace

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3782	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/19/17	6/19/17	6/21/17	6/21/17
4335	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

Inspl 3345 - Storm Inlet Insp Screening 07/16/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3782	CLOSED	Inspect Comprehensive & Clean within 30 Da	6/19/17	6/19/17	6/21/17	6/21/17
4335	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO518152

Inspl '901 - Storm Inlet Insp Screening 07/17/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4310	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO518364

Inspl '909 - Storm Inlet Insp Screening 07/16/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4305	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO518370

Inspl '904 - Storm Inlet Insp Screening 07/13/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4323	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO518464

Inspl '890 - Storm Inlet Insp Screening 07/16/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4331	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO518466

Inspl '917 - Storm Inlet Insp Screening 07/16/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4327	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/29/17	9/29/17

SDIHO528660

Inspl '942 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4300	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO528662

Inspl '922 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4342	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO528664

Inspl '923 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4338	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO528690

Inspl '925 - Storm Inlet Insp Screening 07/13/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4319	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO528692

Inspl '926 - Storm Inlet Insp Screening 07/13/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4316	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO528710

Inspl 272 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4301	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

Inlet

SDIHO528712

Inspl 273 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4339	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO528714

Inspl 274 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4336	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO528716

Inspl 3275 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4332	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO528718

Inspl 3276 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4328	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538668

Inspl '924 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4334	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO538670

Inspl '929 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4330	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO538672

Inspl '931 - Storm Inlet Insp Screening 07/11/2017

Stenciling required	Yes
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4326	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

Inlet

SDIHO538696

Inspl '927 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4313	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

SDIHO538698

Inspl '928 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4318	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538792

Inspl '933 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4320	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

Inlet

SDIHO538794

Inspl '934 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4309	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538796

Inspl '935 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4317	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538798

Inspl '936 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4314	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538868

Inspl '973 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4308	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/28/17	9/28/17

Inlet

SDIHO538890

Inspl 304 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4324	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538910

Inspl 270 - Storm Inlet Insp Screening 07/11/2017

Stenciling required Yes

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4322	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDIHO538912

Inspl 331 - Storm Inlet Insp Screening 07/11/2017

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4307	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

Inspl 857 - Storm Inlet Insp Screening 10/20/2017

Debris depth <6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
3802	CANCEL	Sweep - Weekly	6/26/17	6/26/17	6/26/17	
4307	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	9/27/17	9/27/17

SDOBP05002G

Inspl 3376 - Storm Inlet Insp Screening 08/07/2017

Stenciling required	Yes
Grate condition	Needs Repair or Replace
Debris depth	<6"

WOID	Status	Description	Initiated	Proj Start	Actual Start	Actual Finish
4296	CLOSED	Replace Stencil / Medallion	8/28/17	8/28/17	10/10/17	10/10/17

Result of HDOT PM Review:

- ☑ Confirmed Potential Violation
  - o Email Notice of Corrective Action sent to EPA/DOH on: **7/3/2018**
    (Due Within 14 Calendar Days of Potential Violation Notification Date)
- ☐ Re-categorized as Deficiency (see rationale below)
  - o Email Notice sent to EPA/DOH on:
- ☐ Summarily Dismissed (see rationale below)
  - o Email Notice sent to EPA/DOH on:

Rationale for Re-Categorization or Summary Dismissal:

Notice of Corrective Action

Corrective Action in Response to:

☑ Potential Violation (complete Section A & C)

☑ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #: 1

Potential Violation Notification Date: **6/19/2018**
(from Notice of Potential Violation Form)

Corrective Action Notification Date: **7/3/2018**

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

Deficiency Tracking #:

HDOT Receipt of Draft PEAR Date:

Corrective Action Notification Date:

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action:

Immediately following issuance of this Notice of Potential Violation, HDOT Harbors Division reviewed the Consent Decree and the Storm Sewer System Operations & Maintenance Program Manual regarding the auditor's observations and findings of Potential Violations.

The Notice of Potential Violation refers to the HDOT Harbors Division's re-labelling of illegible stencils beyond the requisite 60 days after inspection.

A. Review and Findings.

The HDOT Harbors Division's review finds that there was a misunderstanding of the entry shown in the Asset Management System (Cityworks) report that is the date of inspection, the event that starts the 60-day timeline. The O`ahu Maintenance staff relied on the data input date as the start of the 60-day timeline—that is, the "Initiated" date associated with the event "Replace Stencil / Medallion" in the Cityworks report. Using the "Initiated" date

as the "date of inspection," 34 of the 37 re-stenciling viewed as potential violations would have occurred during the 60-day timeline and in most cases were completed within a week. However, the Consent Decree is clear in that the O`ahu Maintenance staff should have re-labelled illegible stencils 60 days after inspection. The remaining three potential violations involved re-stenciling that was delayed an additional 7 or more days due to employee safety concerns arising from weather conditions or congestion in our cargo yards.

1. Date of Inspection. In better understanding the nature of the potential violations, the HDOT Harbors Division reviewed the Storm Sewer System Operations & Maintenance Program Manual (O&M Program Manual) and finds that it does not contain provisions covering inlet inspections and timely re-stenciling pursuant to paragraph 14 of the Consent Decree.

Corrective Action 1: The corrective action to be taken is amendment of Section 6.7 of the O&M Program Manual to include a definition of "inspection" and clarification of the date that starts the 60-day period for timely re-stenciling to occur.

2. Monitoring of Work. The HDOT Harbors Division review recognized a continuing need for additional personnel to monitor the Asset Management System (Cityworks). The monitoring program infrastructure was developed with Asset Management System (Cityworks) and other related systems. However, the HDOT Harbors Division acknowledges there is need for dedicated staff comfortable and confident with computer technology to use the Asset Management System (Cityworks) input data, to access electronic mailboxes for work orders, and to monitor the status of work initiated. While the O`ahu Maintenance staff is very capable of completing work tasks, electronic software continues to pose challenges for them, despite training from time to time. During the fall of 2017, the HDOT Harbors Division did submit a supplemental legislative budget request for additional positions, which was approved by the Governor. Unfortunately, the request failed to secure Legislative approval.

Corrective Action 2: The corrective action is amendment of a current contract for environmental data entry to include assisting the Harbors Engineering Environmental Section with reports of work orders that have not been completed. The HDOT Harbors Division requests 60 working days to develop and submit a flow chart of the revised process.

In addition, with the retirement of the O`ahu Baseyard Maintenance Superintendent, the O`ahu District will be seeking a Superintendent who is proficient with computers.

3. Medallions. HDOT Harbors Division finds the need for frequent re-stenciling, especially due to Hawai`i's weather. To reduce this frequency in managing the

Storm Sewer System Operations & Maintenance Program, the O`ahu Harbor District Manager contacted the HDOT Highways Division and obtained information regarding that Division's procurement of medallions. Together with the Harbors Engineering Environmental Section, the O`ahu Harbor District has decided to install medallions to replace stenciling, using the same vendor procured by the HDOT Highways Division. The Port of Seattle has reported success using similar markers that have exceeded 3 years of useful life in their container yards.

Corrective Action 3: The stainless-steel storm drain medallions are on order, and the O`ahu Harbor District will install the medallions upon delivery, with completion expected by the end of 2018. Priority for medallion installation will be based on the frequency of re-labelling illegible stencils for each inlet based on information provided by the Asset Management System (Cityworks).

In summary, since our review, we have corrected our re-stenciling procedures to more accurately begin the 60-day re-stenciling window to be the day the Marine Cargo Specialist first observes the need for re-stenciling. The date the Marine Cargo Specialist first observes the need for re-stenciling, as entered into the Asset Management System (Cityworks), is the date of inspection that triggers the 60-day timeline for completion of this task. In addition, we have begun color-coding our reports to better identify the "date of inspection" as the start date of the 60-day timeline for our employees to complete the re-stenciling. Further, the HDOT Harbors Division believes the medallions will greatly reduce the hazardous demands of re-stenciling in container yards. This will ensure a better and safer public education and outreach program. HDOT Harbors Division will install these new storm drain inlet markers during the upcoming semi-annual storm drain inspection and maintenance cycle with completion targeted by the end of 2018.

Milestones for this Corrective Action are:

Change in Processes and Procedures

The HDOT Harbors Division has already instituted, or will soon institute, the following measures to avoid exceeding the 60-day re-stenciling timeline in the future.

a) The Asset Management System (AMS) inspection and notification process for re-stenciling work has been changed to ensure that the HDOT Harbors Division staff are alerted as soon as possible within the 60-day timeline.
b) Training on the improved inspection and maintenance procedures for HDOT Harbors Division personnel will be provided soon after the AMS is re-configured. Thereafter, regular user workshops will be used to reinforce familiarity with the revised procedures.
c) A "Stormdrain QC" tab and "Inspection QC Report" in the AMS were recently created to ensure that Harbors managers can review the progress of stenciling on a continuous basis.

These improvements to the AMS system will allow the Engineering Environmental Section to continuously monitor the status of stenciling and cooperatively coordinate with O`ahu Baseyard maintenance to meet the 60-day re-stenciling requirement. The Engineering Program Manager will alert the O`ahu Harbor District Manager of potential problems and to facilitate follow-on actions when needed.

4-Inch Stainless Steel Medallion Replacement Actions:

1. **Purchase order completion** for 4-inch stainless steel medallions:
   June 29, 2018
2. **Anticipated receipt of 4-inch stainless steel medallions** on Oahu:
   August 2018
   (NOTE: Illegible stencils will have to be spray-painted until the stainless-steel medallions are available for installation)
3. **Completion of installation of 4-inch stainless steel medallions:**
   December 2018
   (in place of painted stencils when safe access to container yard drain inlets is available)

AMS, Training & Notification Improvements:

1. **Re-configure AMS** inspection & notification process: **June 29, 2018**
2. **Initiation of initial training** on improved AMS procedures: **July 2018**

Description of Attached Photographs (if applicable): n/a

6. Deficiencies

Deficiency Tracking #1 and #2 apply to this permit. Please see pages B3-11 through B3-16.

Notice of Deficiency

Deficiency Tracking #: 1
Related Permit(s): Honolulu Harbor

Deficiency Narrative Description:
Consent Decree Part 14.h.ii. states that "[a]n Inspection shall be completed within three months of the Tenant occupying an existing facility, or the Tenant's completion, construction, and occupancy of a newly constructed facility." Clean Islands Council at Pier 12 is referred to as a Harbors Division tenant in two sections of the 2017 Annual Compliance Report (Attachment 5F and Attachment 10). Based on that reference, the Audit Team expected that Harbors Division would inspect this tenant within three months of Clean Islands Council's occupancy in late 2016. Upon further inquiry by the Audit Team, Harbors Division clarified that Clean Islands Council does not, in fact, meet the Consent Decree definition of a "tenant". Therefore, Harbors incorrectly identified Clean Islands Council as a tenant in the Annual Compliance Report.

Recommendations for Improvement:
Harbors Division should consider providing additional clarity in their plans and/or training regarding the definition of "tenant", especially as regards reporting in the Annual Compliance Report.

Description of Attachments (if applicable): Annotated pages from Attachment 5F and Attachment 10 of Harbors Division's 2017 Annual Compliance Report showing reference to Clean Islands Council at Pier 12 as a Harbors Division tenant.

Applicable Regulatory References

NPDES Permit No.: Not applicable.

Consent Decree: Part 14.h.ii.: "An Inspection shall be completed within three months of the Tenant occupying an existing facility, or the Tenant's completion, construction, and occupancy of a newly constructed facility."

SWMPP: Attachment 5F, Attachment 10, Tenant Inspection Manual (August 2014) Section 2.1

Hawaii Administrative Rules (HAR): Not applicable.

Code of Federal Regulations (CFR): Not applicable.

Attachment 5F.
Tenant Training: Questionnaires Results Summary and Completed Questionnaires

Harbors Tenant Training Questionnaire Summary

Name	Company	Company
Terry N. Qauino	Hawaiian Ice Company	9
Mark Wilkins	Clean Island Council	10
Jim Keumann	Wind & Sea Charles	10
Raymond Tavou	Matson	10
Raymond Rodigve	VAK Fisheries, LLC	9
Peter Pillone	HDOT Harbors Division	10
Kam Chun	Matson	9
David Lee	HDOT Harbors Division	9
Paul Descalso	AES Kalaeloa Venture	10

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Clean Islands Council		Kalaeloa	Pier 4	Low	Low	3/16/2017	Regular	Tim Sawyer, Pat Gillan, John Jacobi	(808) 536-5814; (808) 845-8465
		Honolulu	Pier 12	N/A	Low	3/30/2017	New	Patrick Gillen	(808) 845-8465, (808) 479-0702
Concrete Coring Company of Hawaii, Inc.	Keehi Facility	Honolulu	Former Foundation of Building 911; KIPA	Low	N/A	4/18/2017	Annual Recon	John Neff / Nathan Sabey	(808) 488-8222; (808) 330-7516
						11/22/2017	Final		
Dependable Hawaiian Express, Inc.	DHX, Inc.	Honolulu	Pier 21	Low	Medium	2/16/2017	Regular	Kane McEwen; Joe Vele	(808) 841-7311 ext. 1701
Erik Builders, Inc.		Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	James M. Sakata	(808) 845-7736
				Low	N/A	6/2/2017	Final		
Foss Maritime Company	Moana Pa'a Kai, Inc.; Subsiduary of Young Brothers	Honolulu	Piers 20, 21, and 22	Medium	Medium	12/14/2017	Regular	Nathan Kapule; Randal Lau	(808) 543-9398; (206) 276-1898
Frank P. White Jr. Properties	Container Storage Co.	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	Frank White; Gail Thometz	(808) 841-5555
Fresh Island Fish, LLC		Honolulu	Pier 38	Low	Low	4/18/2017	Annual Recon	Derek Higa	(808) 831-4911
Friends of Falls of Clyde		Honolulu	Pier 7	Low	Medium	3/21/2017	Regular	Chris Woolaway; Bruce Mcewan	(808) 753-3311; (808) 543-9311, (808) 543-9357
Friends of Hokule'a & Hawai'iloa		Honolulu	KIPA	Medium	N/A	In 2018	Final	Jay Dowsett	(808) 256-1841
Fukunaga, Paul N.	P.F. Marine	Honolulu	KIPA	Low	Low	3/28/2017	Regular	Paul N Fukunaga	(808) 842-1330, (808) 220-9425
Gillis, Eugene	Excavation Services	Honolulu	KIPA	Medium	N/A	In 2018	Final	Eugene Gillis	(808) 383-1959, (808) 292-7469
GLP Asphalt, LLC	Asphalt Hawaii	Kalaeloa	KBPH	Medium	Medium	10/19/2017	Regular	Sara Daniels	(808) 561-4121
Grace Pacific LLC	GP Kalaeloa HMA Plant	Kalaeloa	KBPH	Medium	Medium	10/17/2017	Regular	Joseph Shacat Scott Sevadjian	(808) 203-2805, (808) 348-4895

Result of HDOT PM Review:

- ☑ Confirmed Deficiency
  - o Email Notice of Corrective Action sent to EPA/DOH on: **8/13/2018** (Due Within 21 Calendar Days of Deficiency Notification Date)
- ☐ Re-categorized as Potential Violation (see rationale below)
  - o Email Notice sent to EPA/DOH on:
- ☐ Summarily Dismissed (see rationale below)
  - o Email Notice sent to EPA/DOH on:

Rationale for Re-Categorization or Summary Dismissal: **n/a**

Notice of Corrective Action

Corrective Action in Response to:

- ☐ Potential Violation (complete Section A & C)
- ☑ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:

Potential Violation Notification Date:
(from Notice of Potential Violation Form)

Corrective Action Notification Date:

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

Deficiency Tracking #: 1

HDOT Receipt of Draft PEAR Date: 7/23/18

Corrective Action Notification Date: 8/13/18

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action:

HDOT-Harbors will clarify definition of “tenant” through training of and discussions among Division staff to avoid inaccurate categorization of entities occupying harbor facilities.

As required by Consent Decree Part 14.h.ii, inspections of new tenants will continue to be completed within three months of tenant occupancy by the Harbors Engineering Environmental Section and its consultants, in conjunction and coordination with other types of new tenant inspections conducted by the Harbors Property Management Staff.

Description of Attached Photographs (if applicable): n/a

Notice of Deficiency

Deficiency Tracking #: 2
Related Permit(s): Honolulu Harbor

Deficiency Narrative Description:
Consent Decree Part 16.e.ii states in part that "HDOT-Harbors shall inspect and conduct outreach at all Tenant facilities at a minimum of twice per year for high-risk Tenants and once per year for medium-risk Tenants…"

The Audit Team identified one tenant facility assigned a "High" risk ranking in 2016 which was inspected once during 2017. The Audit Team identified six tenant facilities assigned a "Medium" risk ranking in 2016 which were not inspected in 2017.

Harbors Division explained that these tenants were requested to vacate by November 30, 2017, and as a result, regular tenant inspections for this area were put on hold until the sites were cleared for final inspections, which did not occur until 2018.

Recommendations for Improvement:
Harbors Division should perform inspections and outreach at tenant facilities as prescribed in the Consent Decree, regardless of whether tenants have been requested to vacate. Harbors Division should discontinue regular inspections and outreach only when tenants have officially vacated the facilities.

Description of Attachments (if applicable): Annotated pages from Attachment 10 of Harbors Division's 2017 Annual Compliance Report highlighting the inspection summary for seven (7) tenants of interest.

Applicable Regulatory References

NPDES Permit No.: Not applicable.

Consent Decree: Part 16.e.ii: "HDOT-Harbors shall inspect and conduct outreach at all Tenant facilities at a minimum of twice per year for high-risk Tenants and once per year for medium-risk Tenants, once every five years with annual reconnaissance for low-risk Tenants."

SWMPP: Attachment 10, Tenant Inspection Manual (August 2014) Section 2.2.2

Hawaii Administrative Rules (HAR): Not applicable.

Code of Federal Regulations (CFR): Not applicable.

