Annual Compliance Report 2011

Kalaeloa Barbers Point Harbor, Hawaii

Prepared for

Hawaii Department of Transportation
Harbors Division

Prepared by
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January 2012

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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, I certify that 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."

_____ _____

Signature Date

_____

Authorized Representative of Harbors Division

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LIST OF ACRONYMS AND ABBREVIATIONS

ACR	Annual Compliance Report
BMP	Best Management Practice
CFR	Code of Federal Regulations
CSRCP	Construction Site Runoff Control Program
CWB	Clean Water Branch
EMS	Environmental Management System
HAR	Hawaii Administrative Rules
HAR-EE	Harbors Division Environmental Engineering Section
HAR-OE	Harbors Division Oahu District Enforcement
HDOH	Hawaii Department of Health
HDOT	Hawaii Department of Transportation
Honolulu Tower	Honolulu Harbor Marine Traffic Control Tower
HRS	Hawaii Revised Statutes
IDDE	Illicit Discharge Detection and Elimination
IEP	Inspection and Enforcement Plan
KBPH	Kalaeloa Barbers Point Harbor
LIDS	Low Impact Development Standards
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
NA	Not Applicable
NGPC	Notice of General Permit Coverage
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NSWD	Non-Stormwater Discharge
ORI	Outfall Reconnaissance Inventory
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TBD	To Be Determined
TMK	Tax Map Key

LIST OF ACRONYMS AND ABBREVIATIONS, CONTINUED

TRP	Tenant Revocable Permit
TSI	Tenant Self-Inspection
USEPA	U.S. Environmental Protection Agency
WESTON	Weston Solutions, Inc.

1.0 INTRODUCTION

The Hawaii Department of Transportation (HDOT), Harbors Division has developed this Annual Compliance Report (ACR) for the Hawaii Department of Health (HDOH) in accordance with its Notice of General Permit Coverage (NGPC), permit number HI03KB488. The ACR details activities conducted by Harbors Division to comply with the requirements of its permit and to keep a record of progress toward yearly goals.

The ACR follows the format and organization of the Storm Water Management Plan (SWMP) to facilitate comparison between planned activities and activities that were accomplished. The ACR describes efforts made by Harbors Division to implement the six minimum control measures established by the United States Environmental Protection Agency (USEPA) and as required by the Hawaii Administrative Rules (HAR) 11-55 Appendix K and the NGPC. This report identifies activities completed during calendar year 2011 and presents areas that will be addressed in calendar year 2012. The following is included in this ACR:

- ✓ Status of Compliance;
- ✓ Assessment of the SWMP minimum control measures:
  - Public outreach and education,
  - Public involvement/participation,
  - Illicit discharge detection and elimination,
  - Construction site runoff control,
  - Post-construction stormwater management in new development and redevelopment;
  - Pollution prevention/good housekeeping;
- ✓ Modifications to the SWMP;
- ✓ Summary of Planned Activities;
- ✓ Modifications to the Small Municipal Separate Storm Sewer System (MS4); and

1.1 APPLICABLE REGULATIONS

It is the intention of HDOT Harbors that this ACR demonstrates compliance with the following regulations listed in the NGPC:

- ✓ HAR, Chapter 11-55, Appendix K, National Pollutant Discharge Elimination System (NPDES) General Permit Authorizing Discharges of Storm Water and Certain Non-Storm Water Discharges from Small Municipal Separate Storm Sewer Systems;
- ✓ HAR, Chapter 11-55, Appendix A, HDOH, Standard General Permit Conditions; and

- ✓ HAR, Sections 11-55-34.04(a), 11-55-34.07, 11-55-34.11, 11-55-34.12, and any other applicable Sections of HAR, Chapter 11-55.

1.2 STATUS OF COMPLIANCE

HAR Chapter 11-55 Appendix K authorizes discharges of storm water and certain non-stormwater discharges from small MS4s. Prior NGPC for the storm drain system was granted by HDOH on May 19, 2003. In a letter dated October 19, 2007 HDOH provided for an extension of the NGPC until a notice of renewed coverage under the applicable general permit is issued or until HDOH notification is received. This extension is in accordance with HAR, Chapter 11-55-34.09(d). The NGPC and extension can be found in Appendix A of this document.

1.3 SWMP PERFORMANCE EVALUATION

A process for conducting an annual performance and effectiveness evaluation of the SWMP has been developed and included in this ACR. This evaluation addresses specific direct and indirect measurements in order to track the long-term progress of the SWMP towards achieving improvements in water quality.

The SWMP contains Best Management Practice (BMP) tables that outline activities that are either occurring or will be implemented in the future to ensure each of the minimum control measures are being implemented. Each BMP task is assigned a specific evaluation indicator, milestone, time frame/due date, and responsible party. The ACR is structured such that each section and BMP table corresponds with those in the SWMP. This allows the ACR to be used as an evaluation tool, addressing conformance with established performance standards, quantitative monitoring, estimates of pollutant load reductions or increases, and detailed accounting of SWMP accomplishments.

As trends are detected and the usefulness of specific BMPs or their evaluation indicators become apparent, the SWMP will be modified to ensure the program is protective of the receiving waters.

Harbors has committed resources to executing programs described in the 2009 SWMP, and will continue each year to implement new initiatives based on available budget and resources. All ongoing and new activities will be reported in the ACRs.

2.0 PUBLIC EDUCATION AND OUTREACH

City and County of Honolulu Stormwater Stenciling, 2009

Permit Requirements

HAR, Chapter 11-55, Appendix K, Part 6(a)(1). Develop and implement a public education program to distribute educational materials to users of the small municipal separate storm sewer community or conduct equivalent outreach activities emphasizing each of the following:

(B) Hazards associated with illicit discharges, and

(A) Impacts of stormwater discharges on water bodies,

(C) Measures the users of the permittee's small municipal separate storm sewer system 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.

2.1 TENANT EDUCATION AND OUTREACH

Harbors Division requires tenants to reduce to the maximum extent practicable (MEP) pollution in storm water discharges and effectively prohibit unauthorized non-storm water discharges into the MS4 through its tenant lease agreements and Tenant Revocable Permit (TRP), which are attached as Appendix B.

An inventory of tenants at Kalaeloa Barbers Point Harbor (KBPH) is kept on file at Harbors Oahu District Environmental Section and has been updated this year to include all current tenants. The tenant inventory identifies primary and alternate environmental contacts for each tenant. Personnel identified in the inventory are deemed responsible for implementation of storm water protection measures and BMP requirements at their facility. Please see BMP 2-1. The tenant inventory can be found in Appendix C. There were no changes to the tenant inventory in 2011.

Harbors Division sends out an annual mailing to Small MS4 users in order to educate them on storm water quality issues, and collect data on tenant operations for updating the database. The 2011 mailing was sent on 28 September 2011and included:

- A cover letter from the HDOT Harbors Administrator
  - Defined the regulatory background
  - Invited all tenants to attend Tenant Storm Water Pollution Prevention Awareness Training

- The Tenant Self-Inspection (TSI) form
    - Returned forms utilized for updating and tracking tenant operations and contact information
- New BMP flyers
    - "Building and Remodeling" Flier. The flier describes sedimentation as a major concern at construction sites and requires submittal of building or remodeling plans to the HDOT Harbors Division for formal approval.
    - "Outdoor Material Storage" Flier. The flier describes responsible practices for storing chemicals and bulk material.
    - "Vehicle and Equipment Washing" Flier. The flier prohibits washing without approval from HDOT Harbors Division and emphasizes setting up berms to capture wash water for disposal.

A copy of this mailing and its attachments can be found in Appendix D. The TSI responses are compiled and used to update the Tenant Database (Appendix C). Future tenant mailings will be updated with new BMP flyers based on findings from the annual tenant inspections.

This year, the percentage of tenants (Honolulu and KBP Harbors combined) that were responsive to the TSI mailing was thirty-six percent. There has been a noticeable decrease in responsiveness since Harbors Division began tracking this metric in 2009. The decrease in responsiveness is most likely due to redundancy with tenant facility inspections. There appears to be little added benefit to requiring the tenants to complete this form when all of the information can be gathered during facility inspections. Harbors Division proposes modifying the mailing in 2012 by replacing the TSI with a contact information sheet, the purpose of which will be to verify that tenant contact information is up-to-date in order to ensure effective and expedient inspection scheduling and communication. Please see BMP 2-1.

On October 19 and 20, 2011 Harbors Division held annual tenant educational workshops entitled, "2011 Tenant Storm Water Pollution Prevention Awareness Training." The agenda included background on applicable regulations, followed by Harbors General Permit requirements for Small MS4s, information on pollution prevention and good housekeeping, notification of upcoming facility inspections, the structure of the Inspection and Enforcement Program (IEP), emergency contact information, and a question and answer session. A copy of the presentation and tenant attendance record are provided as Appendix E.

As a part of the tenant outreach program, the "Tenant Environmental Manager of the Year" award program has been created and implemented this year in order to provide incentive for tenant environmental managers to create positive change within their organizations. Not only does it create positive reinforcement for the organization and individual receiving the award, it demonstrates to the remaining tenants that positive change is achievable and provides concrete examples of solutions that are realistic and affordable. The awardee is chosen from a pool of tenants from Honolulu and KBP Harbors. The award is presented with a letter that is signed by the Governor of the State of Hawaii. This year, Mr. Nathan Kapule of Young Brothers, Inc. received the award. A copy of the award certificate is included in Appendix F.

Harbors Division has maintained a hotline for storm water information and discharge reporting since October 22, 2009. Please see BMP 2-1. The hotline is reachable by dialing (808)-587-1962. The hotline number is a direct line to the Harbors Division Environmental Engineer. Harbors Environmental Section maintains records of calls, follow-up inspection dates and findings, enforcement actions taken, and resolutions in the Harbors Environmental Engineering (HAR-EE) Stormwater Hotline Occurrence Tracking (SHOT) Form (Appendix G). Although no calls were received from the public, calls from the Honolulu Marine Traffic Control Tower (Honolulu Tower) were received as required notification after environmental incidents. The Honolulu Tower logs calls related to KBP Harbor. Please see Appendix H for the Honolulu Tower Log.

BMP 2-1 Tenant Education and Outreach

Goals: 1) Generate tenant awareness of storm water pollution.
2) Engage tenant interest in preventing storm water pollution.
3) Promote positive tenant behavior changes that reduce pollution or opportunities for pollution.

Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
Update mailing items as outreach and education problem areas are identified and recorded	Percentage of problem areas in education/outreach addressed by updated materials	100% of identified problem areas updated	October 2011	Weston Solutions, Inc. (Weston)	Items were updated to include vehicle washing, outdoor material storage, and building and remodeling.
	Percentage of tenants' feedback about the updates that are positive	At least 50% of feedback positive	Not Applicable (NA)	Harbors Environmental Section	No feedback received.
Review TSI responses from tenants	Percentage of tenants responsive to the TSI Form	Greater than 90% of tenants	Ongoing	Harbors Environmental Section	36% of tenants responded to the TSI form (Honolulu and KBP Harbors). The TSI form will be replaced with a contact information sheet in 2012.
Mail educational materials and reporting contacts to tenants	Number of educational materials distributed	100% of tenants received educational materials and reporting contacts	Sent Sept 2011	Harbors Environmental Section	162 mailings were sent (Honolulu and KBP Harbors).

Goals: 1) Generate tenant awareness of storm water pollution. 2) Engage tenant interest in preventing storm water pollution. 3) Promote positive tenant behavior changes that reduce pollution or opportunities for pollution.					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
	Responses on TSI Form show improvement in storm water awareness	Completeness of TSI forms increasing from previous year	Registered mail receipt varies	Harbors Environmental Section	TSI form completeness is adequate and has increased from previous year although less forms were returned.
Establish a reporting/complaint tracking system to log response & enforcement activity	Create a hotline system for reporting violations and answering questions	Create and maintain one hotline number	22 Sept 2009	Harbors Environmental Section	Hotline established
	Number of informational inquiries received via hotline	Number of inquiries increased from previous year	NA	Harbors Environmental Section	None received in 2011.
	Number of hours to respond to complaint from time call is received.	Respond to all reporting/complaints within 24 hrs to minimize water quality impacts or recurrent dumping	NA	Harbors Environmental Section	No calls were received in 2011.

2.2 GENERAL PUBLIC EDUCATION AND OUTREACH

Public education aims to create awareness and prompt behavioral changes. Equipped with information, the public will be less likely to contribute to water pollution as they will be able to make informed choices. Educating the public with this knowledge and contact information for appropriate authorities will increase the likelihood that a violation or accidental release will be reported. The responsibility for tenant and public education falls under the HDOT Harbors Division Environmental Engineering Section.

Public education activities includes posting signs that advise against dumping or discarding inappropriate materials where they may be carried into Harbor waters. Signs are posted at visible public locations, such as harbor entrances, comfort stations, meeting areas, and garbage collection stations. Please see BMP 2-2.

The Harbors storm water website provides information about water quality issues, emergency reporting numbers, and links to useful sections of the USEPA website. Please see BMP 2-2. The website can be accessed at **http://hawaii.gov/dot/harbors.**

Although no ad was placed in 2011, Harbors Division will continue to foster relationships with other State agencies and develop new programs for public education and outreach in 2012.

BMP 2-2 General Public Education and Outreach

Goals: 1) Generate tenant awareness of storm water pollution. 2) Engage tenant interest in preventing storm water pollution. 3) Promote positive tenant behavior changes that reduce pollution or opportunities for pollution.					
Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
Post or construct signage at visible public locations	Visible areas covered by "No Dumping" signs	Signs are hung at additional visible public locations	NA	Harbors Environmental Section	Tenants were instructed to post "no washing" signs where water spigots are located.
	Storm drains with "flows to ocean" stenciling	Number of drains stenciled	NA	Harbors Environmental Section	Collected contact information for tenant volunteers for stenciling activity. Activity to be held in 2012.

Goals: 1) Generate tenant awareness of storm water pollution. 2) Engage tenant interest in preventing storm water pollution. 3) Promote positive tenant behavior changes that reduce pollution or opportunities for pollution.					
Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
	Track the amount of inappropriate materials dumped and correlate this data to the timing of public sign posting to gauge any change of public behaviors over time	The amount of polluting material generated by dumping or discarding has been reduced	NA	Harbors Environmental Section	No materials were tracked in 2011. Materials will be tracked during stenciling event.
Create/update runoff water quality presentations on Harbors Division website	Create/update presentation and post to website	Presentation is posted	Ongoing	Weston/Harbors Environmental Section	Presentation created, but not posted to website.
Measure dissemination and effectiveness of water quality presentation	Percentage increase in presentation viewing, measured by number of hits on presentation website	Increase viewing from previous year	TBD	Harbors Environmental Section; Harbors web master	Website not yet updated, however tenants were emailed the presentation directly upon request.
Set up and solicit a volunteer cleanup or storm drain stenciling activity	Participation in activities.	At least one of the listed activities	NA	Harbors Environmental Section	Volunteer activity will be conducted in 2012.
	Number of employee and public participants	An increase in participation from previous year	NA	Harbors Environmental Section	Tenant solicitation during training resulted in increased volunteer commitment
Post public awareness advertisement in local newspaper or magazine to educate the general public on storm water pollution control	Number of advertisements sponsored	One per year	NA	Harbors Environmental Section	No advertisement posted in 2011.

2.3 VESSEL OPERATORS EDUCATIONAL PROGRAM

Outreach to vessel operators docking at Harbors Division facilities ensures awareness of potential pollutant sources associated with vessel operation in the harbor, including vessel equipment wash water and polluted deck wash-down water, and vessel maintenance. A used oil educational flier was distributed to vessel operators and is available in the 2009 SWMP.

Marine Cargo Specialists monitor loading and unloading procedures for the major vessels in the Harbor. Their duties include tracking compliance with various aspects of the process including storm water pollution control compliance. Harbors is developing a tracking system for Marine Cargo Specialist monitoring records, which will include storm water observations. The monitoring records will be tracked following Marine Cargo Specialist training in 2012. Please see BMP 2-3.

BMP 2-3 Expand the Educational Program to Vessel Operators

Goal: Minimize discharge of pollutants to receiving waters within the harbors					
Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
Marine Cargo Specialists will Monitor ship cargo loading and unloading to prevent discharges of pollutants	Frequency of monitoring activity at loading/unloading zones	Increasing frequency	NA	Harbors Oahu District; Marine Cargo Specialists; Harbor Agents	To be implemented in 2012
	Number of Marine Cargo Specialist Attending Annual Storm water Training	Increasing attendance	NA	Harbors Oahu District; Marine Cargo Specialists; Harbor Agents	Training Conducted in 2011.
	Number of actions taken as a result of loading and unloading monitoring	For informational purposes	NA	Harbors Environmental Section; Marine Cargo Specialists; Harbor Agents	No actions reported from monitoring activities.
Develop and maintain inventory of ships agents responsible for tracking vessel operators and provide educational materials	Percentage of ships agents in inventory	100% of ships agents identified	NA	Harbors Environmental Section; Marine Cargo Specialists; Harbor Agents	Ships agents identified in tenant inspections and inventory will be developed in 2012
	Percentage of ships agents receiving educational materials	100% of ships agents received materials	NA	Harbors Environmental Section; Marine Cargo Specialists; Harbor Agents	Educational materials distributed in training. Total number of agents TBD.

2.4 INSPECTION AND PROGRESSIVE ENFORCEMENT PROGRAM

A tenant and user inspection and enforcement program has been developed as part of Harbor's Environmental Management System (EMS). This program identifies, tracks, inspects and ensures compliance with the Harbor Division's tenant lease agreements and TRPs. As part of the inspection and progressive enforcement program, the inventory of businesses and industries currently operating at the Harbor has been updated (Appendix C). Inspection and Illicit Discharge Detection and Elimination (IDDE) findings are further discussed in Section 4.0.

Harbors completed inspection of all of its KBPH tenants in 2011. Inspection of and outreach to commercial and industrial tenants was conducted to ensure the following:

- ✓ Continually evaluate where outreach efforts should be focused;
- ✓ The facility operator has been made aware of storm water pollution prevention requirements and the consequences of non-compliance;
- ✓ The facility operator is in compliance with its tenant lease agreement or TRPs;
- ✓ Unauthorized non-storm water discharges do not occur at the facility; and
- ✓ Illicit connections are not present at the facility.

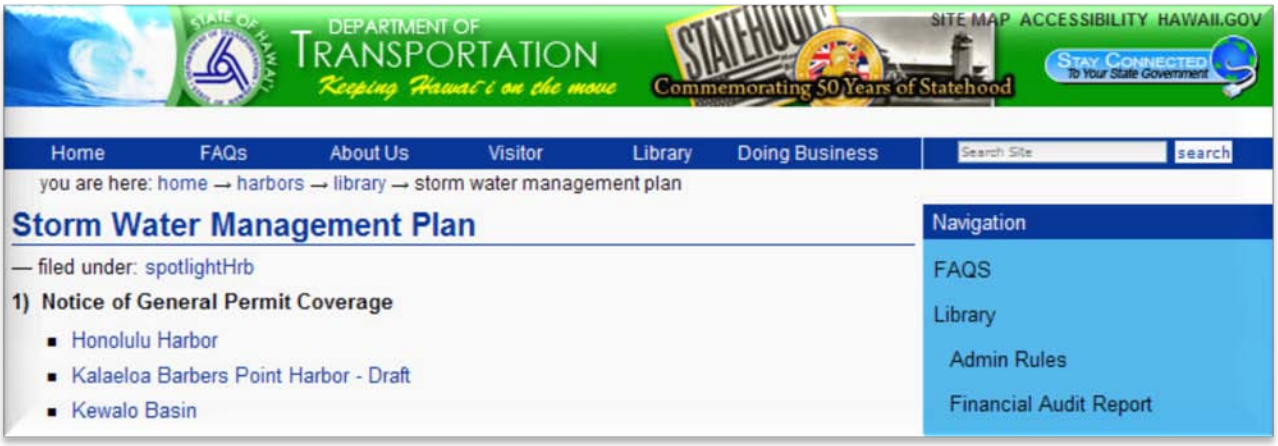
Harbors Division continues to respond to violations observed during these inspections in accordance with the SWMP. Inspection findings were added to the database upon completion in January 2012.