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Aala Produce, Inc.	Aala Ship Service	Honolulu	Pier 32	Low	Low	1/24/2017	Regular	Rodney Tamamoto	(808) 522-0550, (808) 478-8732
AES Kalaeloa Venture, LLC	AES Corporation	Kalaeloa	KBPH	Medium	Medium	10/10/2017	Regular	Dan Hunter Priya Kumar	(808) 682-3434, (808) 781-3936
Aircraft Service International Group / Hawaii Fueling Facilities Corporation	ASIG/HFFC	Honolulu	Pier 51 A&B	Low	Low	3/14/2017	Regular	Glenn Jinbo	(808) 833-3291 x29
Aloha Agricultural Consultants, Inc.	Niu Nursery	Honolulu	KIPA	Low	N/A	3/28/2017	Regular	Sidney Goo	(808) 845-5991, (808) 225-3507
						3/14/2017	Final		
						12/6/2017	Final		
Aloha Marine Lines	Aloha Cargo Transport, Inc., ACT, Northland	Honolulu	Pier 29	Low	Low	3/24/2017	Regular	Jonathan Satre	(808) 748-8790; (206) 436-9687
Aloha Tower Marketplace	AHI Aloha Associates, LLC; PM Realty Group, Aloha Tower Development Corporation (ATDC)	Honolulu	Pier 9	Low	Low	2/9/2017	Regular	Marlene Daley	(808) 528-5700 or 566-2310 (Both not reachable)
Amazon Construction Company, Inc.	Amazon	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	Duston Onaga	(808) 841-6595
					N/A	10/3/2017	Final		
American Guard Services, Inc.		Honolulu	Piers 2/11	Low	Low	1/25/2017	Regular	Shun Almon	(808) 537-3201, (808) 271-8169
American Marine Corporation	American Workboats, Inc.	Honolulu	Pier 14	Medium	Medium	10/31/2017	Regular	DC Carter; Rusty Nall	(808) 425-3859, (808) 792-1181, (808) 479-3905; (808) 545-5190
		KIPA	Pier 60 Open Yard and Warehouse	Low	N/A	4/18/2017	Annual Recon		
						12/29/2017	Final		
Atlantis Submarines Hawaii, LLC	Atlantis Cruises and Atlantis Submarines	Honolulu	Pier 27	Medium	Medium	12/19/2017	Regular	Kekua "Kua" Keli'i	808-832-6606, 808-386-0123
			Pier 6	Low	Low	1/17/2017	Regular		
			Pier 23	N/A	N/A	10/6/2017	Final		
BEI Hawaii		Honolulu	Pier 32	Low	Low	4/18/2017	Annual Recon	Jonathan Sullivan	(808) 864-2615; (808) 532-7448; (808) 535-6025;
Bikeshare Hawaii	non-profit organization	Honolulu	Snug Harbor	N/A	N/A	11/20/2017	New/Final	John Nakange	
						11/28/2017	Follow Up		

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Clean Islands Council		Kalaeloa	Pier 4	Low	Low	3/16/2017	Regular	Tim Sawyer, Pat Gillan, John Jacobi	(808) 536-5814; (808) 845-8465
		Honolulu	Pier 12	N/A	Low	3/30/2017	New	Patrick Gillen	(808) 845-8465, (808) 479-0702
Concrete Coring Company of Hawaii, Inc.	Keehi Facility	Honolulu	Former Foundation of Building 911; KIPA	Low	N/A	4/18/2017	Annual Recon	John Neff / Nathan Sabey	(808) 488-8222; (808) 330-7516
						11/22/2017	Final		
Dependable Hawaiian Express, Inc.	DHX, Inc.	Honolulu	Pier 21	Low	Medium	2/16/2017	Regular	Kane McEwen; Joe Vele	(808) 841-7311 ext. 1701
Erik Builders, Inc.		Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	James M. Sakata	(808) 845-7736
				Low	N/A	6/2/2017	Final		
Foss Maritime Company	Moana Pa'a Kai, Inc.; Subsiduary of Young Brothers	Honolulu	Piers 20, 21, and 22	Medium	Medium	12/14/2017	Regular	Nathan Kapule; Randal Lau	(808) 543-9398; (206) 276-1898
Frank P. White Jr. Properties	Container Storage Co.	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	Frank White; Gail Thometz	(808) 841-5555
Fresh Island Fish, LLC		Honolulu	Pier 38	Low	Low	4/18/2017	Annual Recon	Derek Higa	(808) 831-4911
Friends of Falls of Clyde		Honolulu	Pier 7	Low	Medium	3/21/2017	Regular	Chris Woolaway; Bruce Mcewan	(808) 753-3311; (808) 543-9311, (808) 543-9357
Friends of Hokule'a & Hawai'iloa		Honolulu	KIPA	Medium	N/A	In 2018	Final	Jay Dowsett	(808) 256-1841
Fukunaga, Paul N.	P.F. Marine	Honolulu	KIPA	Low	Low	3/28/2017	Regular	Paul N Fukunaga	(808) 842-1330, (808) 220-9425
Gillis, Eugene	Excavation Services	Honolulu	KIPA	Medium	N/A	In 2018	Final	Eugene Gillis	(808) 383-1959, (808) 292-7469
GLP Asphalt, LLC	Asphalt Hawaii	Kalaeloa	KBPH	Medium	Medium	10/19/2017	Regular	Sara Daniels	(808) 561-4121
Grace Pacific LLC	GP Kalaeloa HMA Plant	Kalaeloa	KBPH	Medium	Medium	10/17/2017	Regular	Joseph Shacat Scott Sevadjian	(808) 203-2805, (808) 348-4895

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Hawaii Maritime Center	Donald Bell	Honolulu	Pier 7	Low	Low	1/19/2017	Regular	Donald Bell	(808) 392-5230, (808) 847-3511
Hawaii Stevedores, Inc.	Hawaii Stevedores, Inc.	Honolulu	Pier 1	Medium	Medium	12/6/2017	Regular	Frank Roznerski	(808) 842-5389, (808) 864-4638; (808) 527-3415
	Horizon Lines, LLC	Honolulu	Pier 51	High	N/A	5/4/2017	Final		
					High	6/21/2017	Regular		
						12/6/2017	Regular		
Hawaiian Aqua Products, Inc.	Foo W. Lim & Sons, Inc.	Honolulu	KIPA	Medium	N/A	In 2018	Final	Yal M. Lim, Foo W. Lim, Evelyn Lim	(808) 521-5468
Hawaiian Cement		Kalaeloa	KBPH	Medium	Medium	10/12/2017	Regular	Dane Wurlitzer	(808) 532-3407, (808) 330-3910
HC&D	Ameron Hawaii; 'Ameron International Corporation	Honolulu	KIPA	Medium	Low	10/27/2017	Regular	Linda Goldstein; June Ching	(808) 266-2672
Healy Tibbitts Builders, Inc.		Kalaeloa	KBPH	Low	Low	6/8/2017	Annual Recon	Glen Toyama	(808) 368-1581
Heumann, James	Wind & Sea Charters	Honolulu	Pier 34	Low	Low	1/25/2017	Regular	James M. Heumann	(808) 220-7675
Honolulu Marathon Association		Honolulu	Pier 2	Low	Low	1/19/2017	Regular	Ronald Chun; Jeanette Chun; Valerie Lawson	(808) 255-2602; (808) 946-0539; (808) 255-2600
HPBS, Inc.		Honolulu	Pier 19	Low	Low	2/21/2017	Regular	Fay Leong; Blare; Captain David Lyman; Captain Steven Baker	(808) 532-7233
Ishikawa, Norman & Dolores	Norman's Tractor Service	Honolulu	KIPA	Medium	N/A	In 2018	Final	William; Theresa Alcosiba; John Ishikawa	(808) 778-1084; (808) 689-3644, (808) 778-0344; (808) 218-9824
Island Beach Activities		Honolulu	Pier 2	Low	N/A	1/19/2017	Regular	John Salvio	(808) 223-8735
						2/28/2017	Final		
ISS Marine Services, Inc.	Inchcape Shipping	Honolulu	Pier 1	Low	Low	3/31/2017	Regular	Ali Wong	(808) 521-2111 ext. 18

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Jas W. Glover, Ltd.		Honolulu	KIPA	Low	Low	3/28/2017	Regular	Kyle Hirano	(808) 591-8977 ext. 321
Jems Enterprises, LLC	Hawaiian Ice Company	Honolulu	Pier 38	Medium	Low	11/2/2017	Regular	Joshua Ibrao	(808) 538-6918 (808) 255-2921
JFC International	Japan Food (Hawaii), Inc.; Davenport Hawaii Partners, LP	Honolulu	Pier 34	Low	Low	1/24/2017	Regular	Toshiaki Wada	(808) 537-9528
Kagami, Inc.		Honolulu	Pier 21	Low	Low	2/21/2017	Regular	Wayne Kagami	(808) 523-5700
Kirkwood, Clarke	Hawaiian Catamaran Multihull Design	Honolulu	KIPA	High	High	7/5/2017	Regular	Matt Buckman	(808) 306-6012
					N/A	In 2018	Final		
Kirby Offshore Marine	(Formerly Uaukewai Diving, Salvage & Fishing, Inc.) Formerly known as K-Sea Transportation Hawaii Division	Honolulu	Pier 21	Medium	Medium	12/5/2017	Regular	James Pontin; Bill Boland	(808) 462-4222, (808) 208-1089; (808) 522-1000 ext.108
Lansdown, Ian J.	Hawaii's Sailing Center; Ian J. Lansdown	Honolulu	KIPA	Medium	N/A	In 2018	Final	Jeff Lansdown	(808) 230-0940
Marisco, Ltd.		Kalaeloa	KBPH	High	High	6/22/2017	Regular	Stephen Hinton	(808) 306-5935, (808) 682-1333
						12/21/2017	Regular		
Maritime License Center, Inc.		Kalaeloa	Pier 6	Low	Low	3/16/2017	Regular	Paul Finley	(808) 589-0123
Mary Charles and Associates Inc		Honolulu	Pier 10	Low	Low	1/20/2017	Regular	Curtis Chee	
Matson Navigation Company, Inc.	Matson Terminals, Inc.	Honolulu	Pier 52	High	High	6/20/2017	Regular	Keahi Birch	(808) 848-1252; (808) 848-1280; (808) 848-8306
						12/12/2017	Regular		
McCabe, Hamilton & Renny		Honolulu	Pier 23	Medium	Medium	11/16/2017	Regular	Andrew Souza	(808) 479-0356
			Pier 23		N/A	10/6/2017	Final		
		Honolulu	Piers 19 & 29	Low	Low	4/18/2017	Annual Recon		
		Kalaeloa	Pier 5	Low	Low	6/8/2017	Annual Recon		

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Nanakuli Neighborhood Housing Services, Inc.	Nanakuli Housing Corporation Baseyard Hawaii	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	Wilbert Barber	(808) 842-0770
Norko Marine Agency, Inc.		Honolulu	Pier 33	Low	Low	4/18/2017	Annual Recon	Norman Cheu	(808) 216-4790, (808) 536-4568
Oceantronics, Inc.		Honolulu	Pier 24	Low	Low	3/30/2017	Regular	Fritz M. Amtsberg	(808) 522-5600; (808) 832-5590, (808) 216-0256
						9/14/2017	Final		
Ohai, Leo A.	Oceanic Libra Corporation	Honolulu	Pier 18	Medium	Medium	10/24/2017	Regular	Nephi Ohai	(808) 690-4030
P&R Water Taxi, Ltd.		Honolulu	Pier 36	Medium	Medium	11/28/2017	Regular	Ralph Dewitt	808) 554-3436
Pacific Environmental Corporation	Penco	Honolulu	Piers 33	Medium	Medium	11/7/2017	Regular	Justin, Shanyn	(808) 545-5190, (808) 479-3905; (808) 545-5195
		Honolulu; Kalaeloa	Pier 14; Pier 4	Low	Low	6/8/2017	Annual Recon		
Pacific Ocean Producers, Inc.	(Nico's) POP Fishing & Marine, LLC	Honolulu	Pier 38	Low	High	3/23/2017	Regular	Neil Kanemoto	(808) 537-2905
					Low	11/28/2017	Regular		
Pacific Shipyards International, LLC	Pacific Marine and Supply, Navatek, Unitek Contracting Group, Honolulu	Honolulu	Pier 41	High	High	6/16/2017	Regular	Greg Ball	(808) 848-6211, (808) 223-4946
					N/A	8/25/2017	Final		
			Pier 24/25	N/A	High	9/26/2017	New		
Pang, Sandra	SP Lunch Wagon; Sandy's Lunchwagon	Honolulu	Pier 51	Low	Low	3/30/2017	Regular	Sandra Pang	(808) 778-4686
Paradise Cruise, LTD	Star of Honolulu	Honolulu	Pier 8	Low	Low	4/18/2017	Annual Recon	Richard A. Davison	(808) 983-7765
Petrospect, Inc.		Honolulu	Pier 21	Low	Low	3/14/2017	Regular	Chad Miller, David Harrington	(808) 536-6626
Pioneer Machinery, Inc.		Honolulu	KIPA	Low	Low	5/5/2017	Regular	Rodney Yee	(808) 371-4892
Pryne, Ty	H.B.N. Yacht Rigging	Honolulu	Pier 21	Low	Low	6/9/2017	Annual Recon	Ty Pryne	(808) 479-8844, (808) 597-8120
Rebecca's Fine Collections, Inc.	R.F.C. Group	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	Rebecca Fan	(808) 478-6688
Resort Management Group LLC	(former Chevron Lot)	Honolulu	Pier 38	N/A	Low	1/5/2017	New	Reed Kishinami	(808) 478-7741
R & C Concrete Specialists, Inc.	Ron's Concrete Specialist, Ltd.	Honolulu	KIPA	Low	Low	4/18/2017	Annual Recon	James Mainaaupo.	(808) 845-0467 (808) 429-2142

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
Sause Bros., Inc.	Canopy and Office	Honolulu	Pier 27	Medium	Low	10/24/2017	Regular	Wayne Stachel	(808)306-2177; (808) 521-5082;
	Staging Yard at KBPH	Kalaeloa	Pier 4	Medium	Medium	3/30/2017	Follow Up	Reid Tamashiro	(808) 721-1667
						10/10/2017	Regular		
						12/27/2017	Follow Up		
	Shed at KBPH	Kalaeloa	Pier 5	Low	Low	6/8/2017	Annual Recon	Mike Leslie	(808) 690-3412 (808) 682-1082
Sea Engineering, Inc.		Honolulu	Pier 32	Medium	Medium	11/7/2017	Regular	W. Patrick Ross; Tor Harris	(808) 259-7966 ext 25; (603) 978-6800
Siu, Wai Lun	Pier 21 Lunchroom	Honolulu	Pier 21	Low	Medium	3/14/2017	Regular	Raymond Siu	(808) 597-8120
State of Hawaii Department of the Attorney General/Criminal	Attorney General-Asset Forfeiture	Honolulu	Pier 20	Low	Medium	3/21/2017	Regular	Kern Nishioka; Steven Davis	(808) 586-1383
			Pier 19	N/A	N/A	8/29/2017	Final		
Steinke Brothers, Inc.		Honolulu	KIPA	Low	Low	3/9/2017	Regular	Robert Steinke	(808) 478-9777 (808) 488-9668
					N/A	10/3/2017	Final		
Submarines Hawaii		Honolulu	Pier 41	Low	N/A	8/30/2017	Final	Jason Young	
The Gas Company, LLC		Honolulu	Pier 38	Medium	Medium	10/31/2017	Regular	Zoe Williams; AK Colburn	(808) 594-5637
The Pasha Group	Pasha hawaii	Honolulu	Pier 2	Low	Low	4/18/2017	Annual Recon	Darren Lee	(808) 590-3617
The Webe Corporation, Ltd.	Ali'I Kai Catamaran (Subsidiary of Robert's Hawaii)	Honolulu	Pier 5	Low	Low	1/23/2017	Regular	Bernie, Jason Young, Chad	(808) 539-9491 (808) 631-8671 (808) 636-5839
Travel Plaza Transportation, LLC		Honolulu	Pier 19 (Shed and Open Lot)	Medium	N/A	6/9/2017	Final	Shawna Nakachi	(808) 343-0853
Trouble Free Corp.		Kalaeloa	KBPH	Low	Low	6/8/2017	Annual Recon	Chris Boyles	(808) 864-8864
U.S. Bureau of Customs and Border Protection, Department of Homeland Security		Honolulu	Pier 1	Low	Low	1/20/2017	Regular	Gose; Peter F. Gonzales	(808) 522-8001 ext. 223; (808) 356-4175
Unify Recovery Service		Honolulu	KIPA	Medium	N/A	In 2018	Final	Gayle Saito	(808) 256-7266

Attachment 10.

2017 HDOT Harbors Division Tenant Inventory, Risk Ranking, and Inspection Summary

Tenant Business Name	DBA or Other Name	Harbor	Location	2016 Risk Ranking	2017 Risk Ranking	Inspection Date	Inspection Type	Inspection POC	Phone Number
United Fishing Agency, Ltd.		Honolulu	Pier 38	Medium	Low	11/2/2017	Regular	Daniel Otani; Nelson Otani	(808) 536-2148
University of Hawaii		Honolulu	Pier 35	Medium	Medium	11/2/2017	Regular	Ross Barnes	(808) 842-9815, (808) 864-0122
VAK Fisheries, LLC		Honolulu	Pier 19	Low	Low	4/18/2017	Annual Recon	Kim Lu	(808) 258-2990
Van, Kevin	Hi-Sea Hawaii Fishing Supply	Honolulu	Pier 20	Low	Low	6/9/2017	Annual Recon	Kevin Van	(808) 521-6076, (808) 282-1452
					N/A	10/6/2017	Final		
Welch, Jr., Darrell, G., AIA	Aloha Tower, 4th Floor	Honolulu	Pier 9	Low	Low	1/18/2017	Regular	Darrell G. Welch Jr.	(808) 585-8522
Wikoliana Educational Excursions, LLC		Honolulu	Pier 7	Low	N/A	5/24/2017	Final	Ian Jeffrey Landdown	(808) 230-0940
Young Brothers, Ltd.		Honolulu	Piers 39 and 40	High	High	6/23/2017	Regular	Nathan Kapule	(808) 543-9398
						12/14/2017	Regular		

Suspended for final inspection

Result of HDOT PM Review:

- ☑ Confirmed Deficiency
  - o Email Notice of Corrective Action sent to EPA/DOH on: **8/13/18** (Due Within 21 Calendar Days of Deficiency Notification Date)
- ☐ Re-categorized as Potential Violation (see rationale below)
  - o Email Notice sent to EPA/DOH on:
- ☐ Summarily Dismissed (see rationale below)
  - o Email Notice sent to EPA/DOH on:

Rationale for Re-Categorization or Summary Dismissal: **n/a**

Notice of Corrective Action

Corrective Action in Response to:

- ☐ Potential Violation (complete Section A & C)
- ☑ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:

Potential Violation Notification Date:
(from Notice of Potential Violation Form)

Corrective Action Notification Date:

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

Deficiency Tracking #: 2

HDOT Receipt of Draft PEAR Date: 7/23/18

Corrective Action Notification Date: 8/13/18

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action:

The DOT Harbors will commit to maintaining regularly scheduled semi-annual inspections for high-risk and annual inspections for medium-risk tenants regardless of the status of their pending evacuation and the cessation of their normal business operations.