Overall each of the tenants showed a willingness to cooperate and improve compliance with storm water regulations and the Harbor's SWMP. Inspections did not reveal any immediate threats to KBPH.

BMP 2-4 Inspection and Progressive Enforcement Program

Goal: Identify, track, inspect and ensure compliance with the Harbor Division's tenant lease agreements and TRPs					
Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
Update inventory of businesses and industries currently operating at the Harbor	Frequency of inventory update	On-going	Annual	Harbors Division	Inventory is updated
Create/update database to record and track tenant inspection findings, enforcement actions, and resolutions.	Database is created and functional	100% of inspections are recorded in the database	January 2012	Harbors Environmental Section	Database is located at Harbors Division office. Last updated in January 2012.
Conduct initial inspection at all commercial and industrial tenant facilities (refer to BMP 4-2 for follow-up inspection)	Percentage of commercial and industrial tenant facilities inspected	100% of tenants	Dec 2011; January 2012	Harbors Environmental Section, Weston, HDOT	9 of 9 (100%) KBPH tenants were inspected. 1 easement was inspected.
Add inspection findings and enforcement taken to database	Number of sites for which inspection findings, enforcement actions, and resolutions are added to database	100% of sites	Ongoing	Harbors Environmental Section	There were no enforcement actions against tenants at KBPH..

3.0 PUBLIC INVOLVEMENT/PARTICIPATION



Permit Requirements http://hawaii.gov/dot/har

HAR, Chapter 11-55, Appendix K, Part 6(a)(2). *Include users of the permittee's small municipal separate storm sewer system in developing, implementing and reviewing the stormwater management plan.*

3.1 RECEIVE PUBLIC FEEDBACK ON SWMP

Public participation is intended to raise public consciousness of water quality issues, to create a sense of responsibility for water quality, and to lessen the likelihood that members of the public will commit actions that may lead to water quality degradation.

Public awareness of storm water quality issues is targeted to solicit comment by informed members, which may lead to a better and more effective plan and implementation. Harbors Division has invited public involvement and participation during the previous NGPC term by posting the SWMP to the Harbors Division website.

The current SWMP is in draft review with HDOH and USEPA Region IX; therefore no tenant or public comment has yet been solicited by Harbors Division. When the SWMP is ready for public comment, Harbors will post it on the website and request comments. Comments received will be tracked and changes will be implemented where necessary or improvements can be made. Please see BMP 3-1.

BMP 3-1 Receive Public Feedback on SWMP

Goal: To raise public consciousness of water quality issues, to create a sense of responsibility for water quality, and to lessen the likelihood that members of the public will commit actions that may lead to water quality degradation.

Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
Ensure notification to harbor tenants of SWMP development capability	Percentage of tenants notified	100% of tenants notified	NA	Harbors Environmental Section	Not performed. SWMP still in draft review
Post the Draft SWMP to the Harbors website during public comment window	Number of people who viewed the SWMP online	Increasing from previous year	NA	Harbors Environmental Section; Harbors web master	Not performed. SWMP still in draft review
	Number comments received for SWMP revision	Increasing from previous year	NA	Harbors Environmental Section; Harbors web master	Not performed. SWMP still in draft review
Develop system for tracking comments and change produced by comments	Percentage of comments tracked	100% of comments tracked	NA	Harbors Environmental Section	Not performed. SWMP still in draft review

4.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION

Kaunakakai Harbor, Hawaii. February 2006.

Permit Requirements

HAR Chapter 11-55 Appendix K Part 6.(a)(3). Develop, implement and enforce a program to detect and eliminate illicit discharges that at a minimum includes the following:

(A) Establishment of rules, ordinances or other regulatory mechanism, including enforcement procedures and actions, that prohibit non-stormwater discharges, except those listed in section 1 that do not cause or contribute to any violations of water quality standards, into the permittee's small municipal separate storm sewer system,

(B) Procedures to detect and eliminate illicit discharges (as defined in 40 Code of Federal Regulations (CFR) Section 122.26(b)(2)),and

(C) Compilation of a list of non-stormwater discharges or flows that are considered to be significant contributors of pollutants and the measures to be taken to prevent these discharges into the permittee's small municipal separate storm sewer system, or reduce the amount of pollutants in these discharges.

4.1 REGULATORY MECHANISMS IN-PLACE

Existing rules and ordinances that prohibit non-stormwater discharges are in place and include the following citation from HAR Title 19, Chapter 42, Section 127: no person shall "place, throw, deposit, or discharge, or cause to be placed, thrown, deposited, or discharged into the waters of any harbor, river or shore waters of the State any litter, or other gaseous, liquid or solid materials which render the water unsightly, noxious or otherwise unwholesome so as to be detrimental to the public health and welfare or a navigational hazard. No person shall discharge oil sludge, oil refuse, fuel oil or molasses either directly or indirectly, or pump bilges or ballast tanks containing other than clean water into the waters of any harbor, river or into any shore waters in the State."

The rules are made enforceable by Title 19, Chapter 41 Section 12 which grants the HAR the full force and effect of law pursuant to sections 266-2, 266-3, 266- 4, and 266-25, Hawaii Revised Statutes (HRS). The enforcement of these rules shall also be pursuant to the provisions of section 26-14.6, HRS. The violation of these rules shall be subject to penalties as set forth in section 266-25, HRS, and the Harbors IEP.

Further, HAR Title 19 Chapter 42 Section 15 requires compliance with Federal, State, and County laws, ordinances and rules, and in particular rules of the HDOH pertaining to air and water pollution.

TRPs and tenant lease agreements incorporate language which requires compliance with all storm water quality regulations. Copies of "Lease Agreement Addendum 1, Environmental Compliance - Lessee's Duties" and an excerpt from the Standard Revocable Permit form, "Section 26. Special Terms and Conditions, Environmental Compliance - Permittee's Duties" are provided in the SWMP and Appendix B of this report.

4.2 ILLICIT DISCHARGE DETECTION AND ELIMINATION PLAN

Harbors Division has developed an IDDE plan as part of its SWMP in an effort to eliminate discharges that the established storm drainage system is not designed to accept, process, or discharge.

In accordance with its IEP, Harbors conducted inspections of nine of nine tenants at the KBPH (two tenants were located at both Honolulu Harbor and KBPH). Included in this task was the creation of comprehensive lists indicating the locations and quantities of various Non-Stormwater Discharges (NSWDs), potentially polluting materials, and BMPs in use at the facilities. The inspection findings will be completed by the end of 2011.

The resultant 2011 inspection report for each inspection will be sent to each tenant in 2012. The inspection reports contain the following:

- ✓ An explanation the objective of the inspections;
- ✓ Tenant contact information;
- ✓ Facility description;
- ✓ A list of potential pollutant sources;
- ✓ A description of stormwater flow throughout the site;
- ✓ A summary of inspection observations;
- ✓ A tenant risk ranking;
- ✓ Any required follow-up actions; and
- ✓ A photo log documenting deficiencies and good practices.

Inspection observations include industrial activity, petroleum and solvent storage quantities, mode of storage, potential pollution sources, a description of site drainage, observed BMPs, and required BMPs.

Overall, all tenants that had discrepancies were unaware of storm water regulations pertaining to the issue and showed willingness to comply immediately. In some cases where discrepancies showed an immediate threat to water quality, tenants were asked to rectify the discrepancy during the inspection. For example, in cases where the discrepancy was an outdoor sink that discharged onto the ground, tenants were instructed to remove the sink from service immediately. Discrepancies that could not be immediately rectified were communicated to the tenant representative and forwarded to the Harbors' Environmental Section for follow-up.

A letter is sent to each recalcitrant tenant or tenant that is found to have poor practices to the extent that there is a potential negative impact to the environment. These letters are signed by the Deputy Directory of DOT Harbors Division and strongly convey that failure to meet the requirements of the letter can result in fines or termination of the tenant's revocable permit. The letter requires response within 20 days of receipt. No KBPH tenants were issued a letter in 2011.

4.2.1 Update Storm Sewer System Map

The most up-to-date MS4 outfall map is included as Appendix I of this document. The map contains outfall locations, drain and piping locations, and outfall IDs. Sources of non-stormwater discharges were identified in the dry-weather outfall reconnaissance inventory (ORI) and documented in reports found in Appendix J. Please see BMP 4-1.

BMP 4-1 Update Storm Sewer System Map

Goal: Develop a comprehensive infrastructure map of the MS4 storm drain system					
Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
Update outfall maps to identify sources of outfall discharges and outfall conditions	Percentage of outfalls that have sufficient, up-to-date information	100% of outfalls	16 Dec 2011	Harbors Environmental Section	Locations on maps were confirmed with GPS device
	Sources of outfall discharges identified	100% of sources identified	16 Dec 2011	Harbors Environmental Section	Outfall discharges identified in reports. See Appendix J

4.2.2 Outfall Reconnaissance Inventory (ORI)

An annual dry weather ORI was performed December 16, 2011 by the Harbors Environmental Division. The ORI was made at low tide and observed outfall conditions, flow characteristics, and the surrounding areas.

A map of the KBPH outfalls is included as Appendix I. The ORI forms are included as Appendix J. Please see BMP 4-2.

Important sections of the form are listed in Table below and include

- ✓ The location of the outfall;
- ✓ Date of the inspection;
- ✓ Qualitative measurement of flow at the outfall; and
- ✓ Notes that include observations of conditions, surroundings, ocean life, etc.