Description of Attached Photographs (if applicable): n/a

Appendix B4

Permit-Specific Information – Kalaeloa Barbers Point Harbor

Appendix B4: Permit-Specific Information – Kalaeloa Barbers Point Harbor

1. Key Documents

Permit / Document	4. Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB482
2011 Annual Compliance Report	2011-ACR-Kalaeloa.pdf
2017 Annual Report	2017_HarborsACR_Final-Complete
Best Management Practice Guidance	• 01_BMP_VehicleWashing_20140828.pdf • 02_BMP_VehicleFueling_20140828.pdf • 03_BMP_MaterialStorage_20140828.pdf • 04_BMP_General_20140828.pdf • 05_BMP_SolidandHazardousWasteManagement_20140828.pdf • 06_BMP_MaterialDeliveryHandling_20140828.pdf • 07_BMP_BuildingRemodeling_20140828.pdf • 08-BMP-Vessel-Maintenance-20140925.pdf • 09_BMP_BuildingPowerWashing_20140828.pdf • 10-BMP-Sidewalk-Power-Washing_20140822.pdf • 11-BMP-Storm-Drain-20140828.pdf
DOH Comments on 2017 Annual Report	None received
New Tenant Information Package	HAR-PM-Env-Brochure-v19.pdf
Permit	December 2016 extension is here: 20161202.03KB488.EXT.16.pdf
Public Education and Outreach Plan	Section A of SWMPP
Stormwater Web site	http://hidot.hawaii.gov/harbors/library/storm-water-management/
SWMPP	Final HDOT Harbors SWMP-150325.pdf

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name *(Original File Name)*	**Sections/Pages Relevant to PEAR 3**
2011 Annual Report *(2011-ACR-Honolulu.pdf)*	Section 7.2.2
2017 Annual Report *(2017_HarborsACR_Final-Complete)*	Section 2 Sections 3.2-3.3 Section 4.2 Attachments 1-9 Section C, in entirety
Best Management Practice Guidance • *01_BMP_VehicleWashing_20140828.pdf* • *02_BMP_VehicleFueling_20140828.pdf* • *03_BMP_MaterialStorage_20140828.pdf* • *04_BMP_General_20140828.pdf* • *05_BMP_SolidandHazardousWasteManagement_20140828.pdf* • *06_BMP_MaterialDeliveryHandling_20140828.pdf* • *07_BMP_BuildingRemodeling_20140828.pdf* • *08-BMP-Vessel-Maintenance-20140925.pdf* • *09_BMP_BuildingPowerWashing_20140828.pdf* • *10-BMP-Sidewalk-Power-Washing_20140822.pdf* • *11-BMP-Storm-Drain-20140828.pdf*	In entirety
New Tenant Information Package *(HAR-PM-Env-Brochure-v19.pdf)*	In entirety
Permit *(20161202.03KB482.EXT.16.pdf)*	In entirety
Public Education and Outreach Plan *(Section A of SWMPP)*	Section A of SWMPP in entirety
Stormwater Web site (*http://hidot.hawaii.gov/harbors/library/storm-water-management/)*	In entirety
SWMPP *(Final HDOT Harbors SWMP-150325.pdf)*	(see Public Education and Outreach Plan) Section B, Attachment 1 Section B, Attachment 10, Part 9 Section D Table 3-4 Section E Part 4.0 Section E Attachment 1, Parts 1.1-1.2

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix B5

Permit-Specific Information – Highways Maui District

Appendix B5: Permit-Specific Information – Highways Maui District

1. Key Documents

Permit / Document	5. Maui District Small MS4 Permit HI 15KE674
2017 Annual Report	20180129.Contents of CD-Annual_Report_2017_HDOTMauiSWMP-v1-HI 15KE674.pdf Plus Parts 1 - 5
Best Management Practice Guidance	• KahuluiHarbor-Fueling.pdf • KahuluiHarbor-General.pdf • KahuluiHarbor-Storage.pdf • KahuluiHarbor-Washing.pdf • KahuluiHarbor-Waste.pdf
DOH Comments on 2017 Annual Report	Assumed no comments received
Permit	NGPC2015-04-02HI15KE674.pdf 20161122 NGPC Extension HI 15KE674 EXT 16.pdf
Public Education and Outreach Plan	OutreachTrainingStrategy_Dec2017 - Copy.pdf
Stormwater Web site	http://hidot.hawaii.gov/stormwater/storm-water-management/maui/swmp/ http://hidot.hawaii.gov/stormwater/storm-water-management/maui/ http://stormwatermaui.com/
SWMPP	MauiSWMP--Dec 2016 Final w-o Appendices.pdf Plus Appendices

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 3**
2017 Annual Report *(20180129.Contents of CD-Annual_Report_2017_HDOTMauiSWMP-v1-HI 15KE674.pdf* *Plus Parts 1 – 5)*	Section 2 Section 3 Section 4.2.4 Appendix A
Best Management Practice Guidance • *KahuluiHarbor-Fueling.pdf* • *KahuluiHarbor-General.pdf* • *KahuluiHarbor-Storage.pdf* • *KahuluiHarbor-Washing.pdf* • *KahuluiHarbor-Waste.pdf*	In entirety
Permit *(NGPC2015-04-02HI15KE674.pdf* *20161122 NGPC Extension HI 15KE674 EXT 16.pdf)*	In entirety
Public Education and Outreach Plan *(OutreachTrainingStrategy_Dec2017 - Copy.pdf)*	In entirety
Stormwater Web site *(http://hidot.hawaii.gov/stormwater/storm-water-management/maui/swmp/* *http://hidot.hawaii.gov/stormwater/storm-water-management/maui/* *http://stormwatermaui.com/)*	In entirety
SWMPP *(MauiSWMP--Dec 2016 Final w-o Appendices.pdf* *Plus Appendices)*	Sections 1.0-2.0 Section 3.2.5-3.2.6 Section 3.3 Appendix F.1

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix B6

Permit-Specific Information – Highways Oahu District

Appendix B6: Permit-Specific Information – Highways Oahu District

1. Key Documents

Permit / Document	6. Oahu District Individual Permit HI S000001
2017 Annual Report	20171101.Compliance Submission for Annual Report 2016-2017-HI S000001.pdf Plus Appendices in folder HWY-O Annual Report 2016-17.pdf
DOH Comments on 2017 Annual Report	No comments received from DOH
Permit	20160318.Modified NPDES Permit HI S000001.PDF
Public Education and Outreach Plan	B.1_Public-Education-Plan_REV1_9.23.15.pdf
Stormwater Web site	http://www.stormwaterhawaii.com/ http://www.trashfreehawaii.com
SWMPP	SWMPP (April 2015).pdf Appendices at: http://www.stormwaterhawaii.com/about/hawaii-storm-water-program-plan/

2. Sections of Key Documents Found Relevant for PEAR 3

Document Name ***(Original File Name)***	**Sections/Pages Relevant to PEAR 3**
2017 Annual Report *(20171101.Compliance Submission for Annual Report 2016-2017-HI S000001.pdf* *Plus Appendices in folder)*	Chapter 2 Chapter 3 Chapter 4.5 Chapter 5.2.7 Chapter 6.2.4 Chapter 7.2.1.1 Appendix B
Permit *(20160318.Modified NPDES Permit HI S000001.PDF)*	Part A.6. Part D.1
Public Education and Outreach Plan *(B.1_Public-Education-Plan_REV1_9.23.15.pdf)*	In entirety
Stormwater Web site *(http://www.stormwaterhawaii.com/* *http://www.trashfreehawaii.com)*	In entirety
SWMPP *(SWMPP (April 2015).pdf* *Appendices at:* *http://www.stormwaterhawaii.com/about/hawaii-storm-water-program-plan/)*	Chapter 2 Chapter 3.2 Chapter 3.8 Chapter 4.7 Chapter 5.4 Chapter 6.4 Chapter 7.2 Chapter 10.3

3. On-Site Evaluation

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

4. On-Site Evaluation Photos

Following EPA (2007) guidance, PEAR 3 did not involve onsite evaluations.

5. Potential Violations

No Potential Violations were identified by the Audit Team for this permit.

6. Deficiencies

No Deficiencies were identified by the Audit Team for this permit.

Appendix C

Revised Audit Work Plan, November 2016

State of Hawaii Department of Transportation
Office of Environmental Compliance

Revised Audit Work Plan

State Project No. OSC-15-01

November 2016

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- B5: PEAR #5 – Pollution Prevention / Good Housekeeping Program
- B6: PEAR #6 – Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

C1 - C6 PEAR 1 - 6 Schedule

- C1: PEAR #1 – Schedule for Post-Construction / Permanent Best Management Practices
- C2: PEAR #2 – Schedule for Construction Site Runoff Control
- C3: PEAR #3 – Schedule for Public Outreach / Public Involvement
- C4: PEAR #4 – Schedule for Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program
- C5: PEAR #5 – Schedule for Pollution Prevention / Good Housekeeping Program
- C6: PEAR #6 – Schedule for Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

D1 – D3 Notices to EPA & DOH

- D1: Draft Notice of Potential Violation
- D2: Final Notice of Potential Violation
- D3: Notice of Corrective Action

List of Acronyms

ACR	Annual Compliance Report
AWPC	Audit Work Plan Commencement
BMP	best management practice
CD	Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC)
CFR	Code of Federal Regulations
DOH	Department of Health
EPA	United States Environmental Protection Agency
HAR	Hawaii Administrative Rules
HARP	Hazard Appraisal and Recognition Plan
HDOT	State of Hawaii Department of Transportation
MEP	maximum extent practicable
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
PEAR	Program Element Audit Report
PM	Project Manager
QA	quality assurance
QC	quality control
SWMPP	Storm Water Management Program Plan

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Section 1: Introduction, Purpose, and Goals

Under Paragraph 10.d of the Consent Decree (Civil Action 1:14-CV-00408-JMS-KSC) entered on 5 November 2014 (CD) with the United States Environmental Protection Agency (EPA) and the State of Hawaii (State) Department of Health (DOH), the State of Hawaii Department of Transportation (HDOT) is required to perform compliance audits of Municipal Separate Storm Sewer System (MS4)[1] permits issued to HDOT's Airports, Highways, and Harbors Divisions (referred to herein as the singular "MS4 Permit Audit"). Specific requirements for the MS4 Permit Audit are defined in Appendix A of the CD and included in Appendix A of this document. The MS4 Permit Audit will be conducted in accordance with this Audit Work Plan (AWP) by Kennedy/Jenks Consultants (Kennedy/Jenks), the selected independent third-party audit firm.

This AWP was conditionally approved by EPA & DOH on 31 October 2016. As memorialized in the conditional approval letter, HDOT will begin the audit on 15 March 2017. This date is hereafter referred to as the AWP Commencement date (AWPC). This AWP includes project milestones with defined dates in some cases (e.g., "15 April 2017") while other dates may be specified relative to the AWPC (e.g., "30 days after AWPC"). All "days" in this AWP refer to calendar days as opposed to business days.

The defined purpose of the MS4 Permit Audit is to assess HDOT's current regulatory and administrative compliance with its MS4 permits, DOH National Pollutant Discharge Elimination System (NPDES) General Permit Coverage Authorizing Discharges of Storm Water and Certain Non-Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Hawaii Small MS4 General Permit), applicable Storm Water Management Program Plans (SWMPPs), and the CD.

The defined goals of the MS4 Permit Audit focus on meeting the requirements listed in Appendix A of the CD, including:

- Evaluating compliance with HDOT MS4 permits and the CD
- Identifying information gathered during the MS4 Permit Audit that may be used to promote information and technology transfer between HDOT Divisions
- Identifying Potential Violations (areas where the evaluation found the permittee not in compliance with a specific permit requirement or SWMPP commitment) and Deficiencies (items which, if not corrected, may be anticipated to lead to Potential Violations) in HDOT's stormwater programs and assisting with timely self-correction of identified Potential Violations and Deficiencies by HDOT.

[1] The MS4 refers to the conveyance system in addition to the jurisdiction(s) which own/operate the system.

In addition to meeting the CD requirements and EPA & DOH expectations, the overarching goal of the MS4 Permit Audit is to develop internal trust and collaboration within HDOT. The Audit Team will seek HDOT-wide opportunities for improvement rather than focusing on minor issues of non-compliance.

Reporting requirements of the MS4 Permit Audit are defined in Appendix A Section D.7. of the CD and include:

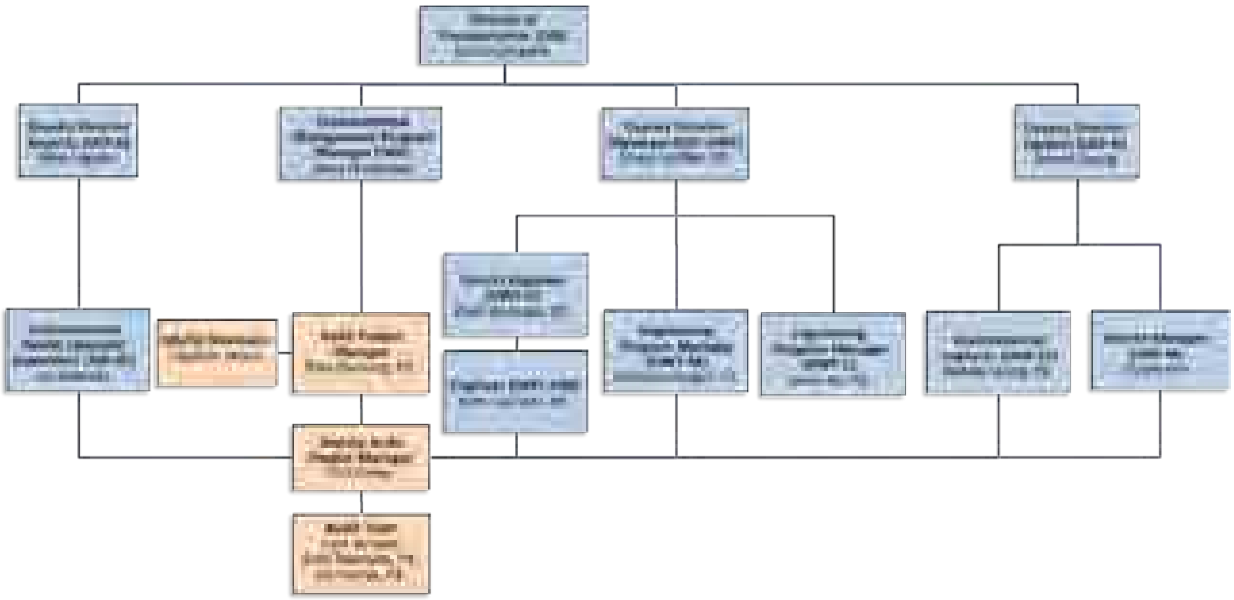
- A specific statement of the procedures followed, HDOT sites and activities visited, and all materials reviewed during the MS4 Permit Audit
- Retrospective analysis of activities that may be outmoded, ineffective, insufficient, or excessively burdensome, and providing recommendations to modify, streamline, or augment them in accordance with what has been learned during the MS4 Permit Audit, as appropriate.
- Identification of Potential Violations and Deficiencies and of MS4 permit conditions, applicable SWMPPs, the CD, and/or other applicable regulations, and providing recommendations for improvements as found to be appropriate
- Identification of best practices and opportunities for information/technology transfer to be applied across the three HDOT Divisions
- An analysis of the practices implemented for each HDOT Division's program elements and a determination as to whether identified best practices can be universally implement across all three Divisions. If best practices cannot be universally implemented, the report will clearly describe impediments identified.

In accordance with requirements defined in Appendix A of the CD, EPA's *MS4 Program Evaluation Guidance* (hereinafter EPA (2007) guidance) was consulted in the development of this AWP. The audit protocols included herein are intended to promote consistency among regulated facilities when conducting environmental audits and to validate that the MS4 Permit Audit is conducted in a thorough and comprehensive manner. Program evaluation worksheets (included in Appendix B) were developed to guide the Audit Team while performing the MS4 Permit Audit. Each worksheet addresses a separate program element, and includes key questions derived from the EPA (2007) guidance document recommended to be considered during an MS4 evaluation. While this AWP is based on the EPA (2007) guidance for auditing small MS4s, HDOT has adapted the guidance to focus some aspects of the audit process to reflect the unique nature of HDOT operations.

Section 2: Audit Team and HDOT Personnel

Figure 2-1 provides an organizational chart defining the Audit Team and HDOT staff that will be involved in the MS4 Permit Audit.

Figure 2-1 Organizational Chart



Additional information describing key MS4 Permit Audit personnel is provided below.

HDOT Project Manager – Anna Fernandez

In her role as Environmental Program Manager, Anna Fernandez reports directly to the HDOT Director. She serves as the HDOT Project Manager (PM) for this project. In this role, she administers and manages Kennedy/Jenks in performing the MS4 Permit Audit and their contact with HDOT leaders and stakeholders.

Deputy Director(s)

Deputy Directors report directly to the HDOT Director. They are responsible for facilitating the Audit Team's access to HDOT personnel and facilities within their respective Divisions as appropriate. The following Deputy Directors will be directly involved in the MS4 Permit Audit process:

Airports (DEP-A) – Ross Higashi
Highways (DEP-HWY) – Edwin Sniffen, P.E.
Harbors (DEP-H) – Darrell Young

MS4 Permit Coordinator(s)

MS4 Permit Coordinators are those HDOT personnel responsible for managing compliance with the MS4 permit for each Division, district, or designated MS4 permitted area. The following MS4 Permit Coordinators will be directly involved in the MS4 Permit Audit process:

Airports (AIR-EE) – Joy Masuda (Environmental Health Specialist Supervisor)
Oahu Highways (HWY-OW) – Kelly Lee Sato, P.E. (Engineer)
Maui Highways (HWY-M) – Ferdinand Cajigal, P.E. (Engineering Program Manager)
Oahu Harbors (HAR-EE) – Randal Leong, P.E. (Environmental Engineer)
Maui Harbors (HAR-M) – Duane Kim (District Manager)

Additional Key MS4 Permit Audit Personnel

The following key staff will also be consulted throughout the MS4 Permit Audit Process:

District Engineer (HWY-O) - Pratt Kinimaka, P.E.
Engineering Program Manager (HWY-C) - Jamie Ho, P.E.

Audit Project Manager – Ross W. Dunning, P.E. / Principal (Kennedy/Jenks)

Ross is a Principal of Kennedy/Jenks and leads their companywide stormwater practice. He has assisted many Western U.S. Port authorities for almost 20 years with development of strategies and stormwater management plans to address Clean Water Act and NPDES regulations. He is Kennedy/Jenks' point of contact for the HDOT PM, and manages the Audit Team to verify that MS4 Permit Audit procedures and reports meet CD requirements and are on schedule. The Audit PM is responsible for updating this Audit Work Plan (with the approval of the HDOT PM), producing schedules, preparing audit reports, and maintaining audit records.

Lead Quality Assurance/Quality Control (QA/QC) Reviewer: Heather Wood (Kennedy/Jenks)

Heather is the former Director of Sustainability for the Port of Virginia, responsible for development of their environmental programs and permit compliance (including NPDES). Heather is also the former Chair of the American Association of Port Authorities Environmental Committee. She is Kennedy/Jenks' Ports and Harbors Sector Leader. In her role as the Lead QA/QC Reviewer, she will direct the review of MS4 Permit Audit work products, including draft and final audit reports, by qualified Kennedy/Jenks staff.

Deputy Audit Project Manager – Phil Potter (Kennedy/Jenks)

Phil is based in Kennedy/Jenks' Honolulu office and leads the firm's stormwater practice in Hawaii. For over 8 years, he has assisted municipal clients including the HDOT Highways Oahu District and the City and County of Honolulu with development and implementation of their NPDES compliance programs. In his role as the Deputy Audit PM, Phil is responsible for assisting the Audit PM in the execution of the Audit Work Plan and will directly coordinate with the HDOT MS4 Permit Coordinators and other stakeholders.

Auditors – Cale Yamada; Brad Takenaka, P.E.; Jon Honda P.E. (Kennedy/Jenks)

Cale, Brad, and Jon are experienced stormwater professionals in Kennedy/Jenks' Honolulu office. Among their many stormwater projects, they currently assist the City and County of Honolulu with ongoing development and implementation of its municipal stormwater program including, but not limited to, providing periodic MS4 program compliance inspections for hundreds of City and County industrial facilities throughout the island of Oahu.

Auditors are responsible for performing inspections of HDOT facilities and documentation, and performing interviews with HDOT employees responsible for MS4 program implementation and management in order to assess compliance with applicable MS4 program and CD requirements. Auditors are also responsible for coordinating with the Audit PM and Deputy Audit PM regarding any Potential Violations and Deficiencies identified. Hereinafter, the "Audit Team" refers to the Kennedy/Jenks' staff introduced above.

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Section 3: Audit Notes and Guidelines

This Section addresses various topics intended to guide the Audit Team in completing the MS4 Permit Audit in a safe and efficient manner.

3.1 Health, Safety, and Site Access Considerations

Prior to initiating onsite evaluations (see Section 5.2), the Audit PM will lead the Audit Team in developing a Hazard Appraisal and Recognition Plan (HARP), following Kennedy/Jenks' standard safety program. The HARP describes how to identify and analyze safety risks associated with field activities, operations, and facilities; approaches for mitigating identified risks; and processes for documenting and reporting accidents, near misses, and potentially unsafe conditions which may be encountered in the field. The HARP is a "living document" which will be updated as appropriate throughout the term of the MS4 Permit Audit. The Audit Team will wear appropriate personal protective equipment (hard hat, safety vest, safety shoes, protective eyewear, and hearing protection as appropriate) while performing the onsite evaluations.

Harbors Facilities

At this time, no special security clearances or requirements are defined to be necessary at Harbors facilities and/or project sites, as long as the Audit Team is escorted by personnel with valid Transportation Worker Identification Credentials (TWIC) and documentation of Maritime Security (MARSEC) Facility Security Awareness training certification. Active loading or unloading of cargo may necessitate additional safety requirements at certain pier locations.

Airports Facilities

At this time, Airports Division facilities to be evaluated are anticipated to be outside secured air operations areas; therefore, no special requirements or clearances are defined to be necessary. Adequate notice will be provided to the Airports Division MS4 Permit Coordinator to arrange security escort as found to be necessary.

Highways Facilities

At this time, there are no defined security restrictions to access Oahu District or Maui District Highway facilities as the Audit Team will be escorted by HDOT personnel at all times.

3.2 Quality Control Procedures

The Audit PM is responsible for ensuring that Kennedy/Jenks' effort and deliverables meet their company's professional mandate to consistently perform work in a technically correct manner, meeting the standard of care for their profession. The standard of care is defined to represent the watchfulness, attention, caution, prudence, and skill that other qualified professionals in the same or similar circumstances would exercise.

Kennedy/Jenks' quality assurance (QA) program includes processes and procedures developed over their near century-old history to achieve and maintain a rigorous level of quality, planning,

application, and verification. Its quality control (QC) program implements this process and QC reviewers will continuously monitor their effort and work products on this project to meet contract and CD requirements, Kennedy/Jenks' QA/QC standards, and HDOT's expectations.

3.3 Photographs

Digital photographs collected and archived during the course of the MS4 Permit Audit will be managed in accordance with EPA's *Digital Camera Guidance for EPA Civil Inspections and Investigations* (2006). Photographs taken will be organized into photograph logs with each photograph numbered with the date and time included. A brief photograph caption will identify the facility or site name, describe what is depicted in the photograph, the location, direction, and other pertinent data (e.g., the location within the facility or site) as appropriate.

3.4 "Maximum Extent Practicable" Concept

Unlike NPDES industrial wastewater permits which typically contain specific end-of-pipe effluent limits based on water quality standards or available treatment technology, HDOT's MS4 permits include programmatic requirements involving the implementation of BMPs in order to reduce pollutants discharged to the "maximum extent practicable" (MEP). In addition, HDOT's permits allow flexibility in the types of BMPs and activities implemented to meet permit requirements. There is also added complexity in evaluating several similar permits applicable to the very different operations conducted at HDOT Highways, Airports, and Harbors facilities. This makes it challenging to assess the true effectiveness of HDOT's several MS4 stormwater programs and how they may be integrated.

Per EPA (2007) guidance, HDOT is considered a non-traditional MS4 permittee, and as such, the evaluation of its MS4 programs will be specific to their particular circumstances and applicable permit requirements. Some HDOT MS4 permits contain broad requirements that outline the basic SWMPP components the permittee is required to implement, giving the permittee the flexibility to develop a program to meet these broad requirements. Other MS4 permits are more prescriptive and specify in detail the minimum activities and best management practices (BMPs) for each program element.

Given these inherent operational differences and challenges, each HDOT permittee has traditionally applied different approaches to comply with specific permit requirements based on MS4-specific traits or issues. For example, EPA regulations require permittees to develop "procedures for site inspection and enforcement" for addressing construction activities. Few MS4 permits specify how the permittee should inventory their active construction projects or track enforcement activities. A permittee with only a few construction projects a year may be able to use a paper system to inventory and track construction projects. A permittee with hundreds or thousands of construction projects would likely need a database or similar electronic tracking system to ensure it was implementing the program to a level considered to meet MEP.

It is relatively straightforward to assess whether HDOT has developed certain programs and conducted various activities that are called for and within the timeframes specified in each of the permits under consideration, as well as activities or programs specified under SWMPPs or other documents prepared by HDOT. The challenge for the Audit Team and HDOT is to assess

whether the programs and activities implemented have or will constitute MEP. EPA (2007) guidance will assist with this determination, but is not definitive. Determination requires application of the Audit Team's best professional judgment.

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Section 4: Audit Structure and Schedule

For each of the six program elements required to be reviewed by the CD, Kennedy/Jenks will review the six permitted MS4 programs concurrently, developing six Program Element Audit Reports (Final PEARs) that represent the culmination of the auditing efforts across the three HDOT Divisions.

Appendix A of the CD defines various project milestones and deadlines, described for ease of reference below:

Table 4-1 CD Appendix A Deadlines

Program Element	Evaluation Complete: [a]	Draft PEAR to HDOT: [d]	HDOT Review of Draft PEAR: [e]	Final PEAR to HDOT: [f]
PEAR #1: Post-Construction Runoff Control / Permanent Best Management Practices	3 Months (90 Days) [b] After AWPC[c] 13 June 2017	135 Days After AWPC 28 July 2017	165 Days After AWPC 27 August 2017	210 Days After AWPC 11 October 2017
PEAR #2: Construction Site Runoff Control	9 Months (270 Days) After AWPC 10 December 2017	315 Days After AWPC 24 January 2017	345 Days After AWPC 23 February 2017	390 Days After AWPC 9 April 2018
PEAR #3: Public Outreach / Public Involvement	15 Months (450 Days) After AWPC 8 June 2018	495 Days After AWPC 23 July 2018	525 Days After AWPC 22 August 2018	570 Days After AWPC 8 October 2018
PEAR #4: Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Programs	21 Months (630 Days) After AWPC 5 December 2018	675 Days After AWPC 19 January 2019	705 Days After AWPC 18 February 2019	750 Days After AWPC 4 April 2019
PEAR #5: Pollution Prevention / Good Housekeeping	27 Months (810 Days) After AWPC 3 June 2019	855 Days After AWPC 18 July 2019	885 Days After AWPC 17 August 2019	930 Days After AWPC 1 October 2019
PEAR #6: Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability	33 Months (990 Days) After AWPC 30 November 2019	1035 Days After AWPC 14 January 2020	1065 Days After AWPC 13 February 2019	1110 Days After AWPC 29 March 2020

Notes:

(a) "Evaluation" as referenced in CD Appendix A Section B.5. is defined in this AWP to represent the conclusion of the Post-Onsite Evaluation Review Period (See Section 5.2.3) for PEARs #1, 2, 4, and 5. For PEARs #3 and 6, no onsite evaluation is required and therefore "evaluation" is defined to represent the date of conclusion of the Records Review period. Please refer to Appendix C for more detail.

(b) “Months” are based on 30-day months in this AWP.
(c) AWPC = Audit Work Plan Commencement (15 March 2017)
(d) Pursuant to CD Appendix A Section D.2., Kennedy/Jenks will complete a draft audit report and transmit it to HDOT within 45 days of completing an audit of a program element (defined in this AWP as the conclusion of “evaluation”, as discussed in Note (a)).
(e) Pursuant to CD Appendix A Section D.3., HDOT will review the draft PEAR to correct any factual inaccuracies within 30 days of receipt.
(f) Pursuant to CD Appendix A Section D.4., Kennedy/Jenks will complete a final PEAR within 120 days of completing an audit of a program element (defined in this AWP as the conclusion of “evaluation”, as discussed in Note (a)).

Section 5: Program Element Audits

Each program element audit will follow a similar schedule and structure, discussed generally in this section. The Program Element Audits will occur over a 37-month period depicted graphically below (Figure 5-1):

Figure 5-1 Program Element Audit Schedule

Appendices B1 - B6 list the basic information anticipated to be reviewed for each MS4 program element to be audited. The Audit Team will utilize worksheets provided in Appendices B1 - B6 to collect and track information for each MS4 permit and element. References to Appendices C1 - C6 are also included, defining specific schedules for each of the six PEARs. Each Program Element Audit will include three phases (Pre-Audit, Onsite Evaluation, and Reporting), detailed in the following sections.

5.1 Pre-Audit

This Section describes the first phase of each Program Element Audit.

5.1.1 Notice of Audit

The Audit Team will schedule events, confirm appropriate participants, and begin planning the upcoming program element audit with the HDOT PM prior to initiating each Program Element Audit (Appendices C1 - C6 Item 1). The HDOT PM will coordinate with the MS4 Permit Coordinators to provide the following for each of the six MS4 permits:

- Facility or Division-specific SWMPPs
- Recent Annual Reports
- Documentation of required training, inspection reports, legal enforcement correspondence, if any, etc.
- Relevant memoranda of understanding with adjacent of contributing agencies, municipalities, etc.
- Organizational charts specifically listing HDOT staff with MS4 permit authority and responsibility.

The HDOT PM will coordinate with the MS4 Permit Coordinators to identify individuals and stakeholders that should be engaged during the MS4 Permit Audit.

5.1.2 Records Request

The Audit Team will review those sections of the NPDES permits, SWMPPs, guidance documents, the CD, etc. pertinent to the each individual audit element. Based on this review, the Audit Team will develop a records request and submit it to the HDOT PM (Appendices C1 - C6 Item 2). Where documentation is required (completed forms, logs, sign-in sheets, etc.), the Audit Team will request a subset of relevant records for verification. Electronic records are preferred, but physical copies of hard copy records are also acceptable. The HDOT PM will work with the MS4 Permit Coordinators to acquire and provide requested records to the Audit Team (Appendices C1 - C6 Item 3).

5.1.3 Records Review

The Audit Team will compare the program element requirements and commitments identified in the NPDES permits, SWMPPs, CD, annual reports, etc. and the records obtained in the record review (Appendices C1 - C6 Item 4). This review will be informed to the extent appropriate by the interview questionnaire provided in Appendices B1 - B6. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators may be conducted during this period.

5.2 Onsite Evaluation

This Section describes the second phase of each Program Element Audit.

5.2.1 Pre-Onsite Evaluation Conference Call

The Audit Team and HDOT PM will contact each MS4 Permit Coordinator to confirm schedules, address questions and security concerns, confirm personnel safety equipment needed, and organize training and orientation briefings that may be required (Appendices C1 - C6 Item 5).

5.2.2 Onsite Evaluation

For work planning purposes, it is assumed that onsite evaluations for each Program Element will be conducted over the course of five (5) days (except for PEAR #4, which requires an extra day). Detailed activity descriptions and schedules are included in Appendices C1 - C6 (Item 6). It should be noted that following EPA (2007) guidance, PEAR #3 and PEAR #6 do not require onsite evaluations[2]. The onsite evaluations for each Program Element are tentatively scheduled during the following time periods (Table 5-1):

[2] Although no on-site evaluation is required for PEAR #3 (Public Outreach / Public Involvement Program), the Audit Team will endeavor to identify and attend events such as Harbors' tenant outreach in order to gain a well-rounded understanding of this program.

Table 5-1 Tentative On-Site Evaluation Dates

PEAR	On-Site Evaluation
PEAR #1: Post-Construction / Permanent Best Management Practices	Tuesday 30 May 2017 to Monday 5 June 2017
PEAR #2: Construction Site Runoff Control	Monday 27 November 2017 to Friday 1 December 2017
PEAR #3: Public Outreach / Public Involvement Program	[none required]
PEAR #4: Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program	Monday 19 November 2018 to Wednesday 28 November 2018
PEAR #5: Pollution Prevention / Good Housekeeping Program	Monday 20 May 2019 to Friday 24 May 2019
PEAR #6: Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability	[none required]

5.2.3 Post-Onsite Evaluation Review Period

Following the Onsite Evaluations, the Audit Team will review the findings of the Pre-Audits and Onsite Evaluations and address final evaluation-related tasks that may have been noted (Appendices C1 - C6 Item 7). This review period completes the evaluation of the program element, as referenced in CD Appendix A Section B.5.

5.3 Reporting

This Section describes the third phase of each Program Element Audit.

5.3.1 Draft PEARs

Pursuant to the CD, the Audit Team will prepare draft PEARs documenting the procedures followed, sites and activities visited, materials reviewed, and a summary of major findings from the program element audits of the six HDOT NPDES permits (Appendices C1 - C6 Item 8). The PEARs will be structured so that they may be easily incorporated into each Division's Annual Compliance Report (ACR) (see Section 7).

The Audit Team will endeavor to draw defensible conclusions based on the NPDES permit requirements and conditions, the SWMPP developed to meet the permit goals, measurable achievement of those goals, and the Audit Team's best professional judgment interpretation of compliance with the NPDES regulations.

EPA (2007) guidance describes that, in some cases, it may not be possible to assess compliance with a program component because of the limitations of the MS4 program evaluation process. If this is found to be the case, the draft PEAR for the program element will state that this is the case and provide as much supporting information as possible. Similarly, if there were no findings of note for a particular SWMPP or NPDES component, this fact will be stated in the PEAR.

If the Audit Team identifies what may be a Potential Violation or Deficiency at any point during the Pre-Audit, Onsite Evaluation, or Reporting periods, actions will be taken in accordance with the decision tree defined in Section 6 for the Audit Team, HDOT PM, and MS4 Permit Coordinators to follow. The draft PEAR will describe the two findings as follows:

- Findings reviewed per Section 6 and found to be Potential Violations, reported to DOH/EPA and addressed via Corrective Actions.
- Findings found to be Deficiencies, for which recommendations for improvement will be included.

Each draft PEAR will identify BMPs and opportunities for information/technology transfer that may be considered for application across the three HDOT Divisions. The draft PEARs will also analyze the practices implemented for each HDOT Division's program elements and assess whether identified best practices can be universally implemented across the three HDOT Divisions. If best practices cannot be universally implemented, the draft PEAR report will describe identified impediments (such as legal barriers). The draft PEAR will also identify positive program elements considered to exceed the NPDES requirements and SWMPP. Finally, the draft PEAR will include a retrospective analysis of activities that are considered to be potentially outmoded, ineffective, insufficient, or excessively burdensome. Recommendations to modify, streamline, or expand them in accordance with what has been learned will be listed.

The Audit Team will complete the draft PEAR within 45 days of the completion of the evaluation for each program element. The Audit Team will provide five (5) copies of the draft PEAR and one electronic file copy in Word (Version 2007 or earlier) to the HDOT PM.

5.3.2 HDOT Review

Upon receipt, the HDOT PM will distribute copies of the draft PEARs to the appropriate MS4 Permit Coordinators, who will be responsible for reviewing the reports and distributing the reports to key personnel for their review. The MS4 Permit Coordinators will submit to the HDOT PM a consolidated written request for clarification and corrections to the draft PEAR for their respective permit as found to be necessary (Appendices C1 - C6 Item 9). The HDOT PM will then submit the consolidated requests and corrections to the Audit PM (Appendices C1 - C6 Item 10).

5.3.3 Final Audit Report

Upon receipt of the consolidated requests and corrections, the Audit Team will make appropriate changes to the draft PEARs and submit the final PEARs (Appendices C1 - C6 Item 11).

For PEARs #1 - 5, the Final PEAR is scheduled to be submitted approximately 25 days in advance of the CD deadline. This is intended to afford additional time for the Divisions in each subsequent Program Element Audit. The CD is structured such that, if followed strictly, only 60 calendar days are afforded for Steps 1 to 7 of PEARs #2 - 6. For example, Final PEAR #1 is due at 210 days following AWPC and the evaluation of PEAR #2 is due at 270 days following AWPC. By reducing the time it takes Kennedy/Jenks to write the Final PEAR, an additional 25 days are afforded to the Divisions to fulfill the records request for the subsequent audit (Appendices C2 - C6 Item 3).

The Audit Team will provide five (5) copies of the final PEARs and one electronic file copy in Word (Version 2007 or earlier) to the HDOT PM.

5.3.4 Post-Audit Report Review

The HDOT PM and Audit PM will meet after the submission of each PEAR to discuss QC procedures and potential improvements to be made prior to the subsequent PEAR.

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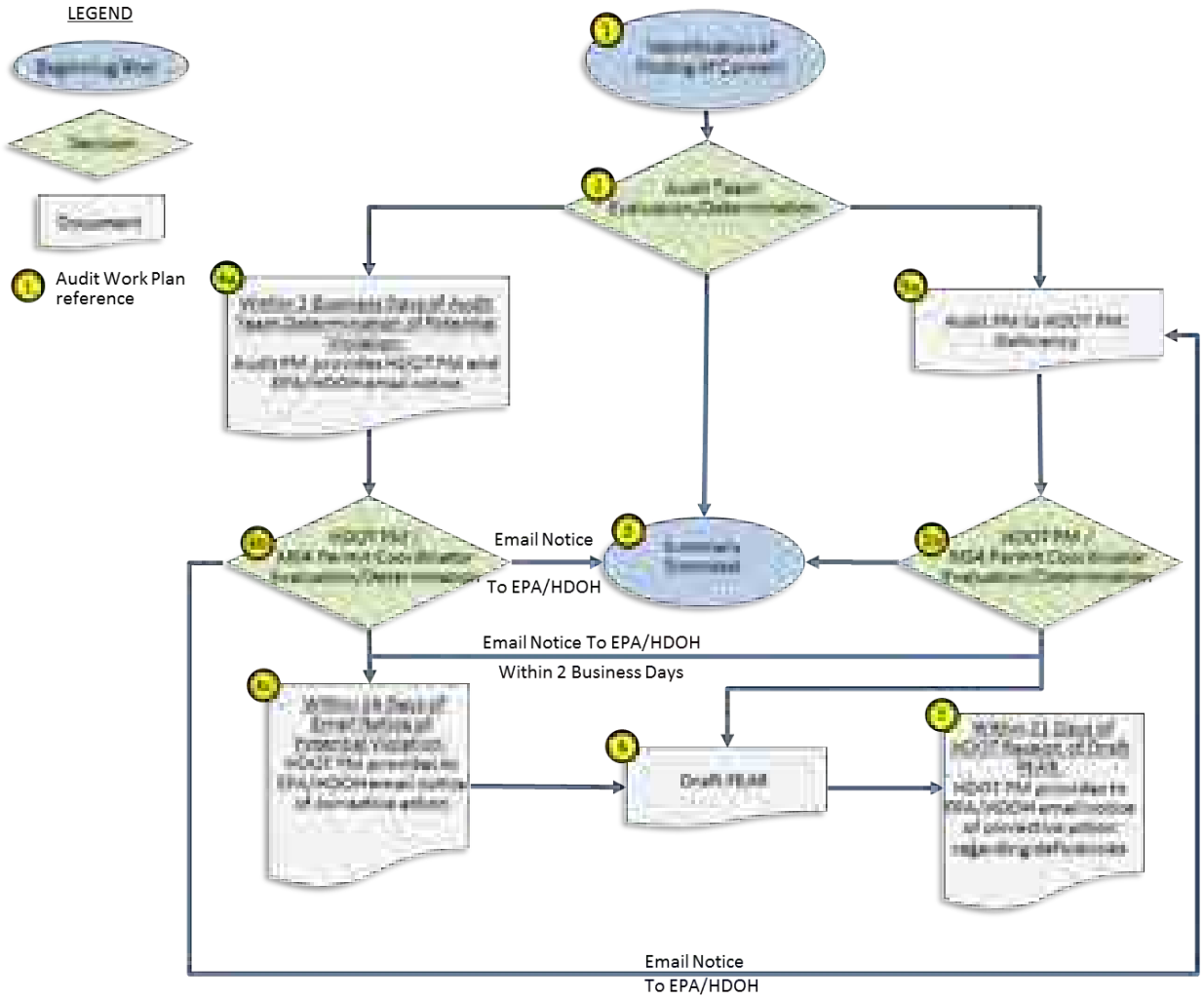
Section 6: Potential Violations and Deficiencies

If at any point during the Pre-Audit, Onsite Evaluation or Reporting Periods the Audit Team identifies what may represent a Potential Violation or Deficiency (hereinafter "Finding of Concern"), the Audit Team, HDOT PM, and MS4 Permit Coordinators will follow the decision tree shown on Figure 6-1.

Figure 6-1 Potential Violation and Deficiency Decision Tree



1 6.1 Identification of Finding of Concern

2 6.2 Audit Team Consultation

Upon identification of a Finding of Concern, the Audit Team will consult internally to assess whether the Finding of Concern may represent a Potential Violation, a Deficiency, or whether it summarily merits dismissal.

Potential Violation - The Audit Team will categorize the Finding of Concern as a Potential Violation if it meets the EPA (2007) guidance definition of an "area where the evaluation found the permittee not in compliance with a specific permit requirement or SWMPP commitment". These occurrences would follow the procedures listed in Section 6.3.

Deficiency – The Audit Team will categorize the Finding of Concern as a Deficiency if it meets the Consent Decree definition of an "item which, if not corrected, will lead to potential violations"[1]. These occurrences would follow the procedures listed in Section 6.4.

3 Summary Dismissal – The Audit Team will dismiss the Finding of Concern if it does not meet either the definition of a Potential Violation or a Deficiency. No further action will be required.

[1] EPA (2007) guidance further elaborates that deficiencies are areas of concern impeding effective program implementation. They are typically areas where the permit or SWMPP does not describe specifically how the permittee should conduct an activity, yet the evaluator believes the permittee may consider altering how they conduct the activity to meet water quality goals. Deficiencies can also be areas where future permit violations could result if the permittee continues on its present path. The Audit Team will look for opportunities to enhance program elements (e.g. recommending that MS4 Coordinators perform required annual reviews earlier in the year, thereby allowing time for self-correction).