Table 4-1 Honolulu Harbor Dry Weather Inspections

Outfall	Date	Flow	Indicators of Illicit Discharge	Notes
BP-01	12/16/2011	No	None	
BP-02	12/16/2011	No	None	
BP-03	12/16/2011	No	None	Six struts from BP-04
BP-04	12/16/2011	No	None	Eight struts from BP-05
BP-05	12/16/2011	No	None	Three struts from BP-06
BP-06	12/16/2011	No	None	Eight struts from BP-07
BP-07	12/16/2011	No	None	Ten struts from BP-08; 2-12in within 20ft
BP-08	12/16/2011	No	None	Four struts from BP-09
BP-09	12/16/2011	No	None	Eight struts from BP-10
BP-10	12/16/2011	No	None	Ten struts from BP-11
BP-11	12/16/2011	No	None	Two struts
BP-12	12/16/2011	No	None	Three struts from BP-27
BP-13	12/16/2011	No	None	Seven struts from BP-14
BP-14	12/16/2011	No	None	
BP-15	12/16/2011	No	None	Two struts from BP-16
BP-16	12/16/2011	No	None	Three struts from BP-17
BP-17	12/16/2011	No	None	Four struts from BP-18
BP-18	12/16/2011	No	None	One strut from BP-19
BP-19	12/16/2011	No	None	Three struts from BP-20
BP-20	12/16/2011	No	None	Five struts from BP-21
BP-21	12/16/2011	No	None	Eight struts from BP-22
BP-22	12/16/2011	No	None	One strut from BP-23
BP-23	12/16/2011	No	None	Eight struts from BP-24
BP-24	12/16/2011	No	None	Struts are 22ft apart
BP-25	12/16/2011	No	None	Possible are missed - three struts left of 36in BP-14
BP-26	12/16/2011	No	None	Three struts from BP-14
BP-27	12/16/2011	No	None	Five struts from BP-26
BP-28	12/16/2011	No	None	Two struts from BP-02
BP-29	12/16/2011	No	None	

BMP 4-2 Outfall Reconnaissance Inventory

Goal: Establish and carry out procedures to identify and remove illicit discharges					
Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
Dry weather visual inspection of outfalls	Percentage of outfalls inspected	100% of outfalls inspected on-time	December 16 2011	Harbors Environmental Section	Completed
Wet weather inspections of outfalls	Percentage of outfalls inspected	20% of outfalls inspected on-time	NA	Harbors Environmental Section	A wet weather inspection was not performed due to weather. One will be performed in 2012.
Collect and analyze reports of illicit discharges.	Number of apparent illicit discharges reported.	100% of illicit discharges found	NA	Harbors Environmental Section	No illicit discharges found.
Input inspection findings into database.	Percentage of findings input into database	100% of findings	December 2011	Harbors Environmental Section	100% of ORI findings input into database.
Ensure proper measures and controls are implemented to mitigate pollutants in permitted NSWDs	Number of permitted NSWDs found that lack proper controls	Reduced from previous year	NA	Harbors Environmental Section	No permitted NSWDs exist to date
Document these controls in a database with tenant information and Tax Map Key (TMK)	Percentage of permitted NSWDs recorded in database	100% of identified permitted NSWDs	NA	Harbors Environmental Section	NA

4.2.3 Illicit Discharge Reporting

The Harbors Division Environmental Section collects and records reports of storm water quality violations through its storm water hotline. Calls are recorded on the SHOT Form, available in Appendix G of this document. There were no illicit discharges reported through the hotline in 2011. The hotline will be advertised in future educational mailings and educational workshops. Please see BMP 4-3.

Harbors Grounds Maintenance personnel track illicit discharge incidents utilizing a Pier Inspection Form to record their observations. No illicit discharges were recorded by Harbors Ground Maintenance in 2011; however a monthly spill log was kept and is included as Appendix K.

The Honolulu Tower keeps a log of all incidents reported for Honolulu Harbor. The log details the date, time, location, vessel involved, and description of the findings or incident reported. A summary of the log entries pertaining to environmental or storm water issues is provided as Appendix H. Please see BMP 4-3. The Honolulu Tower is required to notify Harbors Division Environmental Section on all environmental issues.

BMP 4-3 Illicit Discharge Reporting

Goal: Encourage public education and involvement in eliminating illicit discharges					
Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
Collect violation reports from the Marine Traffic Control Center	Percentage of violations reported	100% of violation reports collected	Continuous	Harbors Environmental Section	Follow up conducted as needed
Record report of illegal discharge incidents	Keep Marine Cargo Specialist inspection reports on-file.	100% of Pier inspection reports are kept	TBD	Harbors Environmental Section	No inspection reports received.
Establish the illicit discharge/illegal dumping hotline	A hotline for citizens to report illegal dumping and suspicious discharges will be established in the first year. (See BMP 2-1)	Establish one hotline	22 Oct 2009	Harbors Environmental Section	Completed
Determine effectiveness of hotline	Number of illicit discharge/illegal dumps reported by citizens	Increasing from previous year	NA	Harbors Environmental Section	No calls received by Hotline in 2011
	Number of illicit discharges prevented or stopped due to call to hotline	Increasing from previous year	NA	Harbors Environmental Section	NA
Advertise hotline	The hotline will be advertised on an insert in each TSI mailing and on all storm water pollution prevention signage	One TSI mailing insert per year and all signage	Registered mail receipt varies	Harbors Environmental Section	The hotline was advertised in TSI mailing in 2011. Quick reference cards distributed at training.

4.2.4 Inspection and Enforcement Plan

When an illicit discharge is determined to have taken place, appropriate action is taken against the responsible parties according to the IEP. This document establishes specific inspection procedures, enforcement tools, and the progressive escalation of enforcement action with regard to the seriousness of the illicit discharge and the recalcitrance of the dischargers.

Harbors ranked each tenant based on the tenant's potential to contribute pollutants to the environment. See BMP 4-4. The results of the tenant risk rankings will be reevaluated for accuracy each calendar year. The tenant's ranking determines the frequency of inspection according to the IEP. High risk tenants will be inspected twice per year, medium ranking tenants will be inspected annually, and low ranking tenants will be inspected biannually. Risk rankings and corresponding inspection frequencies will be determined following the inspection of all Harbors tenants currently being concluded.

Harbors Division maintains records, including inspection reports, warning letters, notices of violation, resolutions, and other enforcement records demonstrating its good faith effort to bring tenant facilities into compliance with applicable requirements. Tenants are provided with inspection findings in the form of a letter. No major enforcement actions were taken in 2011 as a result of inspections. See BMP 4-4.

BMP 4-4 Inspection and Enforcement Plan

Goal: Eliminate illicit discharges through inspection and enforcement.					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Establish/update ranking of tenants according to Inspection and Enforcement Manual	Percentage of tenants ranked	100% of tenants ranked	January 2012	Harbors Environmental Section	Completed rankings for nine tenants (100%).
Perform initial investigation upon discovery or notification of a suspected illicit discharge or connection.	Percentage of reports investigated	100% investigated	NA	Harbors Environmental Section	No IDDE reported this period.
Follow up investigation of illicit discharge	Percentage of investigations followed up	100% Follow up	NA	Harbors Environmental Section	No IDDE reported this period.
If enforcement action has taken place, perform	Same as above	Same as above	NA	Harbors Environmental Section	No IDDE reported this period.

Goal: Eliminate illicit discharges through inspection and enforcement.					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
follow up inspection within two weeks of initial inspection					
Initiate investigation of complaints transmitted by HDOH regarding facilities within its jurisdiction	Percentage of reports investigated	100%	NA	Harbors Environmental Section	No complaints by HDOH.

4.2.5 Employee Training

Harbors Division annually provides initial and refresher NPDES training to key personnel to instruct personnel at all levels of responsibility, including Harbors Oahu District Enforcement (HAR-OE) personnel, concerning the components and goals of the SWMP. Please see BMP 4-5. The instruction addresses the following areas:

- ✓ Regulatory requirements,
- ✓ Materials management practices including proper storage, handling, and use of materials,
- ✓ Good housekeeping and criteria for clean working environment,
- ✓ Recognizing conditions that could lead to degraded runoff water quality,
- ✓ Identifying and notifying responsible parties,
- ✓ Taking action to correct conditions that could result in storm water pollution,
- ✓ Warning and enforcement procedures, and
- ✓ Recording incidents.

A copy of the employee training materials can be found in Appendix L.

As stated in the SWMP, Harbors Division will provide train all employees who are responsible for identification, investigation, elimination, cleanup and reporting of illicit connections and other illicit discharges annually.

BMP 4-5 Employee Training

Goal: Eliminate illicit discharges through training of essential personnel.					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Develop storm water IDDE training materials	Training materials address all relevant IDDE aspects and are up to date	IDDE is addressed	May 2011	Harbors Environmental Section, Weston	Completed. See Appendix L.
Train all employees who are responsible for identification, investigation, elimination, clean-up, and reporting of illicit connections/discharges	Frequency of employee training Number of employees trained	Once per year Train all applicable employees	May 2011	Harbors Environmental Section, Weston	Completed..

5.0 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

Drain Inlet Control, Barbers Point. January 2006.

Permit Requirements

HAR Chapter 11-55 Appendix K Part 6.(a)(4). Develop, implement and enforce a program to reduce storm runoff pollutants 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, that, at a minimum, includes the following:

(A) Establishment of rules, ordinances and 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 best management practices,

(C) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts on water quality,

(D) Procedures for site plan review of construction plans which incorporate consideration of potential water quality impacts,

(E) Procedures for receipt and consideration of information submitted by the public,

(F) Procedures for site inspection and enforcement of control measures.

5.1 CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

A Construction Site Runoff Control Program (CSRCP) has been developed and included as part of Harbor's SWMP in order to establish rules, ordinances, and other regulatory mechanisms in order to:

- ✓ Require stockpiling or immediate access to materials for erosion prevention and sediment control.
- ✓ Require erosion prevention and sediment controls at all construction projects;
- ✓ Require construction site operators to implement appropriate erosion prevention and sediment control BMPs; and

- ✓ Require construction site operators to implement BMPs appropriate for the control of waste and other potential pollutant sources.

The CSRCP includes the following:

- ✓ Construction site plan reviews;
- ✓ Pollution prevention;
- ✓ Source identification;
- ✓ BMP implementation;
- ✓ Construction site inspections;
- ✓ Enforcement measures;
- ✓ Report of non-compliant sites; and
- ✓ Education outreach for construction site operators

5.1.1 Required Document Review

Harbor Division's CSRCP applies to all construction projects existing within its jurisdiction, regardless of size or ownership of the construction site or activity.

Each Section of the HDOT Engineering Branch, including Planning, Design, Construction, Maintenance, and Environmental, reviews subsets of construction plans specific to their department for potential storm water impacts. HAR-EE reviews construction plans for potential storm water quality impacts, and drainage connection and discharge permit applications. This review process is tracked and included in the ACR. Please see BMP 5-1.

Construction site operators are required to submit a Storm Water Pollution Prevention Plan (SWPPP) and a Notice of Intent (NOI) under the Hawaii NPDES General Permit Authorizing Discharges of Storm water Associated with Construction Activity, HAR Chapter 11-55 Appendix C (the Hawaii Construction General Permit) for projects greater than one acre prior to approval. Harbors Division ensures that plans reflect the actual site conditions and are updated accordingly. The HDOH CWB implements NPDES requirements in Hawaii and administers review and granting of Individual and General Permit Coverage, however NOI requests for discharge of storm water from industrial sites and SWPPPs have been routed to HAR-EE for review and comment. In 2011 the following plans were reviewed by Harbors Division:

Table 5-1 Summary of Plans Reviewed

Location	Project Description
None reviewed in in 2011.	

TRPs and tenant lease agreements require compliance with all environmental laws and limit possession, usage and storage of hazardous wastes without lessor knowledge and consent.

Harbors Division requires that prior to new connections or discharge to the regulated drainage system, an application for the connection and/or discharge must be made. Upon review and

acceptance of the application, Harbors returns a permit for connection, a permit for discharge or comments explaining a denied connection or discharge.

Storm water BMPs are reviewed by HDOH CWB during NPDES NOI review, and may be reviewed by the City and County of Honolulu if plans are routed through them. Please see BMP 5-1. Harbors Division personnel including Marine Cargo Specialists, the Harbor agent, and Construction Inspectors may note implementation of BMPs and contractor waste management practices, and have authority to take action in the event of noncompliance.

BMP 5-1 Required Document Review

Goal: Prevent sediment and erosion runoff from construction sites during the planning phase.					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Review construction plans for potential impacts in respective areas	Percentage of construction plans reviewed	100% of plans reviewed	NA	All HDOT Engineering Branch Sections	None tracked in 2011.
Review plans for storm water considerations during pre- and post-construction phases	Percentage of construction plans reviewed	100% of plans reviewed	NA	Harbors Design, Maintenance and Environmental Section	None tracked in 2011.
Review SWPPP, NOI, and discharge permit applications for construction projects	Percentage of documents reviewed	100% of documents reviewed	NA	Harbors Design, Maintenance and Environmental Section	None tracked in 2011..
Review erosion and sediment BMPs and waste management practices	Percentage of sediment BMPs and waste management practices reviewed	100% of BMPs and waste management practices reviewed	NA	HDOH Clean Water Branch, City and County of Honolulu, or Harbors Division	None tracked in 2011.

5.1.2 Construction Site Best Management Practices

Construction site BMPs serve the purpose of preventing sediment and other pollutants created from construction activities from reaching waters. In many cases BMPs prevent sediment and pollutants from being dislodged from their original locations.

Harbors Division requires that construction site operators implement appropriate erosion and sediment control BMPs as well as any other BMPs that will reduce the flow of pollutant off-site to the MEP. Selected BMPs must demonstrate an understanding of the soil texture and sediment size such that the BMP chosen provides the maximum benefit to runoff control. A specification sheet that includes stormwater BMP requirements has been developed and will be included with contractor solicitation documents. The Temporary Water Pollution, Dust, and Erosion Control spec is included as Appendix M.

5.1.3 Site Inspection and Enforcement

Construction sites are inspected for compliance with the storm water-related requirements until construction is terminated, the site has been stabilized, and the site's NPDES construction permit has been closed. Inspections are at least once every two weeks during the months of October through April, then at least bi-monthly during the remaining months. Inspections ensure the following:

- ✓ Sediments generated at the project site are retained using adequate source control and structural BMPs;
- ✓ Construction-related materials and wastes are retained at the project site to avoid discharge to the storm sewer and waters of the United States;
- ✓ Unauthorized non-storm water runoff is contained at the project site; and
- ✓ Erosion from slopes and channels are controlled by implementing an effective combination of erosion and sediment control BMPs, such as limiting grading during the wet season; inspecting graded areas during rain events; planting and maintenance of vegetation on slopes; and covering slopes susceptible to erosion.

Enforcement is executed according to the IEP located in Harbor Division's EMS Manual. Reports include a list of all construction projects, inspection dates, and resolution of any violations of storm water-related requirements and can be found in Appendix N. Please see BMP 5-2.

Table 5-2 Summary of Construction Inspections

Project Number	Project Title	Dates Inspected	Corrective Actions
HC 10239	Perimeter Fencing at Honolulu and Kalaeloa Barbers Point	2/22/2011, 3/10/2011, 3/22/2011	None
HC 10414	Embankment Repairs at Kalaeloa Barbers Point Harbor	2/2/2011, 2/16/2011	None
HC 10423	Repair Bollards at Piers 31-33, Honolulu Harbor	4/21/2011, 5/2/2011, 12/9/2011, 12/28/2011	None

BMP 5-2 Site Inspection and Enforcement

Goal: Ensure implementation of BMPs and controls by construction site operators through inspection and enforcement.					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Perform inspections of permitted construction sites for implementation of construction site BMPs	Frequency of inspection	At least once every two weeks during the months of October thru April, then at least bi-monthly during the remaining months	Throughout the year	Harbors Division, Site Inspectors	Completed. See Table 5-1 for summary and Appendix N for reports.
	Number of construction sites inspected	100% of construction sites	Throughout 2011	Harbors Division, Site Inspectors	3 of 3 (100%)
Incorporate inspection of storm water components into inspection program	Construction site storm water deficiencies are reduced	Deficiencies are reduced from previous year	Throughout 2011	Harbors Division, Site Inspectors	Baseline established. Erosion and sediment control inspections already underway.
Keep a list of all construction projects, inspection dates, and resolution of violations for the ACR.	Completeness of inventory	100% of construction sites, inspections, resolutions, and violations recorded	Throughout 2011	Harbors Construction and Environmental Section	File created at Harbors and 100% of known construction sites inspected.

5.1.4 Receipt of Public Input

Harbors Division remains open to public comment and illicit/NSWD reporting. The public is able to contact Harbors Division via hotline, email, website, or mail. Communications are logged on the HAR-EE Spill Documentation Form and appropriate responses are made. No public input was received during the 2011 period. Please see BMP 5-3.

BMP 5-3 Receipt of Public Input

Goal: To remain receptive public to opinion and involvement					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Accept and follow up on public reporting and record outcome	Track number of public reports	Increase from previous year	NA	Harbors Environmental Section	None received

5.1.5 Training and Outreach

Harbors Division employees who are responsible for construction plan review and site inspections are trained annually in the requirements of the SWMP and Hawaii General Permits. A copy of the Stormwater Construction Inspection training is available as Appendix O. Please see BMP 5-4. Employees were trained in plan review and inspection procedures.

Construction plan review training included the following 10 elements taken from EPA guidance:

- ✓ Minimize clearing and grading;
- ✓ Protect waterways;
- ✓ Phase construction to limit soil exposure;
- ✓ Immediately stabilize exposed soils;
- ✓ Protect steep slopes and cuts;
- ✓ Install perimeter controls to filter sediments;
- ✓ Employ advanced sediment settling controls;
- ✓ Certify and train contractors on storm water site plan implementation;
- ✓ Control waste at the construction site; and
- ✓ Inspect and maintain BMPs.

Construction site inspection included training on specific forms from the Harbors EMS Manual:

- ✓ HDOH CWB NOI General Form
- ✓ HDOH CWB NOI Form C
- ✓ EMS Manual Appendix G – Inspection and Enforcement Program
- ✓ EMS Manual Appendix H – Construction Program
- ✓ HAR 11-55 Appendix C

Education and outreach will be provided for stakeholders. Educational materials currently include a specification section for construction storm water BMPs. Please see BMP 5-4. The intent of

these educational materials is to make certain that the site manager or onsite coordinator is aware of the proper installation and maintenance procedures for construction storm water BMPs.

5.1.6 Dredge Spoil Stockpile Management Plan

As part of the 2009 SWMP, Harbors developed a dredged spoil stockpile management plan for implementation of erosion and sediment control BMPs, the purpose of which is to prevent both wind-and water-caused erosion of the stockpiled materials. Existing stockpiles and stockpile control measures were investigated during 2009 through 2011 in order to create the stockpile management plan. The stockpile management plan has been revised and is currently being implemented. Stockpile management activities for 2011 include issuance of a design and contract for installation of erosion and sediment control BMPs. Surfactants will be utilized for erosion control and new silt barriers will be installed along the perimeter of the piles.

Stockpile management activities for 2012 will follow the first phase of the plan, which includes surveying stockpiles to further investigate topography, installation of vegetated swales, and soil composition analysis for re-use.

BMP 5-4 Training and Outreach

Goal: Foster widespread knowledge of construction BMPs					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Develop internal training materials for plan review staff and inspectors	NA	NA	June 2011	Harbors Environmental Section	Updated in 2011. See Appendix O.
Conduct training for employees who are responsible for construction site inspections	Educate construction inspectors about proper selection, installation, inspection, and maintenance of BMPs	100% of construction site inspectors received education	June 2011	Harbors Environmental Section	Training conducted in June 2011
Provide educational materials for plan reviewers	Percent of plan reviewers receiving educational materials	100% of plan reviewers received educational materials	June 2011	Harbors Construction and Environmental Section	100%
Provide educational package to construction sites	Percentage of construction sites covered	100%	NA	Harbors Engineering Branch	To be implemented in 2012.
Post educational materials on Harbors website	Increase views to website	Increased views from previous year	NA	Harbors Web Master	Materials to be uploaded in 2012.