6.3 Potential Violation Decision Tree

Notification: Audit PM to HDOT PM and EPA & DOH

If the Finding of Concern is categorized by the Audit Team as a Potential Violation, the Audit PM will notify the HDOT PM and EPA & DOH via email[1] within 2 business days of making the determination using the form presented in Appendix D1. Additionally, the HDOT PM will be notified via telephone. These notifications will include the following information:

1. Specific details of the Potential Violation
2. Related photographs, if any
3. Applicable regulatory references [i.e., NPDES permit, SWMPP, Hawaii Administrative Rules (HAR), or Code of Federal Regulations (CFR) references, as applicable].

Evaluation/Determination

The HDOT PM will consult with the appropriate MS4 Permit Coordinator to further investigate the factual accuracy of the Potential Violation determination. Based on that consultation, the Potential Violation may be summarily dismissed (if found to be factually inaccurate) or re-categorized as a Deficiency (if incorrectly categorized as a Potential Violation). Both of these scenarios would be accompanied by email notification from the HDOT PM to EPA & DOH using the form presented in Appendix D2. The time required for this consultation is included in the 14-day timeline described in Item 4c, below.

Determination of Potential Violation

If the Finding of Concern is confirmed to be a Potential Violation, the HDOT PM will then work with the appropriate MS4 Permit Coordinator to assess suitable corrective actions.

Unless otherwise agreed upon with EPA & DOH, HDOT will correct the Potential Violation within 14 days of initial Audit Team email notification to EPA & DOH (see Item 4a above). Email notification of the Corrective Action will be provided to EPA & DOH by the HDOT PM using the forms presented in Appendix D2 and Appendix D3. The Consent Decree allows HDOT the option to request an extension to this reporting deadline. In order for EPA & DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA & DOH.

[1] Per EPA & DOH request, Connor Adams (EPA) and Matthew Kurano (DOH) will be copied on all email notifications to EPA & DOH.

6.4 Deficiency Decision Tree

5a **Notification: Audit PM to HDOT PM**

If a Finding of Concern is categorized as a Deficiency, the Audit PM will notify the HDOT PM via telephone and email and include the following information:

1. Specific details of the Deficiency
2. Related photographs, if any
3. Applicable regulatory references (i.e., NPDES permit, SWMPP, HAR, or CFR references, as applicable).

5b **Evaluation/Determination**

The HDOT PM will consult with the appropriate MS4 Permit Coordinator to further investigate the factual accuracy of the Deficiency determination. Based on that consultation, the Deficiency may be summarily dismissed (if found to be factually inaccurate) or re-categorized as a Potential Violation (if incorrectly categorized as a Deficiency). The latter scenario will be accompanied by an email notification to EPA & DOH within 2 business days of making the determination using the form presented in Appendix D2.

6 **Deficiency**

If the finding is confirmed to be a Deficiency, this finding (along with confirmed Potential Violations) will be documented in the appropriate draft PEAR. The HDOT PM will work with the appropriate MS4 Permit Coordinator to assess the appropriate corrective actions.

7 Unless otherwise agreed upon with EPA & DOH, HDOT will correct Deficiencies within 21 days of receiving the draft PEAR (Appendices C1 - C6 Item 8). Email notification of the Corrective Action will be provided to EPA & DOH by the HDOT PM using the form included in Appendix D3. The CD allows HDOT the option to request an extension to this reporting deadline. In order for EPA & DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA & DOH.

Section 7: Annual Compliance Report

Due to the differences in Division operations, not all portions of each PEAR will be applicable to all MS4 permittees. As such, the PEARs will be structured so that they may be easily incorporated into each Division's Annual Compliance Report (ACR). The HDOT PM will work with each permittee to ensure that the appropriate PEAR content is included in each individual ACR. Each ACR will include a detailed summary of actions taken as a result of the audit reports and dates at which corrective actions, if warranted, were taken.

Additionally, pursuant to CD Appendix A Section D.5., the HDOT PM will submit each original draft and final PEAR to EPA & DOH at the same time that ACRs are submitted. Within the draft and final PEAR, an authorized HDOT official will certify that, to the best of the official's knowledge and information, the MS4 Permit Audit was conducted in accordance with this AWP. If items have not been corrected, HDOT will provide a schedule for implementing corrective measures.

References

United States Environmental Protection Agency. 2005. Small SM4 Stormwater Program Overview. December. Accessed online at <https://www3.epa.gov/npdes/pubs/fact2-0.pdf>.

United States Environmental Protection Agency. 2006. Digital Camera Guidance for EPA Civil Inspections and Investigations. July. Accessed online at <https://www.epa.gov/sites/production/files/2013-09/documents/digitalcameraguide.pdf>.

United States Environmental Protection Agency. 2007. *MS4 Program Evaluation Guidance.* Accessed online at <https://www3.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf>.

Appendix A

Consent Decree Sections Pertaining to Audit
(10.d Page and Appendix A)

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APPENDIX A

ENVIRONMENTAL COMPLIANCE AUDITS

A. General Provisions

1. This Appendix provides details of the NPDES MS4 compliance audits required by Paragraph 10.d of the Consent Decree. The audits shall include evaluation of common stormwater program elements at each of HDOT's three divisions (Airports, Highways and Harbors), as stated in Paragraph A.3 below, throughout the state on a per element schedule. The audits shall be completed to fulfill the following goals:
    a. Determine compliance with the federal regulations and state MS4 permits and regulations and this Consent Decree (see Paragraph A.2, below);
    b. Ensure information gathered during the audits is used to promote information and technology transfer between divisions; and
    c. Identify deficiencies and potential violations that are discovered by the third party auditor and allow for timely self-correction of the deficiencies and potential violations by HDOT.
2. The audits shall be designed to assess current regulatory and administrative compliance with the following items throughout each of HDOT's divisions:
    a. The Hawaii NPDES General Permit Authorizing Discharges of Storm Water and Certain Non-Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (Hawaii Small MS4 General Permit), Hawaii Administrative Rules, chapter 11-55, Appendix K;
    b. NPDES permit, Permit No. HI S000001, MS4 Permit for the HDOT-Highways, Oahu District;
    c. NPDES Permit, Permit No. HIS000005, MS4 Permit for the HDOT-Airports, Honolulu International Airport;
    d. Applicable Storm Water Management Plans (SWMPs); and
    e. This Consent Decree.
    f. Future NPDES MS4 permits and SWMPs issued to HDOT. This obligation shall not delay or prevent termination of the Consent Decree.
3. The audits shall include, but not be limited to, an evaluation of the following MS4 Program Elements as they relate to compliance at each of HDOT's three divisions:
    a. Public Education/Outreach and Participation/Involvement
    b. Illicit Discharge Detection and Elimination (including commercial/tenant oversight programs)
    c. Construction Site Runoff Control
    d. Post-Construction Runoff Control/ Permanent BMPs
    e. Pollution Prevention/ Good Housekeeping
    f. An analysis of how Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability impact MS4 compliance
4. HDOT shall audit Program Elements for the Harbors, Airports and Highways Divisions in accordance with the schedule defined in the Work Plan described in Paragraph B.1, below.

5. The audits shall be conducted by a qualified third party environmental consulting firm retained by HDOT and selected by a committee consisting of representatives of the HDOH and HDOT. The selection committee shall choose an audit firm which is experienced with environmental auditing and the permits and regulations described in Paragraph A.2, above.
6. The requirements of this Appendix related to the consulting firm's qualifications, authority to conduct the audits, and production of the HDOT Audit Reports (Audit Reports) shall be incorporated in any contract relating to the audits entered into by HDOT and the selected consulting firm to the extent allowed by State Procurement Code.
7. Any violations by HDOT discovered though the execution of the Environmental Compliance Audit detailed in this Appendix are neither "voluntarily discovered" within the terms of EPA's revised *Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations Policy* (Audit Policy) nor voluntarily disclosed to EPA under EPA penalty policies. Accordingly, any such violations are ineligible for penalty mitigation or other favorable treatment under the Audit Policy.
8. HDOT agrees not to attempt to use any state audit and/or privilege laws to restrict EPA's or HDOH's ability to review the Audit Reports at HDOT facilities to determine if the audits have been properly completed and HDOT has corrected any uncorrected non-compliance, potential violation, or deficiency as per its certification (see Paragraph F below). Also, HDOT agrees not to attempt to use any state audit and/or privilege laws to restrict EPA's or HDOH's ability to obtain, review and/or use the Audit Reports in any action to enforce the audit provisions of the Consent Decree. Neither information contained in the Audit Reports, nor underlying information upon which the Audit Reports relied, that indicates regulatory violations at any HDOT facility, shall be claimed as confidential business information by HDOT or its consulting firm.

B. Procurement of Services/Audit Work Plan

1. HDOT shall advertise a Request for Qualifications from third party audit firms to conduct the audits. Advertisement for the Request for Qualifications shall not exceed forty-five (45) days.
2. Within thirty (30) days of the end of the Request for Qualifications period, the HDOT and HDOH selection committee shall conduct the professional services selection of an audit firm and provide the recommendation to the Director.
3. Within fifteen (15) days of the selection committee recommendation to the Director of Transportation, or another length of time agreed to by EPA and HDOH, HDOT shall notify the potential audit firm with a letter of selection, pending negotiation of fees.
4. Within thirty (30) days or another length of time agreed to by EPA and HDOH, HDOT shall, as approved by the Director of Transportation, award the selected audit firm and proceed to process the contract for the audit work. Within seven (7) days of each milestone, HDOT shall notify EPA and HDOH by email that the following milestones were completed:
    a. Request for Qualifications advertisement;
    b. Awarding of contract between HDOT and the selected audit firm;
    c. Notice to Proceed on the Audit.
5. On or before September 16, 2016, HDOT shall submit a draft audit work plan (Audit Work Plan) to EPA and HDOH for review and approval. In developing the Audit Work Plan, HDOT shall consult EPA's guidance on auditing small MS4s:

http://www.epa.gov/npdes/pubs/ms4guide_withappendixa.pdf The Audit Work Plan shall include the following audit schedule and describe each task necessary to accomplish the Audit Scope with targeted time frames for the consulting firm to complete:

a. 3 months after the Audit Work Plan is approved: Evaluation of Post Construction/Permanent BMP programs for all three HDOT divisions;
b. 9 months after the Audit Work Plan is approved: Evaluation of Construction Site Runoff Control programs for all three HDOT divisions;
c. 15 months after the Audit Work Plan is approved: Evaluation of Public Outreach/Public Involvement for all three HDOT divisions;
d. 21 months after the Audit Work Plan is approved: Evaluation of Illicit Discharge Detection and Elimination, Industrial Commercial Activities/Tenant Programs for all three HDOT Divisions;
e. 27 months after the Audit Work Plan is approved: Evaluation of Pollution Prevention/Good Housekeeping for all three HDOT Divisions;
f. 33 months after the Audit Work Plan is approved: Evaluation of Staffing, Funding, Organizational Structure, Availability of Resources and Storm Water Program Sustainability for all three HDOT divisions.

6. The Audit Work Plan shall include, but is not limited to: the minimum documents to be reviewed (e.g. SWMPs, training records, inspection reports, etc.), minimum number of field verifications, as necessary, for each program element evaluated, deliverables (notices of potential violations, draft and final audit reports), and reporting deadlines.
7. EPA, after consultation with HDOH, may reject the draft Audit Work Plan in whole or in part. If EPA rejects the Audit Work Plan or any portion of it, EPA shall identify the reason(s) in writing to HDOT for such rejection and may require HDOT to redraft the Audit Work Plan in its entirety or part. EPA shall provide any comments to HDOT within forty-five (45) days.
8. If EPA and HDOH reject the Audit Work Plan in whole or part, HDOT shall resubmit a revised Audit Work Plan within one hundred and twenty (120) days. After submission of the revised Audit Work Plan, EPA, after consultation with HDOH, shall provide any comments to HDOT within forty-five (45) days. HDOT will review all comments and make all required modifications to the revised Audit Work Plan. If EPA does not provide written comments, the revised Audit Work Plan shall be deemed approved by EPA and HDOH.

C. Audits

1. HDOT shall take all appropriate measures to facilitate the audit firm in performing the audits in accordance with the approved Audit Work Plan.
2. HDOT shall grant the audit firm full access to and unrestricted review of all HDOT records, documents and information that the audit firm requires to complete the audits.

D. Reporting/Audit Reports

1. HDOT shall require the audit firm to provide preliminary written notice of any potential violations identified in any audit to HDOT, EPA and HDOH within 2 business days following an audit of a program element in Paragraph B.1, above.
2. HDOT shall require the audit firm to complete a draft audit report to HDOT within 45 days of completing an audit of a program element.
3. HDOT shall review the draft audit report to correct any factual inaccuracies within 30 days after receiving the draft audit report.
4. HDOT shall require the audit firm to complete a final audit report within 120 days, or another length of time agreed to by EPA and DOH, of completing an audit of a program element.
5. HDOT shall submit original draft and final audit reports to EPA and HDOH with the Annual Compliance Report (ACR).
6. HDOT shall provide a detailed summary of any actions taken as a result of the audit reports and dates at which those actions were taken with the ACR.
7. The HDOT Audit Reports shall contain:
    a. A specific statement of the procedures followed, HDOT sites and activities visited and all materials reviewed during the audits;
    b. Retrospective analysis of activities that may be outmoded, ineffective, insufficient, or excessively burdensome, and recommendations to modify, streamline, or expand them in accordance with what has been learned;
    c. An identification of deficiencies (items which, if not corrected, will lead to potential violations) and potential violations with the applicable SWMPs, this Consent Decree, and/or applicable permit and regulations, and recommendations for improvement;
    d. Identification of best practices and opportunities for information/technology transfer to be applied across all divisions; and
    e. An analysis of the practices implemented for each Division's program elements and a determination as to whether identified best practices can be universally implement across all three Divisions. If best practices cannot be universally implemented, the report shall clearly describe the identified impediments.
8. HDOT shall correct any deficiency or potential violation identified in the Audit Reports or otherwise discovered by HDOT as part of the audit process set forth herein within the time frames identified in Paragraph E below.

E. Corrections of Potential Violations and Deficiencies

1. HDOT shall correct any potential violations within 14 days of notification as described in D.1 of this Appendix, or another period of time agreed to by EPA and DOH. In order for EPA and DOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA and HDOH.
2. HDOT shall correct any deficiencies within 21 days of receiving the draft Audit Report, or another period of time agreed to by EPA and HDOH. In order for EPA and HDOH to agree to an extension, HDOT must provide a corrective action workplan, including a final compliance date, to EPA and HDOH.
3. If HDOT corrects any violation discovered through the Audit process within the time frames described above, it shall not be subject any related stipulated penalties under Paragraph 30.

4. Notwithstanding anything in E.3 of this Appendix, the United States and HDOH reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree or to obtain penalties or injunctive relief under the Act or its implementing regulations, or under other federal or State laws, regulations, or permit conditions, if HDOH or EPA independently discovers a violation of a permit, law, or statute.
5. Similarly, United States and HDOH, reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree or to obtain penalties or injunctive relief under the Act or its implementing regulations, or under other federal or State laws, regulations, or permit conditions, if an activity or violation poses an immediate threat to human health or the environment.

F. Certifications

1. HDOT shall provide the following information and certifications to EPA and HDOH regarding completion of each audit and correction of any non-compliance or potential violation identified in the Audit Reports or otherwise discovered by HDOT as part of the audit process within an Environmental Compliance Audit section of the ACR. An authorized HDOT official shall certify that, to the best of the official's knowledge and information, the audits were conducted in accordance with the Work Plan described above, the Audit Reports are submitted to HDOT, EPA and HDOH in the ACR as described above, and all items of non-compliance identified in the Audit Reports have been corrected or steps have been taken to correct them. If all items have not been corrected, HDOT must include a schedule for correcting the issue.

Appendix B

PEAR 1 through 6 Guiding Questions

B1: PEAR #1 – Post-Construction / Permanent Best Management Practices

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Overall Approach**						
A1	Discuss the process chronologically in the order that a project would occur. Walk us through the process as if we were a developer proposing a project.						
B	**Laws/Rules/Regulations/Policies**						
B1	What legal authority does the permittee have to require post-construction BMPs on development sites and to ensure maintenance?						
B2	Does the permittee's legal authority address post-construction requirements for all projects disturbing one acre or more?						
B3	Does the legal authority require site design, source control, and stormwater treatment BMPs?						
B4	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
B5	What procedures for alternative compliance (i.e., planning-level BMPs and other non-structural controls) are allowed?						
B6	Does the legal authority authorize the permittee to require stormwater management plans to address post-construction impacts?						
B7	Do the laws/rules/regulations/policies outline the contents of an approvable plan and responsibilities for operation and maintenance of approved BMPs?						
C	**Post-Construction BMP Standards**						
C1	What technical guidance (e.g., BMP manual) does the permittee use as the standard for design and selection of post-construction BMPs? Note: It is not necessary to do a thorough review of the manual or standards used by the permittee.						
C2	Are project proponents required to follow a technical guidance manual?						
C3	Does the guidance provide siting and use criteria for the BMPs to ensure proper and adequate BMPs are being selected and implemented?						
C4	Does the guidance provide siting and use criteria for BMP selection based on the development context (i.e., BMP selection appropriate for ultra urban-areas versus those more appropriate for more rural settings with larger parcels)?						
C5	Are pollutants of concern that are typically generated by the proposed development type considered when selecting or approving BMPs?						
C6	Does the technical manual provide guidance on sizing, performance, and location of BMPs?						
C7	When was the BMP manual last updated?						
C8	Does the permittee have different requirements or standards for different types of developments (e.g., specific post-construction requirements for gas stations or automobile repair facilities)?						
C9	Does the permittee have design manuals related to land-efficient site designs (e.g. better site design, better models for large retailers)?						
C10	Does the permittee promote source control and site design standards to reduce the generation of pollutants in addition to treatment BMPs?						
C11	Does the permittee include in standards and manuals specifications for innovative site design practices, such as low-impact development and other techniques that manage runoff on-site?						

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C12	Are project applicants encouraged or required to use vegetative BMPs that promote infiltration, such as swales, biofiltration practices, etc., where possible?						
C12	Does the permittee offer financial incentives to support post-construction stormwater goals (e.g., programs to support redevelopment, such as enterprise zones, or stormwater utility credits)?						
D	**Plan Review and Approval Procedures**						
D1	Which Division/District is responsible for post-construction stormwater plan review?						
D2	How many plan reviewers are there?						
D3	How many plans submitted for review (private and public projects) each year?						
D4	What is the project size threshold for the permittee to require post-construction BMPs?						
D5	Does the permittee apply standard conditions that incorporate post-construction installation and maintenance requirements into its plan review process?						
D6	Do plan reviewers use specific criteria or a checklist when reviewing plans?						
D7	Does the permittee consider pollutants of concern or whether the project discharges to a 303(d) listed impaired water when determining which BMPs are required?						
D8	Does the permittee consider such regional concerns as smart growth initiatives, watershed master plans, and other larger-scale planning efforts to ensure that each new development and redevelopment plan is consistent with the goals of these initiatives?						
D9	For up to three sets of post-construction plans provided by permitee:						
D9a	Are adequate BMPs included on plans, details, and drawings?						
D9b	What types of standard conditions or notes are included?						
D9c	Are maintenance requirements specified?						
D9d	Do the location of BMPs hinder maintenance?						
D10	What types of projects must be reviewed by the permittee for post-construction stormwater controls?						
D11	Does the permittee have a process to identify priority projects identified in the MS4 NPDES permit?						
D12	What types of standards or technical guidance do the permittee's reviewers use to review projects?						
D13	Does the permittee condition improvements to existing developments with requirements for post-construction stormwater controls? How are these redevelopment requirements triggered?						
E	**Post-Construction BMP Inventory**						
E1	How does the permittee track the installation and maintenance of post-construction BMPs?						
E2	Is your post-construction BMP inventory managed in a database and/or linked to GIS?						
E3	What information is collected?						
F	**BMP Inspection & Maintenance**						
F1	Does the permittee require maintenance agreements for all projects with post-construction BMPs?						
F2	Are as-built inspections conducted at the conclusion of a project to ensure the BMP has been built properly? What Division/District is responsible for this?						
F3	Do staff conduct these inspections or are they self-certified?						
F4	Does the permittee inspect private facilities or require inspections by owner/operators?						

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F5	If the permittee performs the inspections, how often are they performed?						
F6	If owner/operators are required to inspect and maintain their BMPs, how is this authorized? Through a MOU? Through conditions of approval? Through another type of agreement?						
F7	How does the permittee ensure inspections are occurring? Reminder notices? Inspection reports?						
F8	Who is responsible for structural stormwater BMP maintenance (public and private)? Permitee? Owner?						
G	**Enforcement**						
G1	How does the permittee require proper maintenance and repair after the inspection?						
G2	What types of enforcement actions are provided by laws/rules/regulations/policies (e.g., notices of violation, abatement)?						
G3	Is the permittee's enforcement authority limited (e.g., limits on the dollar amount of fines, inability to issue civil penalties)?						
G4	How many enforcement actions have been taken in the past year due to lack of BMP maintenance?						
H	**Public Construction Projects**						
H1	For staff:						
H1a	Are plan reviewers trained on post-construction BMPs and requirements?						
H1b	What type of training do staff performing "as built" and post-construction inspections receive?						
H1c	How often are the trainings conducted?						
H1d	How many staff have been trained?						
H1e	What type of training or education does the permittee provide to developers and engineers on post-construction requirements?						
H2	For developers and plan designers:						
H2a	What types of educational materials have been developed and distributed to developers and designers regarding post-construction BMPs and application requirements?						
H2b	How are the materials distributed? At the permit desk? During inspections?						
H2c	What type of training does the permittee provide or advertise to local developers and designers?						
H2d	How often is this training conducted?						
H2e	How many developers and designers have been trained?						
H2f	Are they required to attend?						
I	**Consent Decree Questions**						
I1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
I1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
I2a	Have deficiencies or potential violations been identified?						
I2b	What are recommendations for correcting these deficiencies or potential violations?						
I4	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						

Question Number	Question	Airports		Harbors		Highways	
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I5	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
I6	If best practices cannot be universally implemented, what are the identified impediments?						

B2: PEAR #2 – Construction Site Runoff Control

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Laws/Rules/Regulations/Policies**						
A1	What legal authority does the permittee have to require erosion and sediment control BMPs on construction sites and to ensure compliance?						
A2	Does the permittee's legal authority address stormwater quality for all projects disturbing at least 1 acre?						
A3	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
A4	Does the legal authority authorize the permittee to require erosion and sediment control plans?						
B	**Construction Site Inventory**						
B1	How does the permittee track construction projects?						
B2	Is the following information collected?						
B2a	The number and status (active/inactive/completed) of construction sites						
B2b	The number, frequency, results, and follow-up actions resulting from inspections						
B2c	The actions taken to resolve the issues and dates when compliance was achieved.						
B2d	The number and type of enforcement actions taken at sites in violation						
B2e	Complaints submitted by the public						
B3	Does the inventory include construction sites disturbing less than 1 acre?						
B4	What is the threshold for tracking projects?						
B5	Does the inventory track which sites have submitted an NOI for coverage under a state/EPA construction general permit?						
B6	How is the inventory updated? How often?						
B7	Does the permittee prioritize projects for more frequent or targeted inspections? If yes, based on what criteria?						
C	**Construction Requirements and BMPs**						
C1	What technical guidance (e.g., BMP manual or fact sheets) does the permittee use as the standard for design and selection of nonstructural and structural construction BMPs?						
C2	Are project applicants required to follow these technical manuals?						
C3	Does the guidance set minimum operation and maintenance requirements for BMPs?						
C4	Does the guidance include installation requirements for the BMPs?						
C5	Does the guidance provide proper siting and use criteria for BMPs to ensure that adequate BMPs are being selected and implemented?						
C6	Does the permittee provide guidance as to recommended BMPs to be used?						
C7	Does the permittee have different requirements or standards for different times of the year (i.e., during the rainy season vs. the dry season)?						
D	**Plan Review Procedures**						
D1	Does the permittee hold pre-application meetings on any construction project? Are stormwater and erosion and sediment control requirements addressed at these meetings?						
D2	What is the permittee's threshold for plan review? (For example, does the permittee review plans for all projects disturbing greater than 1 acre, or do they use another threshold?)						

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D3	Does the permittee apply standard conditions that incorporate erosion and sediment control requirements into its plan review process?						
D4	Do the plan reviewers verify whether the project applicant has submitted an NOI to the state or EPA? Is evidence of NOI submission required before a plan can be approved or a local permit issued?						
D5	Do plan reviewers use specific criteria or a checklist when reviewing plans?						
D6	Does the permittee consider during the review process whether the construction project discharges to a TMDL/impaired water?						
D7	For up to two construction plans provided:						
D7a	Are adequate BMPs included on plans?						
D7b	What types of standard conditions or notes are included?						
D7c	Are maintenance requirements specified?						
D7d	Are BMPs addressing other construction activities, such as materials storage and waste disposal, incorporated into the construction plans?						
D7e	Do the plans include notes addressing the prohibition of non-stormwater discharges?						
D7f	Were comments provided by the permittee to the project proponent reasonable and appropriate?						
E	**Construction Site Inspections**						
E1	Does the permittee adequately inspect the following phases of construction?						
E1a	Clearing and grubbing and site preparation						
E1b	Mass grading and public infrastructure/utility construction						
E1c	Building construction and final grading						
E1d	Final stabilization						
E2	What group is charged with erosion and sediment control inspections?						
E3	Do the inspectors use a checklist or inspection form during each inspection?						
E4	How many inspectors does the permittee use to verify erosion and sediment control compliance at construction sites?						
E5	Does this number appear adequate to assess active construction occurring in the permitted area? Compare this to the total number of construction sites that need to be inspected at any one time (number of inspections per construction site per year). Consider project durations and phasing, local conditions (e.g., dry vs. wet seasons), and additional duties assigned to inspectors.						
E6	Does the permittee have an established prioritization process for establishing inspection frequency? If so, on what factors is the prioritization based (i.e., size, proximity to water body, sensitive areas)?						
E7	How often are sites inspected?						
E8	Does the permittee target inspections during and immediately after wet weather events? If so:						
E8a	What size rain event triggers an inspection?						
E8b	How soon after a rain event?						
E9	Is there an established rainy season for the area? Are sites inspected prior to the start of the rainy season to determine preparedness?						

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F	**Program Support and Resources**						
F1	Does the program have a dedicated source of funding to support plan review staff and inspectors?						
G	**Enforcement**						
G1	What types of enforcement actions are provided for in applicable laws/rules/regulations/policies (e.g., notices of violation, “stop work” orders, fines)?						
G2	Is use of these actions outlined in an established, escalating enforcement policy?						
G3	Review with the permittee statistics on enforcement of construction site erosion and sediment controls.						
G3a	How many enforcement actions are taken per year?						
G3b	Are follow-up inspections conducted to verify compliance?						
G4	Are there limitations on the permittee’s enforcement authority (e.g., limits on the dollar amount of fines, inability to issue civil penalties)?						
G5	Do staff feel that their enforcement authority is adequate to achieve compliance on construction projects?						
H	**Training and Education**						
H1	For staff:						
H1a	What type of training do construction inspectors receive? Are plan reviewers trained on erosion and sediment control BMPs and requirements?						
H1b	How often is training conducted?						
H1c	How many staff have been trained?						
H1d	What type of follow-up is conducted by the permittee to verify that the training is effective?						
H2	For construction operators:						
H2a	What types of educational materials have been developed and distributed to construction operators?						
H2b	How are the educational materials distributed?						
H2c	What type of training does the permittee provide or advertise to local construction operators?						
H2d	How often is this training conducted? How many construction site operators have been trained?						
H2e	Are contractors and developers required to attend?						
H2f	Are training sessions held in cooperation with other local permittees or regional authorities?						
I	**Public Construction Projects**						
I1	Do RFPs or contracts include language specifying stormwater requirements?						
I2	Are inspection and maintenance requirements specified in the contract?						
I3	What oversight does the permittee implement to ensure the contractor is implementing all requirements appropriately and adequately?						
I4	What penalties are in place to require compliance from the permittee’s contractors?						
J	**Consent Decree Questions**						
J1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						

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J1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
J2a	Have deficiencies or potential violations been identified?						
J2b	What are recommendations for correcting these deficiencies or potential violations?						
J3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
J4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
J5	If best practices cannot be universally implemented, what are the identified impediments?						

B3: PEAR #3 – Public Outreach / Public Involvement

Question Number	Question	Airports		Harbors		Highways	
		Kahului Airport Small MS4 Permit HI 14KE349	Honolulu International Airport Individual Permit HI S000005	Honolulu Harbor Small MS4 Permit HI 03KB482	Kalaeloa Barbers Point Harbor Small MS4 Permit HI 03KB488	Maui District Small MS4 Permit HI 14KE352	Oahu District Individual Permit HI S000001
A	**Goals and Objectives**						
A1	Does the permittee have a strategy document for education and participation?						
A2	Does the document include specific goals?						
A3	On what are the goals based?						
A4	Are the goals measurable? How?						
B	**Message Development**						
B1	Have specific messages been developed for stormwater outreach?						
B2	On what are the messages based? Pollutants of concern? General awareness? Problem target audience? All of the above?						
B3	Are different messages used for different target audiences (i.e., children, homeowners, industry, etc.) or is one central message used for all?						
B4	Do the messages encourage participation in stormwater-related activities?						
B5	Do the messages educate about behavior changes that the audience can make to contribute to a solution?						
B6	Have messages been developed specific to reducing illicit discharges with information about how to report them to the appropriate authorities?						
B7	Have messages been developed to educate pesticide, fertilizer, and herbicide applicators (including homeowners) about ways to reduce stormwater pollution?						
C	**Target Audiences**						
C1	Has the permittee identified target audiences for outreach efforts? How are these target audiences selected? What are the target audiences?						
C2	What land use groups (i.e., industry, commercial businesses) has the permittee targeted?						
C3	Have certain ethnic groups or nationalities been identified as audiences to be targeted based on an evaluation of local demographics?						
C4	Have the target groups been reevaluated based on evaluation of the strategy and progress that has been made?						
C5	For Phase I permittees: have they targeted pesticide, herbicide, and fertilizer applicators (including homeowners) and construction site operators for outreach?						
C6	For Phase II permittees: have they targeted industries or commercial businesses of concern for outreach?						
D	**Message Packaging**						
D1	Does the permittee have a variety of written educational materials?						
D2	Does the permittee have a variety of other packages (i.e., Web site, presentations, displays) for educational materials?						
D3	Did the permittee produce the education and outreach materials in the different languages that are spoken in the community?						
D4	Do the permittee's materials explain stormwater issues in easy-to-understand terms?						

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E	**Distribution Mechanisms**						
E1	Does the permittee track distribution of materials to measure effectiveness?						
E2	Is the permittee focused solely on distribution or is an effort made to evaluate the impact of the messages?						
E3	Does the permittee use a variety of distribution mechanisms to target various audiences?						
F	**Evaluation Methods**						
F1	How does the permittee evaluate the effectiveness of the outreach strategy?						
F2	Has the permittee conducted a public awareness survey?						
F3	Which outreach materials have been the most effective in soliciting public involvement and participation? Changing audience behaviors? Increasing general stormwater awareness?						
F4	Have any changes been made to the outreach strategy or materials based on an evaluation of effectiveness?						
G	**Public Participation Activities**						
G1	What opportunities does the permittee give to the public to review and comment on any changes to the SWMP, such as public comment via a Web site, a public meeting, or a stormwater advisory group?						
G2	What volunteer opportunities (i.e., stream cleanups, storm drain stenciling) does the permittee coordinate or publicize to encourage the public to participate in stormwater-related activities?						
G3	Does the permittee sponsor or promote any of the following activities?						
G3a	Beach/stream/lake cleanups						
G3b	Volunteer stream monitoring						
G3c	Stream clean-ups or equivalent activities						
G3d	Stormwater citizen panel						
H	**Consent Decree Questions**						
H1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
H1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
H2a	Have deficiencies or potential violations been identified?						
H2b	What are recommendations for correcting these deficiencies or potential violations?						
H3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
H4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
H5	If best practices cannot be universally implemented, what are the identified impediments?						

B4: PEAR #4 – Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program

Question Number	Question	Airports		Harbors		Highways	
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A	**Legal Authority (IDDE)**						
A1	Does the permittee have laws/rules/regulations/policies to prohibit illicit discharges and dumping to the MS4?						
A2	What exclusions are included in laws/rules/regulations/policies?						
A3	What enforcement mechanisms are authorized in the event of an illicit discharge being detected?						
A4	Has an enforcement escalation plan been developed?						
B	**Mapping (IDDE)**						
B1	Does the permittee have a map showing storm drain pipes, outfalls, and storm drain inlets?						
B2	Is the map readily available to the personnel who would respond to an illicit discharge incident?						
B3	Does the permittee have a map of the storm drain system showing the locations of outfalls and municipally maintained structural stormwater controls?						
C	**Field Screening (IDDE)**						
C1	How are field screening areas identified?						
C2	Are areas of the MS4 prioritized based on incidents of illicit discharges, land use, dumping reports, etc.?						
C3	How often are field screening areas evaluated?						
C4	Are outfalls inspected during dry weather to identify any potential dry-weather discharges? What does the inspection include?						
C5	If dry-weather flows are present, are they being sampled to determine potential sources of pollutants? For what parameters?						
C6	Does the permittee have a database (or other method) to track locations of illicit discharges, spills, and illegal dumping?						
C7	Does the database track dry-weather monitoring or screening data?						
D	**Investigation of Potential Illicit Discharges (IDDE)**						
D1	Does the permittee have a procedure for tracing the source of an active illicit discharge?						
D2	Who performs the investigations?						
D3	Are these procedures written in a document or plan?						
D4	What equipment does the permittee use to find illicit discharges?						
D5	Does the permittee have equipment to videotape storm drains, or can it quickly contract out this work?						
D6	How are investigations tracked?						
D7	Has an enforcement response plan been adopted for use when an illicit discharge source has been located?						
E	**Spill Response and Prevention (IDDE)**						
E1	Does the permittee have a clear set of procedures in place that details who is responsible for responding to spills and emergency situations?						
E2	Do field staff have spill containment supplies in their vehicles, and are they trained to contain minor spills?						

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E3	Is a contractor or other entity available for larger spills?						
E4	Does the permittee have the ability to collect cleanup and abatement costs from the responsible party?						
E5	How are spills and spill response tracked to ensure adequate reporting?						
F	**Public Awareness and Reporting Program (IDDE)**						
F1	Does the permittee prioritize subwatersheds or neighborhoods and assign resources for educational efforts based on frequency and types of illicit discharge incidents?						
F2	Is there a general phone number or “hotline” in the phone book or Web site that people can call to report a spill or dumping?						
F3	What types of public outreach materials are available to publicize public reporting?						
F4	Does the permittee track the number of public calls or complaints reporting illicit discharges?						
G	**Preventing Sanitary Sewer Discharges (IDDE)**						
G1	Has the permittee conducted any studies or evaluations to determine whether sanitary sewers are contributing pollutants to the MS4?						
G2	What is the extent of infiltration and inflow into the sanitary sewer system? How is this impacting discharge from the MS4?						
G3	If the permittee also operates a sanitary sewer system, do they have procedures to prevent sewage spills and SSOs to the MS4?						
H	**Education and Training (IDDE)**						
H1	What type of training do field staff (e.g., storm sewer maintenance crews, street sweepers) receive on spill response and IDDE?						
H2	Are staff generally educated about what illicit discharges are and how to report them?						
I	**Legal Authority (I/C)**						
I1	Does the Phase I permittee have the authority to require industrial and commercial facilities to implement stormwater BMPs?						
I2	Does the Phase I permittee have the authority to conduct inspections and enforce requirements?						
I3	What laws/rules/regulations/policies provide this legal authority?						
I4	What types of facilities are covered under this legal authority?						
I5	Who (e.g., specific staff, Division/District, etc.) has the authority to enforce the laws/rules/regulations/policies and/or inspect the facilities?						
I6	What exemptions do the laws/rules/regulations/policies or other legal authority allow?						
J	**Facility Inventory (I/C)**						
J1	Has the permittee completed an inventory of industrial/commercial facilities discharging to the stormwater system?						
J2	What types of facilities are included on the inventory?						
J3	What sources were used to create the inventory?						
J3A	Facilities that filed NOIs for EPA MSGP or state industrial general permit coverage?						
J3B	Significant industrial users within the pretreatment program?						

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J3C	Business licenses?						
J3D	Phone book?						
J3E	"Windshield" survey?						
J4	Does the inventory include all the industrial/commercial facilities subject to the industrial general permit?						
J5	Does the permittee periodically check to see if new facilities that must be covered by an industrial stormwater general permit have filed an NOI?						
J6	What is the process for notifying the permitting authority of non-filers?						
J7	If applicable, does the inventory include all the facilities specified as required in the MS4 NPDES permit?						
J8	How is the inventory updated? How often?						
J9	What information is maintained about the facilities?						
J10	How is the inventory maintained and stored?						
J11	Does the permittee prioritize the facilities?						
J12	Is the prioritization based on facility type, past inspection or enforcement results, proximity to receiving waters, potential pollutant sources on-site, and so forth?						
J13	Is the prioritization used to determine frequency of inspections?						
J14	Has the permittee mapped the locations of prioritized facilities to cross-reference reports of dumping, illicit discharges, or other water quality issues?						
K	**Standards, BMPs and Outreach (I/C)**						
K1	Has the permittee adopted standards or BMPs that industrial/commercial facilities are required to implement (e.g., all car dealerships must install a wash rack plumbed to the sanitary sewer)?						
K2	Are the requirements for new developments only or are they triggered by improvements of existing facilities? Are there schedules for implementing retrofits?						
K3	Are these standards applicable to existing facilities, new facilities, or both?						
K4	Does the permittee refer facility operators to specific stormwater BMP or standards guidance documents?						
K5	What type of educational program has been developed for industrial and commercial facility operators?						
K6	What type of brochures, handouts, or guidance on BMPs is provided to these facilities by the permittee?						
K7	When is this information provided? During inspections? During training events? During professional organization presentations?						
L	**Staff Training (I/C)**						
L1	What type of training do the industrial and commercial inspectors receive?						
L2	How often?						
L3	If additional inspectors are used (e.g., food safety inspectors for restaurant inspections, pretreatment inspectors), are they trained specifically on stormwater BMPs and requirements? By whom?						

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M	**Inspections (I/C)**						
M1	Who performs inspections and for what types of facilities (e.g., health inspectors for restaurants, pretreatment inspectors for industrial facilities with a pretreatment permit)						
M2	How often are industrial and commercial facilities inspected? How is the frequency determined?						
M3	Does the permittee's industrial/commercial inspector(s) use a standard checklist during inspections?						
M4	Is a report written after the inspection? How is the inspection documented in the file?						
M5	Does the permittee verify NPDES permit coverage for facilities?						
M6	For industrial facilities, does the inspector review the SWPPP and monitoring data during the inspection?						
M7	Does the permittee refer non-filers to the permitting authority?						
M8	Do inspectors provide educational materials during inspections? What types?						
M9	If multiple Divisions/Districts perform inspections, how is information transferred or cataloged?						
N	**Program Support and Resources (I/C)**						
N1	Does the program have a dedicated source of funding to support inspectors?						
O	**Enforcement (I/C)**						
O1	In instances of noncompliance, do the inspection staff use a formalized, approved enforcement escalation procedure?						
O2	How was the enforcement escalation procedure developed? Is it used? Is it effective?						
O3	Who is authorized to apply various enforcement procedures (e.g., NOVs, fines)?						
O4	What types of penalties are readily available to the inspection staff?						
O5	What is the most common method of gaining compliance (e.g., NOVs, fines, abatement)?						
O6	Can the permittee describe a recent non-compliance issue at an industrial/commercial facility? If so, how was compliance achieved?						
O7	At what point are non-compliance cases referred to the NPDES permitting authority? How many have been referred in the last 12 months?						
P	**Consent Decree Questions**						
P1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
P1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
P2a	Have deficiencies or potential violations been identified?						
P2b	What are recommendations for correcting these deficiencies or potential violations?						
P3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
P4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
P5	If best practices cannot be universally implemented, what are the identified impediments?						