6.0 POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Vegetated Swale, Kahului, Hawaii

Permit Requirements

HAR Chapter 11-55 Appendix K Part 6.(a)(4). Develop, implement and enforce a program to reduce pollutants in storm runoff entering the permittee's small municipal separate stormwater sewer system from new development and redevelopment projects which disturb greater than or equal to one acre, including construction sites less than one acre that are part of a large common plan or development or site that would disturb one acre or more, that, at a minimum, includes the following:

(A) Establishment of rules, ordinances, and other regulatory mechanism, including enforcement procedures and actions, that address post-construction runoff from new development and redevelopment projects,

(B) Structural or non-structural best management practices to minimize water quality impacts and attempt to maintain pre-development runoff conditions, and

(C) Procedures for long-term operation and maintenance of best management practices.

6.1 POST-CONSTRUCTION STORMWATER MANAGEMENT PROGRAM

Harbors Division has developed a Post-Construction Stormwater Management Program as part of its SWMP to prevent polluted storm water discharges from areas of new development and significant redevelopment. This program includes project reviews based on the post-construction erosion control NPDES permit regulations and the Development Standards requirements. The purpose of the post-construction program is to provide a mechanism by which ongoing protection of storm water quality can be addressed and attained.

Post-construction storm water management is also addressed in part by the preceding minimum control measures: public education and outreach, public involvement and participation, and illicit discharge detection and elimination.

6.1.1 Construction Permit Review Process

As part of the NPDES program, HDOH CWB administers review of projects that are equal to or greater than one acre in size. Applicants for coverage under the Nationwide General Permit or Individual Storm Water Discharge Permits submit applications including descriptions of the project scope and schedule, contractor, past land use history, existing conditions and potential pollution sources, construction and post-construction site-specific BMPs.

Harbors Division's review process has the goal of maintaining or improving pre-development runoff conditions. As such, Harbors requires construction applicants to perform a pre- and post-development hydrological analysis to protect natural channels from erosion, to size storm drainage infrastructure, and to address flooding.

Harbors Division identifies controls that provide treatment and reduce storm water volume and velocity. Harbors Division also ensures that on-going maintenance of BMPs is provided in the plans and properly executed, as BMPs are not effective unless properly maintained.

No NPDES Permit and Low Impact Development Standards (LIDS) compliance applications were received in 2011. Please see BMP 6-1.

BMP 6-1 Review NPDES Permit Application

Goal: To ensure that long-term controls are in place to prevent degradation of storm water					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Review NPDES Permit and LIDS compliance applications	Percentage of applications reviewed	100% of applications	NA	Harbors Division Environmental, Design and Maintenance Sections	No applications received.

6.1.2 Low Impact Development Standards Plan

Harbors Division has developed a low impact development standard (LIDS, see SWMP) that requires measures to reduce pollution discharges to the MEP from all new development and significant redevelopment projects. The LIDS requirements apply to all new development and significant redevelopment projects.

Significant redevelopment includes, but is not limited to expansion of a building footprint, or replacement of a structure; replacement of impervious surface that is not part of a routine maintenance activity; and land-disturbing activities related to structural or impervious surfaces. Where significant redevelopment will result in an increase of less than 50 percent of the impervious surfaces of a previously existing development, and the existing development was not subject to LIDS, the BMP design standards apply only to the addition, and need not be applied to the entire development.

Implementation of LIDS and amendments of TRPs and tenant lease agreements will follow the completion of the Final SWMP. Please see BMP 6-2.

BMP 6-2 Low Impact Development Standards Plan

Goal: Reduce pollution discharges to the MEP from all new development and significant redevelopment projects					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Implement LIDS and amend tenant lease agreements and TRPs as necessary	Percentage of necessary lease agreement and TRP amendments conducted	100%	TBD	Harbors Environmental Section, Design and Maintenance	To be released with Final SWMP

6.1.3 Structural and Non-Structural BMPs

Post-construction storm water quality efforts are currently addressed by Harbors Division through the following BMPs or integration of the following BMPs:

- ✓ Preserve undeveloped areas where such areas are not required by operations to be paved,
- ✓ Consider surface treatments for improved areas which retain rainfall and allow percolation rather than impervious surfacing which generates runoff, such as paver tiles in lieu of asphalt or concrete pavement,
- ✓ Preserve naturally occurring flat to low slopes in all areas, which minimize runoff concentration, quantity, velocity and erosive capability,
- ✓ Where runoff flows are concentrated, provide durable drainage systems sized to convey peak flows,
- ✓ Review construction plans to provide and maintain grading which limits the area of the drainage basin discharging into the harbor,
- ✓ Continuously monitor operations to ensure that major tenants using pier aprons adequately clean the aprons upon completion of loading/offloading activities,
- ✓ Implement structural BMPs that reduce the quantity of storm runoff at the Harbor,
- ✓ Operational areas will be paved with reinforced concrete or asphalt concrete, to prevent erosion. These surfaces will also allow spills of materials to be cleaned up,
- ✓ Maintain minimal to low slopes throughout improved areas (access roadways, piers and aprons) where surfaced with asphalt or reinforced concrete, which reduces runoff peak flow quantities and velocity.

Harbors Division evaluates current BMPs to determine if they sufficiently meet the requirements of the NPDES permit and, if they are lacking, Harbors Division requires tenants and contractors to implement the appropriate BMPs.

Post-construction storm water BMPs are evaluated by Harbors during tenant inspections. No new post-construction BMPs were implemented during 2011. Please see BMP 6-3.

BMP 6-3 Structural and Non-Structural BMPs

Goal: Implementation of LID BMPs					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Evaluate current BMPs	Percentage of BMPs evaluated	100%	Ongoing	Harbors Construction and Environmental Section, Design and Maintenance	BMPs were identified during tenant inspections
Enforce development & implementation of new post-construction BMPs	Percentage of site potential pollutants are prevented	100%	NA	Harbors Construction and Environmental Section, Design and Maintenance	No post-construction BMPs developed in 2011

6.1.4 Operation, Maintenance, and Inspections

Structural or non-structural BMPs are not considered effective, nor are MEP criteria met, unless a long-term operation and maintenance procedure is put into place and carried out. Upon completion of construction, assurance is required for the long-term operation and maintenance of structural and non-structural BMPs. Please see BMP 6-4.

BMP 6-4 Operations, Maintenance, and Inspections

Goal: To maintain effectiveness of BMPs through operations and maintenance plans					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Create database to track operation and maintenance practices	Create a database	Database has been created	NA	Harbors Environmental Section	To be created in 2012
Perform scheduled operation and maintenance practices	On-time completion of maintenance practices	100% of O&M has been confirmed conducted	NA	Oahu District	Identified BMPs will be documented and O&M will be confirmed in 2012
Inspect project for post-construction controls	Percentage of potential pollutants mitigated	Equal to maximum standard operating capacity	NA	Harbors Construction Environmental Section Inspectors and	To be inspected in 2012.

6.1.5 Stakeholder Education and Outreach, Employee Training

Tenant TRPs and tenant leases require maintenance of post-construction runoff control measures in their premises. An educational packet will be sent to all stakeholders, which include tenants and their contractors. The education package will include:

- ✓ A post-construction BMP template
- ✓ BMP Checklist
- ✓ Questions relating to post-construction storm water management on the TSI

While it is the responsibility of the tenant to ensure that their construction contractors are educated in Post-Construction considerations, Harbors will send educational material to contractors that are identified to be working on Harbors property. Please see BMP 6-5.

Harbors internal training will include guidance on the inspection of post-construction BMPs. Please see BMP 6-5. Inspection training also includes proper operations and maintenance of typical post construction BMPs, indicators of BMP failure, and inspection techniques.

BMP 6-5 Stakeholder Education and Outreach

Goal: Create awareness with stakeholders and employees to reduce post-construction run-off.					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Develop post-construction educational package	NA	NA	NA	Harbors Environmental Section	Educational materials to be developed in 2012
Distribute educational packet in TSI Mailing	Percentage of tenants in receipt of mailing	100%	NA	Harbors Environmental Section	Educational materials were developed and distributed.
Post information on Harbors Division website	Track number of views	Greater than previous year	NA	Harbors Web Master	Information to be posted in 2012
Conduct training	Percentage of employees and tenants trained	Greater than previous year	NA	Harbors Environmental Section	Training conducted with general stormwater awareness

7.0 POLLUTION PREVENTION/GOOD HOUSEKEEPING

Hawaii Harbor (left) and Sand Island (right), January2006

Permit Requirements

HAR Chapter 11-55 Appendix K Part 6.(a)(4*). Develop, implement and enforce an operation and maintenance 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 best management practices are properly implemented.

7.1 POLLUTION PREVENTION/GOOD HOUSEKEEPING PROGRAM

A Pollution Prevention/Good Housekeeping Program has been developed with the ultimate goal of preventing or reducing pollutant runoff. The program includes an internal record-keeping system to schedule and document the maintenance activities performed.

7.1.1 Maintenance and Housekeeping Practices

Maintenance is on-going at tenant and Harbors facilities. Please see BMP 7-1. The following maintenance activities are conducted:

- ✓ Emptying dumpsters and remove and dispose of discarded objects, machinery or equipment.
- ✓ Prompt repair/replacement of malfunctioning dumpsters
- ✓ General maintenance and repair of public facilities is conducted in-house, while a contractor is selected for most large projects.

- ✓ Grounds maintenance personnel use fertilizer or herbicides in accordance with the manufacturer's instructions and in a manner that eliminates potential for runoff into the gutters, or storm drain system.
- ✓ Pier and apron cleanliness is assessed for debris and staining, and responsible parties notified to conduct cleaning as needed. Operators with leaking vehicles are required to park vehicles and equipment indoors/under cover, provide drip pans and repair leaks.
- ✓ Vehicle and equipment washing on Harbors property is prohibited unless performed in an approved wash facility.
- ✓ Clean up stains, spills, oil spots using dry cleanup methods. A record of spill cleanups can be found in Appendix J.
- ✓ Storm drains are maintained on a regular schedule and records are kept. Please see Appendix P.

7.1.1.1 Sweeping Common Areas and Select Tenant Facilities

Sweeping prevents microscopic pollutants from entering the ocean by removing them before they flow into the storm sewer. Regular sweeping is performed by Harbors Grounds Maintenance. Grounds Maintenance has four sweepers. Sweeping is performed according to the following schedule presented in Table 7-1.

Table 7-1 Grounds Maintenance Sweeping Schedule

Location	Frequency	Duration (Hours)
KBPH Common Roadways & Apron	Twice per month	4

This year approximately 251.9 tons of sweeper waste was removed for disposal from both Honolulu Harbor and Kalaeloa Barbers Point Harbor combined. Grounds Maintenance is also responsible for collection of trash, leaves and other debris, which prevents debris from blocking storm drains and causing localized flooding. In 2011 approximately 9.48 tons of green waste was disposed of at Hawaiian Earth Products, a green waste disposal company.

7.2 WASTE COLLECTION

Grounds Maintenance picks up and disposes of other potential pollutants left in drop off areas or discarded illegally by the public in order to prevent pollution to the environment. This includes automobile, boat, and motorcycle lead acid batteries, scrap steel, discarded used tires, and construction debris.

Table 7-2 is a compilation of the different types of waste collected by Harbors Division and their disposal destinations. Quantities listed are the combined amounts from both Honolulu Harbor and KBPH. All disposal receipts are kept as supporting documentation of compliance with storm water regulations. All values are for both Honolulu Harbor and KBPH.

Table 7-2 Waste Destination and Amounts

Waste Type	Destination Facility	Amount
Green Waste	Hawaiian Earth Products	9.48 tons
Refuse	Covanta Energy Honolulu Resource Recovery	313.53 tons
Sweeper Waste	PVT Land Company, Ltd.	201.76 tons
Refuse	Waimanalo Gulch	50.14 tons
Recycled Metal	Schnitzer Steel Hawaii Corp.	18.9 tons
Used Batteries	Leeward Auto Recycling	74 batteries

BMP 7-1 Maintenance and Housekeeping Practices

Goal: To prevent pollutants from reaching the storm sewer system by using preventative maintenance practices and BMPs.					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Designate appropriate sweeping frequencies and perform sweeping	Percentage of facilities for which a written schedule is made and sweeping performed	100% of facilities	Common area schedule already in-place	Harbors Maintenance Management and Personnel; tenants	Common areas and facilities with contracts with Harbors are swept according to a schedule.
Designate appropriate drainage system maintenance and perform maintenance according to priority	Percentage of drainage systems that have been designated as urgent that have been cleaned	100% of urgent drainage systems	On-going	Harbors Maintenance Management and Personnel; tenants	Drainage priorities to be determined from 2011 inspection results.
Provide general instructions for identification, storage, use, collection and treatment of drainage and housekeeping educational materials to tenants	Percentage of tenants to which educational materials have been provided	100% of tenants	May 2011	Harbors Environmental Section	Instructions Provided in Harbors Storm Water training and mailing attachments
Provide training to employees	Percentage of employees to whom training has been provided	100% of employees	Ongoing	Harbors Environmental Section	Maintenance staff has been trained on general storm water pollution prevention. Please see Appendix L.

7.2.1 Review of Wash Areas, Dry Wells and Infiltration Sinks

Prior to 2011, Harbors Division prohibited all washing activities, including vehicle/equipment washing and hand washing with the use of sinks that are not already approved by HDOH because of the potential to create NSWDs. In 2011, Harbors Division began to allow tenants to formally submit applications to perform permitted washing activities.

The EPA stormwater BMP for Municipal Vehicle and Equipment Washing states the following:

> *"If a vehicle must be washed outside of a facility plumbed to the sanitary sewer, take precautions to avoid wash water discharges to the storm drain system. 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."*
>
> - EPA Website Reference: http://cfpub.epa.gov/npdes/stormwater/menuofbmps

Harbors Division requires that applications for washing include the following information:

- ✓ What the tenant intends to wash;
- ✓ Equipment used (i.e. pressure sprayer, hose, etc.) and flow rate;
- ✓ Wash water containment method (permanent wash rack, temporary berm, etc.);
- ✓ Wash water capture method (vacuum truck, evaporation, etc.);
- ✓ Wash water collection container capacity; and
- ✓ Wash water disposal method.

Tenants are prohibited from washing equipment and vehicles until Harbors Division verifies that these washing activities do not create a potential hazard to the receiving waters. Harbors Division issues a formal letter of approval once these conditions are met. Thus far, no tenants at KBPH have applied for approval to wash. The application and review process is tracked on an annual basis in BMP 7-2.

Harbors Division requires that applications for sinks that are not connected to the sanitary sewer include the following information:

- ✓ The intended use of the sink;
- ✓ A list of substances that may be washed into the sink (i.e. bio-degradable soaps, dirt, etc.)
- ✓ Construction drawings for the sink;
- ✓ Proposed treatment of the water (filtration fabric, sand, carbon filters, oil-absorbent material, etc.)
- ✓ Final destination of wash water; and
- ✓ Routine maintenance schedule for the sink (replacement of filtration material).

Tenants are prohibited from using unapproved sinks until Harbors Division verifies that the sinks do not create a potential hazard to receiving waters. Harbors Division issues a formal letter of approval once these conditions are met. Thus far, no tenants at KBPH have applied for approval for a sink. The application and review process is tracked on an annual basis in BMP 7-2.

BMP 7-2 Review of Wash Areas and Sinks

Goal: To prevent pollutants from reaching the storm sewer system by using preventative maintenance practices and BMPs.					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Review applications for vehicle and equipment wash areas for storm water concerns.	Number of applications submitted and reviewed.	100% of applications.	Ongoing	Harbors Environmental Section	No applications have been submitted.
Review applications for sinks for storm water concerns.	Number of applications submitted and reviewed.	100% of applications	Ongoing	Harbors Environmental Section	No applications have been submitted.

7.2.2 Tenant Education and Employee Training

Tenants were educated about pollution prevention and good housekeeping practices at the annual Harbors training. A copy of the presentation given and a record of attendance are located in Appendix E. A video entitled, "Storm Watch," by EXCAL Visual Communications, was shown during the presentation and topics including the following were discussed:

- ✓ Proper methods for cleaning equipment;
- ✓ Proper labeling and handling of cleaners, solvents, and chemicals;
- ✓ Organized chemical storage;
- ✓ Responsible disposal of chemicals;
- ✓ Storage procedures for stored metals;
- ✓ Proper site drainage;
- ✓ Proper equipment/material storage;
- ✓ Timely equipment operation and maintenance; and
- ✓ Proper site maintenance.

Slides depicting examples of proper and improper BMPs were also presented to illustrate acceptable procedures.

BMP 7-3 Tenant Education, Employee and Contractor Education

Goal: To prevent pollutants from reaching the storm sewer system by using preventative maintenance practices and BMPs.					
Activity	**Evaluation Indicators (or Measurable Goals)**	**Milestones**	**Date Performed**	**Action Performed by**	**Status/ Comments**
Develop educational materials and distribute to tenants	Percentage of tenants in receipt of educational materials	100% of tenants	September 2011	Weston	TSI attachments provided information and tips on housekeeping practices. Will develop contractor educational materials in 2012.
Hold training sessions for employees tasked with maintenance activities	100% of employees trained	100% of employees	Ongoing	Harbors Environmental Section	General awareness training conducted in 2011. Please see Appendix L.

8.0 ADDITIONAL ANNUAL COMPLIANCE REPORT REQUIREMENTS

8.1 MODIFICATIONS TO THE SWMP

Per USEPA Order for Compliance, paragraph 1, the SWMP was revised to more comprehensively detail specific BMPs that will be implemented for each of the program minimum control measures, with underlying rationale for their selection and inclusion. Requirements to specify quantitative goals, provide metrics for improvement, and milestones for each of the BMPs; and the name or name or position title and affiliation of the person or persons responsible for implementation or coordination of each program component are now tracked through the ACR.

Harbors Division made appropriate modifications to reflect the above requirements with its 2009 Draft SWMP submission and is currently awaiting comments from the USEPA and HDOH to incorporate into the revised SWMP.

8.2 MODIFICATIONS TO THE SMALL MS4

No major modifications have been made to the Small MS4 during the 2011 calendar year. A copy of the outfall map is available in Appendix I.

8.3 SUMMARY OF PLANNED ACTIVITIES

8.3.1 Public Education and Outreach

- ✓ Replace TSI form with contact information form to eliminate redundancy with inspection program
- ✓ Add additional educational materials
- ✓ Record hotline inquiries and track response time
- ✓ Post signs that advise against dumping
- ✓ Post tenant training presentation on Harbors website
- ✓ Set up and solicit a volunteer cleanup or storm drain stenciling activity
- ✓ Sponsor a yearly advertisement in the newspaper
- ✓ Monitor ship cargo loading and unloading
- ✓ Develop and maintain an inventory of ships and agents responsible for tracking vessel operators

- ✓ Provide educational materials to vessel operators
- ✓ Keep tenant inventory up-to-date
- ✓ Conduct inspections of all tenants by December 31, 2012
- ✓ Add findings, follow-up to the database

8.3.2 Public Involvement

- ✓ Post SWMP to the Harbors website for public review and comment when completed
- ✓ Track comments and include them in the ACR for 2011

8.3.3 Illicit Discharge Detection and Elimination

- ✓ Create a comprehensive list of NSWDs and control measures for all tenants
- ✓ Continue procedures outlined in the IEP
- ✓ Conduct dry and wet weather ORI
- ✓ Perform follow-up on dry weather NSWD observations

8.3.4 Construction Site Runoff Control

- ✓ Dependent on construction plan submittal
- ✓ Perform construction site plan and permit reviews
- ✓ Include Water Pollution Prevention specifications in contractor solicitation documents
- ✓ Report and implement enforcement procedures against construction sites that are found to be out of compliance
- ✓ Perform construction site inspections to identify possible sources of pollution and to ensure BMP's are providing an appropriate level of pollution prevention. Inspections will specifically target the following:
- ✓ Require stockpiling or immediate access to materials for erosion prevention and sediment control.
- ✓ Require erosion prevention and sediment controls at all construction projects;
- ✓ Require construction site operators to implement appropriate erosion prevention and sediment control BMPs; and
- ✓ Require construction site operators to implement BMPs appropriate for the control of waste and other potential pollutant sources.
- ✓ Execute Stockpile Management Plan