B5: PEAR #5 – Pollution Prevention / Good Housekeeping Program

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A	**Infrastructure Mapping and Characterization**						
A1	Does the permittee have a map showing all inlets, outfalls, storm drain conduits, stormwater management facilities, and receiving water bodies?						
A2	Does this map include catch basins and structural stormwater controls?						
A3	Is the map readily available and used by maintenance field staff when performing maintenance activities?						
A4	Is the map in hard copy format only or is it also in a geographic information system (GIS)?						
A5	Are infrastructure assets or components named or numbered to better track necessary maintenance and repairs?						
A6	Is information regarding stormwater infrastructure maintained in a database or mapping system? What types of data are maintained?						
A6a	Type of structure or asset						
A6b	Location (address, latitude/longitude)						
A6c	Photo						
A6d	Date built						
A6e	Date last inspected						
A6f	Date last cleaned/maintained						
B	**Catch Basin Cleaning**						
B1	Does the permittee have a schedule for routine maintenance or cleaning of catch basins?						
B1a	How many are cleaned and how often?						
B1b	Has the permittee targeted certain areas for more frequent maintenance?						
B1c	Does the permittee set goals for how many basins are inspected and cleaned each year?						
B1d	How does the permittee track and record cleaning and maintenance needs?						
B1e	What information is documented? Does the permittee track which catch basins are cleaned, how much material is removed, and so forth?						
B1f	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency? Are they used to identify areas for targeted outreach?						
B2	What are the permittee's procedures for disposing of waste removed from catch basins or storm drains?						
B2a	Does the permittee flush material that could potentially discharge to surface water?						
B2b	If the material is removed using a wet vacuum, how is the material dewatered? How is the decanted water disposed?						
B3	Does the permittee have a schedule for routine maintenance or inspection of storm drain pipes?						
B4	What are the permittee's maintenance procedures for cleaning clogged storm drain pipes?						
C	**Stormwater Management Structures**						
C1	Are catch basins and other inlet structures marked so that the public knows they drain to surface waters?						

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C2	Has the permittee inventoried the type and location of public stormwater management structures in its jurisdiction? How are the data collected and stored?						
C2a	Pump stations						
C2b	Drainage structures (debris basins, detention basins, regional ponds, etc.)						
C2c	Structural treatment controls						
C2d	Open channels						
C3	How is vegetation maintained in grassed swales, rain gardens, pond perimeters, and other vegetated stormwater controls?						
C4	Has the permittee mapped private stormwater management structures?						
C5	How often are these facilities inspected?						
C6	Are the stormwater management structures regularly maintained by the permittee?						
C6a	Are records kept of material and debris removed during maintenance?						
C6b	How is maintenance conducted? Are chemicals used to maintain vegetation and pests?						
C7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency? Are they used to identify areas for targeted outreach based on type and volume of materials removed?						
D	**Street Sweeping**						
D1	Does the permittee regularly sweep streets? Public parking lots?						
D2	What is the schedule for street sweeping?						
D3	Are areas scheduled for sweeping based on aesthetics only or is consideration given for reducing impacts on the stormwater management infrastructure and surface water?						
D4	What types of sweepers are used? Wet or dry?						
D5	How is street-sweeping debris disposed? If the debris is dewatered, how is this done? How is the decanted water disposed?						
D6	Are records kept of the amount of debris collected?						
D7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize cleaning frequency?						
E	**Public Streets, Roads and Highway Maintenance**						
E1	What types of public streets, roads, and highways operation and maintenance practices and procedures are performed by the permittee?						
E2	Are BMPs used by field crews to minimize stormwater impacts during road maintenance or repair activities?						
E3	What types of BMPs are used? Discuss BMPs used for such activities as:						
E3a	Ditch cleaning						
E3b	Sidewalk repair						
E3c	Asphalt patching						
E3d	Curb and gutter repair						
E3e	Street striping						

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E3f	Sign painting						
E3g	Maintaining dirt and gravel roads (preventing erosion, dust control)						
F	**Facility Inventory**						
F1	Does the permittee have an inventory of public facilities? At a minimum, this list should include the following, as applicable:						
F1a	Public works yards						
F1b	Public transit facilities						
F1c	Wastewater and domestic water treatment plants						
F1d	Sanitary sewer system overflow locations						
F1e	Public parks/open areas						
F1f	Public parking lots						
F1g	Public buildings						
F1h	Landfills and hazardous waste disposal sites, transfer locations, or storage facilities						
F2	Have the facilities been inspected and assessed for water quality impacts?						
F3	Are any facilities required to apply for coverage under a general industrial permit? Do these facilities have SWPPPs?						
G	**Chemical and Hazardous Material Use and Disposal**						
G1	What types of chemicals or hazardous materials are used by the permittee?						
G2	Where are these materials stored?						
G3	Has the permittee implemented an alternative materials program to reduce the use of hazardous materials?						
G4	Has the permittee implemented an inventory reduction program to reduce the quantity of chemicals and hazardous materials stored and used?						
G5	Does the permittee have a household hazardous waste collection center for the public?						
G5a	Are records of the quantity of materials collected maintained by type of material?						
G5b	How does the permittee notify the public of these sites?						
G6	Does the permittee have special household hazardous waste collection days?						
G7	How does the permittee use the data collected to further its program or evaluate program effectiveness? Are the data used to help prioritize maintenance frequency? Are they used to identify areas of targeted outreach?						
H	**Pesticide, Herbicide and Fertilizer Application and Management**						
H1	What kind of program has been established to address pollutants associated with the application of pesticides, herbicides, and fertilizer at public facilities?						
H2	Are the permittee's fertilizer/pesticide applicators certified? Are permits or other certifications required?						
H3	Where are the chemicals stored? Are appropriate procedures and secondary containment followed?						
H4	Is there a pesticide/fertilizer application plan?						
H5	Does the permittee practice integrated pest management (IPM) or use alternatives to pesticides?						

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H6	How does the permittee implement alternative landscaping to minimize the use of fertilizers and pesticides?						
H7	What types of educational activities does the permittee conduct for applicators?						
H8	What types of BMPs are used during application of pesticides in public rights-of-way?						
H9	What types of BMPs are used during application of pesticides at municipal facilities such as parks?						
I	**Municipal Staff**						
I1	Have standard operating procedures or their equivalent been developed to ensure that municipal field staff integrate stormwater quality BMPs into their daily activities?						
I2	Have BMPs or standards been officially adopted by the permittee for use by municipal field staff?						
I3	What reference materials or guidance documents are provided to field staff regarding BMP specifications and details?						
I4	How does the permittee ensure that staff are fulfilling their responsibilities as outlined in standard operating procedures? Do managers provide oversight on a regular basis?						
J	**Contracted Services Staff**						
J1	Does the permittee require contractors to incorporate stormwater quality BMPs into their activities?						
J2	How are BMPs required? Are the requirements outlined in requests for proposals? Are they included in contracts?						
J3	Have BMPs or standards been officially adopted by the permittee for use by contractual staff?						
J4	What reference materials or guidance documents are provided to contractual staff regarding BMP specifications and details?						
J5	How does the permittee ensure that contractors are fulfilling their responsibilities as outlined in their contracts? Are inspections performed? Are periodic reports submitted?						
K	**Training and Education**						
K1	What type of general stormwater training is provided to staff that are not involved in field activities? How often?						
K2	How are new employees trained?						
K3	What types of activity-specific training is provided to field staff? Is information on specific BMPs provided?						
K4	Is any training provided to contract staff?						
L	**Consent Decree Questions**						
L1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
L1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
L2a	Have deficiencies or potential violations been identified?						
L2b	What are recommendations for correcting these deficiencies or potential violations?						
L3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						

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L4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
L5	If best practices cannot be universally implemented, what are the identified impediments?						

B6: PEAR #6 – Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

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A	**SWMP Planning Documents**						
A1	Has a SWMP Plan been developed? If so, when? Last revised?						
A2	Is there a schedule for revision of the SWMP plan?						
A3	Is there an additional MS4-wide document, plan, or program? Who developed it?						
A4	How were internal and external stakeholders included in the development or revision of the SWMP plan?						
B	**Staff Inventory and Organization**						
B1	Does the permittee have a person designated to lead and coordinate the stormwater program and activities?						
B2	Does the SWMP planning document include an organization chart listing responsible parties for each SWMP component?						
C	**Performance Standards or Goals**						
C1	Has the permittee established measurable goals or performance standards for program components?						
C2	If performance standards have been established, are they measurable or are they essentially BMP recommendations with level of service (i.e., number of miles swept) requirements?						
C3	Does the permittee attempt to quantify or assess a program or a BMP's water quality impact or effectiveness as opposed to merely tracking level of service?						
D	**Prioritization of Resources**						
D1	Has the permittee identified specific pollutants of concern for its local water bodies?						
D2	Are these pollutants of concern consistent with priorities identified in the 303(d)-listed impairments for local water bodies?						
D3	Are these pollutants of concern consistent with any water quality monitoring data or studies conducted by the permittee or another agency?						
D4	Has the permittee developed strategies to specifically address those pollutants?						
D5	How does the permittee decide on program priorities? Are these reassessed periodically?						
D6	Does the SWMP include a schedule of activities?						
D7	Does the MS4 discharge to a water body on the state's list of impaired waters?						
D7a	What pollutants are identified on the list?						
D7b	Has stormwater been identified as a source?						
D7c	Does the SWMP specifically address this pollutant?						
D7d	Does the SWMP identify BMPs specifically for sources or discharges to the listed water body						
D8	Has a TMDL been developed for a water body to which the MS4 discharges and for which stormwater has been identified as a pollutant source?						
D8a	What pollutants are addressed in the TMDL?						
D8b	Does the TMDL specifically address (or include wasteload allocations for) stormwater?						
D8c	Has the corrective action plan or other planning to address TMDLs been reviewed for integration with the SWMP?						

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D8d	Does the permittee's stormwater program address the pollutants of concern identified in the TMDL?						
D9	Is the permittee participating in any watershed planning efforts?						
D10	Have any goals been developed based on watershed issues, strategies, or challenges?						
D11	Has the permittee established a set of indicators or parameters to assess progress toward meeting the goal(s) of the watershed plan?						
D12	Is the permittee's stormwater program implemented on a watershed basis?						
E	**Assessment and Evaluation of Programs**						
E1	Does the permittee regularly measure progress against the established performance standards and goals?						
E2	Are the goals quantifiable?						
E3	Is the permittee analyzing data in the annual report to identify program activities that may need to change to address problem areas?						
E4	Has the SWMP been altered based on this evaluation?						
F	**Assessment and Evaluation of BMPs**						
F1	Is the permittee able to track both structural BMPs and non-structural BMPs and activities?						
F2	Has the permittee set measurable goals or performance standards to evaluate individual BMPs and activities or suites of BMPs that address a particular pollutant source?						
F3	Is there a process to evaluate or revise individual BMPs and suites of BMPs when receiving water outcomes or endpoints are not being met?						
F4	Do assessments evaluate impacts of BMPs on ground water?						
F5	Is the permittee analyzing data in the annual report to identify individual BMPs or suites of BMPs that may need to change to address problem areas?						
G	**Assessment and Evaluation of Water Quality**						
G1	Has the permittee documented environmental, water quality, stream corridor, habitat, or other types of improvements?						
G2	Has the permittee estimated reductions in pollutant loadings from the MS4 or other quantifiable water quality benefits expected as the result of the municipal stormwater program?						
H	**Dry & Wet Weather Outfall Screening and Monitoring (If Applicable)**						
H1	Does the permittee conduct dry or wet weather screening at outfalls to characterize stormwater flows from the MS4?						
H2	Does the permittee have written screening procedures?						
H3	What is the permittee's schedule for screening the sites?						
H4	Are parts of the permit area prioritized for screening based on incidents of illicit discharges, land use, dumping reports, etc.?						
H5	What parameters are being tested?						
H6	How does the permittee prioritize sites for follow-up (e.g., magnitude and nature of suspected discharge)?						

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H7	Who conducts the sampling? What kind of training have sampling personnel received?						
H8	What type of records are kept?						
H8a	Analytical results						
H8b	Date and duration (in hours) of the storm events sampled (rainfall data)						
H8c	Rainfall measurements or estimates (in inches) of the storm event which generated the sampled runoff (rainfall data)						
H8d	Duration (in hours) of the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (rainfall data)						
H8e	Estimate of the total flow of the discharge sampled (stage and velocity)						
H9	What analytical methods are used (i.e., 40 CFR Part 136)?						
H10	What are the results of the initial sampling and analysis?						
H11	Has the permittee made any changes to the monitoring program based on past results and experience?						
H12	How have monitoring results been used to assess program components?						
H13	Are monitoring data used to estimate pollutant loads for a TMDL?						
I	**Biological Monitoring (If Applicable)**						
I1	Does the permittee perform biological sampling?						
I2	Has a plan been developed to conduct biological sampling? If so, does the plan include the following:						
I2a	Identification of sampling stations and rationale for selection						
I2b	Location of known major MS4 outfalls discharging to water bodies in which sampling stations were chosen						
I2c	Land use activities near sampling stations						
I2d	Frequency of monitoring						
I3	Who conducts biological sampling and what training have they received?						
I4	Has the permittee made any changes to the monitoring program based on past results and experience?						
I5	How have monitoring results been used to assess program components?						
J	**Ambient Monitoring (If Applicable)**						
J1	Does the permittee conduct ambient monitoring to characterize water quality conditions in receiving waters?						
J2	How were the sampling sites selected?						
J3	Is sampling conducted both during dry weather and wet weather?						
J4	What is the frequency of sampling?						
J5	What parameters are analyzed? What sampling and analytical methods have been used?						
J6	Does the permittee have a written protocol or procedures for this sampling program?						
J7	Who conducts the sampling and what training have they received?						
J8	Has the permittee made any changes to the monitoring program based on past results and experience?						

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J9	How have monitoring results been used to assess program components?						
J10	Are monitoring data used to estimate pollutant loads for a TMDL?						
K	**Data Collection and Reporting**						
K1	What reporting requirements are included in the MS4 NPDES permit?						
K2	For co-permittees or Phase II permittees that rely on other entities to implement required elements of the program, how are data provided or reported?						
K3	How are the required data collected, tracked, and reported?						
K3a	Is there a database?						
K3b	Are there reporting forms?						
K4	Are there internal reporting deadlines within the municipal program structure?						
K5	Are the appropriate data being collected by the permittee to be able to measure effectiveness and determine if performance standards are being met?						
K6	How are data disseminated to those who use them, if at all?						
L	**Consent Decree Questions**						
L1a	Have activities been identified that may be outmoded, ineffective, insufficient, or excessively burdensome?						
L1b	What are recommendations to modify, streamline, or expand such activities in accordance with what has been learned?						
L2a	Have deficiencies or potential violations been identified?						
L2b	What are recommendations for correcting these deficiencies or potential violations?						
L3	Have best practices and opportunities for information/technology transfer to be applied across all Divisions been identified? If so, describe.						
L4	Can identified best practices be universally implemented across all three Divisions? Why or why not?						
L5	If best practices cannot be universally implemented, what are the identified impediments?						

Appendix C

PEAR 1 through 6 Schedule

C1: PEAR #1 – Schedule for Post-Construction / Permanent Best Management Practices

Appendix C1: Schedule for PEAR #1 – Post-Construction / Permanent Best Management Practices

1. Notice of Audit

- Within 7 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 22 March 2017

2. Records Request

- Within 14 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 29 March 2017

3. Fulfillment of Records Request

- Within 43 Days of AWPC
- Within 29 Days of Last Milestone
- By Thursday 27 April 2017

4. Records Review Complete

- Within 57 Days of AWPC
- Within 14 Days of Last Milestone
- By Thursday 11 May 2017

5. Pre-Onsite Evaluation Conference Call

- Within 64 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 18 May 2017

6. Completion of Onsite Evaluation

- Within 82 Days of AWPC
- Within 18 Days of Last Milestone
- By Monday 5 June 2017

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C1: Schedule for PEAR #1 – Post-Construction / Permanent Best Management Practices

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
76 Days After AWPC Tuesday 30 May 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* OGG CONRAC, location tentative *BMP 2:* Wash rack, location tentative [An additional BMP will be inspected only if one is installed by this time] **11am – 12pm** Debrief Meeting [See Note (c)]	77 Days After AWPC Wednesday 31 May 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* Pervious pavement and bioswale systems, NDWP New Employee Parking Lots at Elliott St. *BMP 2:* Contech CDS 2025 System and FloGuard drop inlet filtration insert, NDWP Diamondhead Site Improvements, GSE Lot fronting Hardstand 3 *BMP 3:* Bioswale system, Kalewa St Storage Lots 1-6, Corner of Lagoon and Kalewa St. **11am – 12pm** Debrief Meeting [See Note (c)]	79 Days After AWPC Friday 2 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1*: Alaska Marine Lines, Pier 29 *BMP 2:* Matson Auto Facility, Pier 32 *BMP 3:* HC&D Facility, Pier 60 Replaced with UH Marine Center Pier 35, per 4-18-17 Call with Spencer Yim **11am – 12pm** Debrief Meeting [See Note (c)]	82 Days After AWPC Monday 5 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* GLP Asphalt Facility [Additional BMPs will be inspected only if they are installed by this time] Spencer Yim confirmed via phone on 4-18-17 that no additional BMPs have been installed. **11am – 12pm** Debrief Meeting [See Note (c)]	76 Days After AWPC Tuesday 30 May 2017 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] [BMPs will be inspected only if they are installed by this time] See Records Request. No BMPs to inspect. Meeting only. **4pm – 5pm** Debrief Meeting [See Note (c)]	78 Days After AWPC Thursday 1 June 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *BMP 1:* University Ave. Bioswales, In median of H-1 ramps to University Ave. on makai side of freeway *BMP 2:* Fort Weaver Rd. CDS Units, Fort Weaver Rd., Ewa *BMP 3:* Luluku Storm Water Treatment System, H-3/Likelike interchange, Kaneohe **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) The Audit Team will then verify that up to three (3) structural and source control BMPs approved by each permittee and subject to post-construction requirements were installed and are being maintained properly in the field. Approved plans and inspection records for each BMP will have been reviewed ahead of the onsite evaluation (during the records review period). The BMPs identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 90 Days of AWPC
- **Consent Decree Deadline:** Within 90 Days of AWPC
- Within 8 Days of Last Milestone
- By Tuesday 13 June 2017

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 135 Days of AWPC
- **Consent Decree Deadline:** Within 135 Days of AWPC
- Within 45 Days of Last Milestone
- By Friday 28 July 2017

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 162 Days of AWPC
- Within 27 Days of Last Milestone
- By Thursday 24 August 2017

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 163 Days of AWPC[1]
- **Consent Decree Deadline:** Within 165 Days of AWPC
- Within 1 Days of Last Milestone
- By Friday 25 August 2017

11. Completion of Final PEAR

- Within 183 Days of AWPC[2]
- **Consent Decree Deadline:** 210 Days of AWPC
- Within 20 Days of Last Milestone
- By Thursday 14 September 2017

[1] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.
[2] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C2: PEAR #2 – Schedule for Construction Site Runoff Control

1. Notice of Audit

- Within 190 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 21 September 2017

2. Records Request

- Within 197 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 28 September 2017

3. Fulfillment of Records Request

- Within 226 Days of AWPC
- Within 29 Days of Last Milestone
- By Friday 27 October 2017

4. Records Review Complete

- Within 239 Days of AWPC
- Within 13 Days of Last Milestone
- By Thursday 9 November 2017

5. Pre-Onsite Evaluation Conference Call

- Within 246 Days of AWPC
- Within 7 Days of Last Milestone
- By Thursday 16 November 2017

6. Completion of Onsite Evaluation

- Within 261 Days of AWPC
- Within 15 Days of Last Milestone
- By Friday 1 December 2017

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C2: Schedule for PEAR #2 - Construction Site Runoff Control

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
257 Days After AWPC Monday 27 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* OGG Consolidated Rent A Car Facility, Kahului Airport, Near Hemaloa St and Keolani Pl. *Construction Site #2:* OGG Vehicle Washrack Installation, AOA side, Near Cargo Building and Triturator **11am – 12pm** Debrief Meeting [See Note (c)]	258 Days After AWPC Tuesday 28 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* HNL Consolidated Rent A Car Facility, Rent-A-Car Lots, Corner of Aolele, Rodgers, Paiea St. *Construction Site #2:* HNL NDWP IIT Mauka Extension, Mauka Interisland Terminal, Existing Commuter Air Terminal **11am – 12pm** Debrief Meeting [See Note (c)]	260 Days After AWPC Thursday 30 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Construction Site #1:* New Kapalama Container Yard, Kapalama, Honolulu Harbor *Construction Site #2:* Piers 24-29 Utilities **11am – 12pm** Debrief Meeting [See Note (c)]	261 Days After AWPC Friday 1 December 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] [Unable to forecast construction projects; will be re-contacted by Kennedy/Jenks Consultants closer to the date] **11am – 12pm** Debrief Meeting [See Note (c)]	257 Days After AWPC Monday 27 November 2017 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] *Construction Site #1:* Kuihelani Highway Resurfacing [An additional construction site will be inspected only if one is active at this time] **4pm – 5pm** Debrief Meeting [See Note (c)]	259 Days After AWPC Wednesday 29 November 2017 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] [Unable to forecast construction projects; will be re-contacted by Kennedy/Jenks Consultants closer to the date] **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) The Audit Team will then accompany construction inspectors as they conduct up to two (2) inspections. The purpose of the field evaluation is to assess the permittee's construction inspection program—how knowledgeable the inspectors are about stormwater requirements and BMPs, how thorough of an inspection they conduct, and how they handle problems identified at construction sites. The construction sites identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 268 Days of AWPC[1]
- **Consent Decree Deadline:** Within 270 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 8 December 2017

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 313 Days of AWPC[2]
- **Consent Decree Deadline:** Within 315 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 22 January 2018

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM

- Within 338 Days of AWPC
- Within 25 Days of Last Milestone
- By Friday 16 February 2018

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM

- Within 342 Days of AWPC[2]
- **Consent Decree Deadline:** Within 345 Days of AWPC
- Within 4 Days of Last Milestone
- By Tuesday 20 February 2018

11. Completion of Final PEAR

- Within 362 Days of AWPC[3]
- **Consent Decree Deadline:** 390 Days of AWPC
- Within 20 Days of Last Milestone
- By Monday 12 March 2018

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[1] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.
[2] The deadline is ahead of the CD Deadline due to the required shift in the #7 deadline.
[3] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C3: PEAR #3 – Schedule for Public Outreach / Public Involvement

Appendix C3: Schedule for PEAR #3 - Public Outreach / Public Involvement Program

1. Notice of Audit

- Within 369 Days of AWPC
- Within 7 Days of Last Milestone
- By Monday 19 March 2018

2. Records Request

- Within 377 Days of AWPC
- Within 8 Days of Last Milestone
- By Tuesday 27 March 2018

3. Fulfillment of Records Request

- Within 420 Days of AWPC
- Within 43 Days of Last Milestone
- By Wednesday 9 May 2018

4. Records Review Complete

- Within 450 Days of AWPC
- **Consent Decree Deadline:** Within 450 Days of AWPC
- Within 30 Days of Last Milestone
- By Friday 8 June 2018

For this Program Element, the end of the records review period represents the completion of evaluation. No onsite evaluation will occur for this program element. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators may be conducted during the records review period. If requested by the Audit Team or MS4 Permit Coordinator, an in-person meeting may be scheduled during this period.

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.	Between 19 March 2018 and 8 June 2018, conference calls and in-person meetings will be scheduled as needed.

5. – 7. Not Applicable (See #4)

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 495 Days of AWPC
- **Consent Decree Deadline:** Within 495 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 23 July 2018

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 523 Days of AWPC
- Within 28 Days of Last Milestone
- By Monday 20 August 2018

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 525 Days of AWPC
- **Consent Decree Deadline:** Within 525 Days of AWPC
- Within 2 Days of Last Milestone
- By Wednesday 22 August 2018

11. Completion of Final PEAR

- Within 545 Days of AWPC[1]
- **Consent Decree Deadline:** 570 Days of AWPC
- Within 20 Days of Last Milestone
- By Tuesday 11 September 2018

[1] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C4: PEAR #4 – Schedule for Illicit Discharge Detection and Elimination (IDDE) Program Element and Industrial Commercial Activities/Tenant (I/C) Program

Appendix C4: Schedule for PEAR #4 - Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program

1. Notice of Audit

- Within 552 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 18 September 2018

2. Records Request

- Within 559 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 25 September 2018

3. Fulfillment of Records Request

- Within 583 Days of AWPC
- Within 24 Days of Last Milestone
- By Friday 19 October 2018

4. Records Review Complete

- Within 597 Days of AWPC
- Within 14 Days of Last Milestone
- By Friday 2 November 2018

5. Pre-Onsite Evaluation Conference Call

- Within 604 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 9 November 2018

6. Completion of Onsite Evaluation

- Within 623 Days of AWPC
- Within 19 Days of Last Milestone
- By Wednesday 28 November 2018

The table below provides a preliminary schedule for the onsite evaluation period.

Appendix C4: Schedule for PEAR #4 - Illicit Discharge Detection and Elimination Program Element and Industrial Commercial Activities/Tenant Program

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
614 Days After AWPC Monday 19 November 2018	616 Days After AWPC Wednesday 21 November 2018	621 Days After AWPC Monday 26 November 2018	622 Days After AWPC Tuesday 27 November 2018	615 Days After AWPC Tuesday 20 November 2018	623 Days After AWPC Wednesday 28 November 2018
8am – 9am IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]	**8am – 9am** IDDE Kickoff Meeting [See Note (a)]
9am – 11am IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]	**9am – 11am** IDDE Onsite Evaluation [See Note (b)]
Outfall #1: Near baseyard, Keolani Place *Outfall #2:* Sampling #G, Basin G	*Outfall #1:* Near Iolana Place, Off Lagoon Drive *Outfall #2:* Aolewa Place, Near Access A	*Outfall #1:* SDDH035050, Pier 38 *Outfall #2:* SDDH0517960, Pier 51	*Outfall #1:* SDDBP043660, Pier P-4 [Outfall #1 is the only accessible outfall at this harbor, due to safety concerns]	*Outfall #1:* Outlet No. 1 *Outfall #2:* DP3	*Outfall #1:* PID 304162 Jarrett White Rd., north of Mahiole St., *Outfall #2:* PID 301831, Kaahele St., north of Moanalua Rd.
11am – 12pm IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]	**11am – 12pm** IDDE Debrief Meeting [See Note (d)]
12pm – 1pm LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH	**12pm – 1pm** LUNCH
1pm – 2pm I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]	[I/C Program not evaluated, as Maui Highways does not have an I/C Program]	**1pm – 2pm** I/C Kickoff Meeting [See Note (a)]
2pm – 4pm I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]	**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]		**2pm – 4pm** I/C Onsite Evaluation [See Note (c)]
I/C Facility #1: UPS, 9682 Hemaloa Pl. *I/C Facility #2:* ASIC-HFFC, 761 Kaonawai Pl.	*I/C Facility #1:* UPS, 128 Mokuea Pl. *I/C Facility #2:* United Airlines, 110 Lauhoe Pl.	*I/C Facility #1:* Young Brothers Maintenance Facility, Pier 39 *I/C Facility #2:* Matson Maintenance Facility, Piers 52-53	*I/C Facility #1:* Marisco *I/C Facility #2:* Grace Pacific		*I/C Facility #1:* First Hawaiian Bank, 94-205 Leoku St., Waipahu, HI *I/C Facility #2:* CM Recycling, 204 Sand Island Access Rd., Honolulu, HI
4pm – 5pm I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]	**4pm – 5pm** I/C Debrief Meeting [See Note (d)]		**4pm – 5pm** I/C Debrief Meeting [See Note (d)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meetings. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) Illicit Discharge Detection and Elimination (IDDE) Program: The Audit Team will accompany inspectors in the field as they conduct up to two (2) dry-weather outfall screenings. The outfalls identified in this Appendix are preliminary and are subject to modification.

(c) Industrial/Commercial (I/C) Program: The Audit Team will accompany inspectors in the field as they inspect up to two (2) industrial/commercial facilities. The facilities identified in this Appendix are preliminary and are subject to modification.

(d) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period
- Within 630 Days of AWPC
- **Consent Decree Deadline:** Within 630 Days of AWPC
- Within 7 Days of Last Milestone
- By Wednesday 5 December 2018

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators
- Within 674 Days of AWPC[1]
- **Consent Decree Deadline:** Within 675 Days of AWPC
- Within 44 Days of Last Milestone
- By Friday 18 January 2019

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM
- Within 700 Days of AWPC
- Within 26 Days of Last Milestone
- By Wednesday 13 February 2019

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM
- Within 702 Days of AWPC[2]
- **Consent Decree Deadline:** Within 705 Days of AWPC
- Within 2 Days of Last Milestone
- By Friday 15 February 2019

11. Completion of Final PEAR
- Within 723 Days of AWPC[3]
- **Consent Decree Deadline:** 750 Days of AWPC
- Within 21 Days of Last Milestone
- By Friday 8 March 2019

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.
[2] The deadline is ahead of the CD Deadline due to the required shift in the #8 deadline.
[3] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C5: PEAR #5 – Schedule for Pollution Prevention / Good Housekeeping Program

Appendix C5: Schedule for PEAR #5: Pollution Prevention / Good Housekeeping Program

1. Notice of Audit

- Within 730 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 15 March 2019

2. Records Request

- Within 737 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 22 March 2019

3. Fulfillment of Records Request

- Within 762 Days of AWPC
- Within 25 Days of Last Milestone
- By Tuesday 16 April 2019

4. Records Review Complete

- Within 776 Days of AWPC
- Within 14 Days of Last Milestone
- By Tuesday 30 April 2019

5. Pre-Onsite Evaluation Conference Call

- Within 783 Days of AWPC
- Within 7 Days of Last Milestone
- By Tuesday 7 May 2019

6. Completion of Onsite Evaluation

- Within 800 Days of AWPC
- Within 17 Days of Last Milestone
- By Friday 24 May 2019

The table below provides a preliminary schedule for the onsite evaluation week.

Appendix C5: Schedule for PEAR #5: Pollution Prevention / Good Housekeeping Program

Airports		Harbors		Highways	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
796 Days After AWPC Monday 20 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* OGG Baseyard, Keolani Pl. *Facility #2:* ARFF Station, Onsite **11am – 12pm** Debrief Meeting [See Note (c)]	797 Days After AWPC Tuesday 21 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* HNL Baseyard, 2919 Aolele St. *Facility #2:* Crash Fire Station 2, off Lagoon Drive **11am – 12pm** Debrief Meeting [See Note (c)]	799 Days After AWPC Thursday 23 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Sand Island Baseyard, 48 Sand Island Access Road [DOT-HAR only operates one maintenance facility at Honolulu Harbor] **11am – 12pm** Debrief Meeting [See Note (c)]	800 Days After AWPC Friday 24 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Kalaeloa Storage Facility [DOT-HAR only operates one maintenance facility at Kalaeloa Harbor] **11am – 12pm** Debrief Meeting [See Note (c)]	796 Days After AWPC Monday 20 May 2019 **1pm – 2pm** Kickoff Meeting [See Note (a)] **2pm – 4pm** Onsite Evaluation [See Note (b)] *Facility #1:* HWY-M Kahului Baseyard, 650 Palapapa Dr. *Facility #2:* HAR-M Kahului Harbor, 103 Ala Luina St. **4pm – 5pm** Debrief Meeting [See Note (c)]	798 Days After AWPC Wednesday 22 May 2019 **8am – 9am** Kickoff Meeting [See Note (a)] **9am – 11am** Onsite Evaluation [See Note (b)] *Facility #1:* Kakoi Baseyard, 727 Kakoi St. *Facility #2:* Windward Baseyard, 45-889 Pookela St. **11am – 12pm** Debrief Meeting [See Note (c)]

Notes:
(a) MS4 Permit Coordinators will have the opportunity to present information on their program during the Kickoff Meeting. At least a half hour should be available for MS4 Permit Coordinators (or their designees) to present.

(b) After the Kickoff Meeting, the Audit Team will conduct a walk-through of up to two (2) permittee owned or operated facilities (maintenance yards, chemical storage facilities, etc.) with a facility supervisor and/or other key staff to verify that activities are performed as described in the SWMPP. The facilities identified in this Appendix are preliminary and are subject to modification.

(c) The Debrief Meeting will be limited to discussing any findings that need clarification and any required communication moving forward.

7. End of Post-Onsite Evaluation Review Period

- Within 810 Days of AWPC
- **Consent Decree Deadline:** Within 810 Days of AWPC
- Within 10 Days of Last Milestone
- By Tuesday 3 June 2019

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 855 Days of AWPC
- **Consent Decree Deadline:** Within 855 Days of AWPC
- Within 45 Days of Last Milestone
- By Thursday 18 July 2019

9. Written Request for Clarification and Corrections MS4 Permit Coordinators to HDOT PM

- Within 882 Days of AWPC
- Within 27 Days of Last Milestone
- By Wednesday 14 August 2019

10. Written Request for Clarification and Corrections HDOT PM to Audit PM

- Within 884 Days of AWPC[1]
- **Consent Decree Deadline:** Within 885 Days of AWPC
- Within 2 Day of Last Milestone
- By Friday 16 August 2019

11. Completion of Final PEAR

- Within 905 Days of AWPC[2]
- **Consent Decree Deadline:** 930 Days of AWPC
- Within 21 Days of Last Milestone
- By Friday 6 September 2019

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.
[2] The main Audit Work Plan Section 5.3.3 provides an explanation of why this document is submitted ahead of the CD deadline.

C6: PEAR #6 – Schedule for Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

Appendix C6: Schedule for PEAR #6 - Staffing, Funding, Organizational Structure, Availability of Resources, and Storm Water Program Sustainability

1. Notice of Audit

- Within 912 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 13 September 2019

2. Records Request

- Within 919 Days of AWPC
- Within 7 Days of Last Milestone
- By Friday 20 September 2019

3. Fulfillment of Records Request

- Within 961 Days of AWPC
- Within 42 Days of Last Milestone
- By Friday 1 November 2019

4. Records Review Complete

- Within 989 Days of AWPC[1]
- **Consent Decree Deadline:** Within 990 Days of AWPC
- Within 28 Days of Last Milestone
- By Friday 29 November 2019

For this Program Element, the end of the records review period represents the completion of evaluation. No onsite evaluation will occur for this program element. It is expected that several conference calls between the Audit Team, HDOT PM, and MS4 Permit Coordinators will be conducted during the records review period. If requested by the Audit Team or MS4 Permit Coordinator, an in-person meeting may be scheduled during this period.

Airports		**Harbors**		**Highways**	
Kahului Airport **Small MS4 Permit** **HI 4KE349**	**Honolulu International Airport** **Individual Permit** **HI S000005**	**Honolulu Harbor** **Small MS4 Permit** **HI 03KB482**	**Kalaeloa Barbers Point Harbor** **Small MS4 Permit** **HI 03KB488**	**Maui District** **Small MS4 Permit** **HI 14KE352**	**Oahu District** **Individual Permit** **HI S000001**
Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.	Between 13 September 2019 and 29 November 2019, conference calls and in-person meetings will be scheduled as needed.

5. – 7. Not Applicable (See #4)

[1] This deadline is 1 day ahead of the CD Deadline as the CD Deadline falls on a Saturday.

8. Completion of Draft PEAR & Distribution to MS4 Permit Coordinators

- Within 1034 Days of AWPC[2]
- **Consent Decree Deadline:** Within 1035 Days of AWPC
- Within 45 Days of Last Milestone
- By Monday 13 January 2020

9. Written Request for Clarification and Corrections
MS4 Permit Coordinators to HDOT PM

- Within 1058 Days of AWPC
- Within 24 Days of Last Milestone
- By Thursday 6 February 2019

10. Written Request for Clarification and Corrections
HDOT PM to Audit PM

- Within 1064 Days of AWPC[2]
- **Consent Decree Deadline:** Within 1065 Days of AWPC
- Within 6 Days of Last Milestone
- By Wednesday 12 February 2020

11. Completion of Final PEAR

- Within 1108 Days of AWPC[3]
- **Consent Decree Deadline:** 1110 Days of AWPC
- Within 44 Days of Last Milestone
- By Friday 27 March 2020

[2] The deadline is ahead of the CD Deadline due to the required shift in the #4 deadline.
[3] This deadline is 2 days ahead of the CD Deadline as the CD Deadline falls on a Sunday.

Appendix D

Notices to EPA & DOH

D1: Draft Notice of Potential Violation

State of Hawaii Department of Transportation
MS4 Permit Audit
Draft Notice of Potential Violation

Potential Violation Tracking #: _____

Determination of Potential Violation Date: _____

Potential Violation Notification Date:_____
(Today's Date)

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

_____

_____

_____

_____

_____

_____

_____

Description of Attached Photographs (if applicable):

_____

_____

_____

_____

Applicable Regulatory References

NPDES Permit No.: _____

SWMPP: _____

Hawaii Administrative Rules (HAR): _____

Code of Federal Regulations (CFR):_____

DRAFT

D2: Final Notice of Potential Violation

State of Hawaii Department of Transportation
MS4 Permit Audit
Final Notice of Potential Violation

Potential Violation Tracking #: _____

Determination of Potential Violation Date: _____

Potential Violation Notification Date: _____
(Today's Date)

The Audit Team must submit this notice within 2 business days of determining that a potential violation has occurred.

Potential Violation Narrative Description:

_____
_____
_____
_____
_____
_____
_____

Description of Attached Photographs (if applicable):

_____
_____
_____
_____

Applicable Regulatory References

NPDES Permit No.: _____

SWMPP: _____

Hawaii Administrative Rules (HAR): _____

Code of Federal Regulations (CFR):_____

Result of HDOT PM Review:

- ☐ Confirmed Potential Violation
  - o Email Notice of Corrective Action sent to EPA/DOH on: _____
    (Due Within 14 Calendar Days of Potential Violation Notification Date)
- ☐ Re-categorized as Deficiency
  - o Email Notice sent to EPA/DOH on: _____
- ☐ Summarily Dismissed
  - o Email Notice sent to EPA/DOH on: _____

FINAL

D3: Notice of Corrective Action

State of Hawaii Department of Transportation
MS4 Permit Audit
Notice of Corrective Action

Corrective Action in Response to:

☐ Potential Violation (complete Section A & C)

☐ Deficiency (complete Section B & C)

SECTION A – Corrective Action in Response to Potential Violation

Potential Violation Tracking #:____ Potential Violation Notification Date:_____
(from Notice of Potential Violation Form)

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 14 calendar days of the Potential Violation Notification Date.

SECTION B – Corrective Action in Response to Deficiency

HDOT Receipt of Draft PEAR Date:_____

Corrective Action Notification Date: _____
(Today's Date)

HDOT must submit this notice within 21 calendar days of receiving the relevant Draft PEAR.

SECTION C

Description of Corrective Action

_____

_____

_____

_____

_____

_____

_____

_____

_____

Description of Attached Photographs (if applicable):

_____

_____

_____

_____

_____