8.3.5 Post-Construction Storm Water Management

- ✓ Inventory existing BMPs if found during tenant inspections
- ✓ Perform follow-up construction site permit reviews

- ✓ Enforce the incorporation of Low Impact Development Standards into all new development
- ✓ Ensure structural and non-structural BMP's are in place post-construction to minimize water quality impacts and attempt to maintain pre-development runoff conditions
- ✓ Ensure the longevity of post-construction BMP's via the creation of a long-term operation and maintenance programs
- ✓ Generate and distribute educational materials in annual mailings to tenants and maintain educational materials on the Harbors Division Stormwater Management website
- ✓ Conduct annual tenant training workshop

8.3.6 Pollution Prevention/Good Housekeeping

- ✓ Continue the ongoing maintenance of tenant and Harbor's facilities
- ✓ Require all tenants that wish to perform wash activities to submit applications for washing vehicles and equipment with proper controls and procedures to prevent pollution of receiving waters. Track review and approval process.
- ✓ Harbors will expand its maintenance program to include preventative maintenance of the storm drainage system, internal record keeping and scheduling, and appropriate training of employees
- ✓ Perform inspections at the frequency determined by risk rankings and conduct annual training to ensure tenant's compliance with employee training, pollution prevention, and good housekeeping requirements

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APPENDIX A
NGPC FROM HDOH AND 2007 LETTER OF EXTENSION

LINDA LINGLE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801-3378

IRENE L. FUKINO, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:
EMD / CWB

03KB488.FNL

May 19, 2003

The Honorable Rodney K. Haraga
Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Attention: Mr. Fred Nunes
Harbors Division
Engineering Program Manager

Dear Mr. Haraga:

Subject: **NOTICE OF GENERAL PERMIT COVERAGE (NGPC)**
National Pollutant Discharge Elimination System (NPDES)
Kalaeloa Barbers Point Harbor Small Municipal Separate Storm Sewer System
Kapolei, Oahu, Hawaii
File No. HI 03KB488

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. § 1251 et seq.; the "Act"); Chapter 342D, Hawaii Revised Statutes; and Chapters 11-54 and 11-55, Hawaii Administrative Rules (HAR), Department of Health (DOH), State of Hawaii,

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION

(hereinafter "PERMITTEE")

authorized to discharge storm water runoff and certain non-storm water discharges as identified in Section 2.b. of this NGPC from the Hawaii Department of Transportation, Harbors Division (DOT-Harbors) Small Municipal Separate Storm Sewer System (Small MS4) outfalls identified in the Notice of Intent (NOI), dated March 7, 2003, and additional Small MS4 outfalls that may be identified from time to time by the DOT-Harbors, to the receiving waters named Kalaeloa Barbers Point Harbor, a Class A, Marine Water Embayment.

This NGPC is subject to the Permittee's compliance with:

- HAR, Chapter 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.
- HAR, Chapter 11-55, Appendix A, DOH, Standard General Permit Conditions.
- HAR, Sections 11-55-34.04(a), 11-55-34.07, 11-55-34.11, 11-55-34.12, and any other applicable Sections of HAR, Chapter 11-55.

The Permittee shall, but not be limited to, comply with the following General Requirements, Discharge Monitoring Requirements, and Reporting Requirements.

1. GENERAL REQUIREMENTS

The Permittee shall:

a. Comply with all materials submitted in and with the NOI, dated March 7, 2003.

b. Retain a copy of the NOI; the submitted Storm Water Management Plan (SWMP), and all subsequent revisions; and this NGPC at the facility.

c. Ensure that anyone working under this NGPC complies with the terms and conditions of this NGPC.

d. Revise the SWMP if any discharge limitation or water quality standards established in HAR, Section 11-54-04 for marine waters are exceeded. The revisions shall include Best Management Practices (BMPs) and/or other measures to reduce the amount of pollutants found to be in exceedance from entering State waters.

e. Obtain all necessary permits, certifications, approvals, etc. from all pertinent agencies for the subject project.

f. Include the file number, HI 03KB488, and the following certification with all information required under this NGPC:

> **"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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."

g. Submit all information required under this NGPC to the following address:

Director of Health
Clean Water Branch
Environmental Management Division
State Department of Health
P.O. Box 3378
Honolulu, HI 96801-3378

2. DISCHARGE MONITORING REQUIREMENTS

a. The Permittee shall effectively prohibit non-storm water discharges through its system into State waters. NPDES permitted discharges and discharges identified in Section 2.b. of this NGPC are exempt from this prohibition.

b. The following non-storm water discharges may be discharged into DOT-Harbors' Small MS4 without an NPDES permit, provided that the DOT-Harbors determines that such discharges will not contain pollutants in amounts that will cause or contribute to a violation of an applicable water quality standard and the SWMP shall "identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge."

i. Water line flushing;

ii. Landscape irrigation;

iii. Diverted stream flows;

iv. Rising ground waters;

v. Uncontaminated ground water infiltration (as defined in Title 40, Code of Federal Regulations (40 CFR) §35.2005(20));

vi. Uncontaminated pumped ground water;

vii. Discharges from potable water sources and foundation drains;

viii. Air conditioning condensate;

ix. Irrigation water;

x. Springs;

xi. Water from crawl space pumps and footing drains;

xii. Lawn watering runoff;

xiii. Water from individual residential car washing;

xiv. Flows from riparian habitats and wetlands;

xv. Dechlorinated swimming pool discharges;

xvi. Residual street wash water; and

xvii. Discharges or flows from fire fighting activities.

c. The discharge of pollutants from the DOT-Harbors' Small MS4 shall be reduced to the maximum extent practicable.

3. REPORTING REQUIREMENTS

The permittee shall:

a. Develop, implement, and enforce the SWMP designed to reduce the discharge of pollutants from the DOT-Harbors' Small MS4 to the maximum extent practicable in order to protect water quality and satisfy the appropriate water quality requirements of the Act. In accordance with Section 6(a) of Appendix K, Chapter 11-55, HAR, the SWMP shall include the minimum control measures identified below:

i. Public Education and Outreach

ii. Public Involvement/Participation

iii. Illicit Discharge Detection and Elimination

iv. Construction Site Runoff Control

v. Post-Construction Storm Water Management in New Development and Redevelopment

vi. Pollution Prevention/Good Housekeeping

b. Submit the SWMP within 120 days of the Permittee's claimed automatic coverage which became effective on April 7, 2003.

c. 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.

d. Report in writing any proposed modification described in accordance with Section 6(c)(1) of Appendix K, Chapter 11-55, HAR, to the DOH for approval at least thirty days prior to the initiation date of the modification. The permittee shall report and justify all other modifications made to the SWMP in the annual report for the year in which the modification was made.

e. Submit an annual report by January 28th of the following year in accordance with Section 9(a) of Appendix K, Chapter 11-55, HAR. The annual report shall cover each calendar year during the term of this NGPC and include the following:

i. Status of compliance with conditions of this NGPC;

ii. Assessment of the SWMP, including progress towards implementing each minimum control measure;

iii. Modifications made to the SWMP and implementation schedule during that calendar year, including justifications;

iv. Summary of the storm water activities planned to be undertaken during the next calendar year; and

v. Major modifications made to DOT-Harbors' Small MS4, including, but not limited to, addition and removal of outfalls, drainage lines, and treatment facilities.

f. Properly address all modifications, concerns, requests and/or comments to the DOH's satisfaction.

i. SWMP Modifications - The storm water pollution control activities described in the SWMP may need to be modified, revised, or amended from time to time over the life of the NGPC to respond to changed conditions and to incorporate more effective approaches to pollutant control. Minor changes may be proposed by the Permittee or requested by the DOH. Proposed changes that imply a major reduction in the overall scope and/or level of effort of the SWMP must be made for cause and in compliance with 40 CFR Section 122.62 and Part 124.

ii. System Modifications include any planned physical alterations or additions to the permitted Small MS4, any existing outfalls newly identified over the term of this NGPC.

This NGPC will take effect on the date of this notice. This NGPC will expire at midnight, November 6, 2007, or when amendments to HAR, Chapter 11-55, Appendix K, are adopted, whichever occurs first.

If you have any questions, please contact Ms. Joanna L. Seto of the Engineering Section, Clean Water Branch, at 586-4309.

Sincerely,

CHIYOME L. FUKINO, M.D.
Director of Health

Enclosures: 1. HAR, Sections 11-55-01 and 11-55-34 to 11-55-34.12
2. HAR, Chapter 11-55, Appendices A and K
3. Title 40, CFR Citations as referenced in HAR, Chapter 11-55, Water Pollution Control, Appendix A

c: Mr. Fred Nunes, Engineering Program Manager, DOT-Harbors (w/o encls.)
[via fax 587-1864 only]
Mr. Charles G. Schuster, P.E., Edward K. Noda and Associates, Inc. (w/ Receipt No. 03552 for $500 Filing Fee only)

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
DOH/CWB

03KB488.EXT

October 19, 2007

The Honorable Barry Fukunaga
Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Attention: Mr. Frederick S. Nunes, P.E.
Engineering Program Manager
Harbors Division

Dear Mr. Fukunaga:

Subject: Administrative Extension of
Notice of General Permit Coverage (NGPC)
Kalaeloa Barbers Point Harbor
Kalaeloa, Oahu, Hawaii
File No. HI 03KB488

The Department of Health (Department), Clean Water Branch (CWB) acknowledges receipt of your Notice of Intent (NOI) and $500 filing fee for coverage under the National Pollutant Discharge Elimination System general permit provisions, in accordance with the Hawaii Administrative Rules (HAR), Section 11-55-34.08.

The Department is unable to complete the processing of your project's NOI prior to the current NGPC expiration date. Therefore, in accordance with HAR, Section 11-55-34.09(d), the Department hereby administratively extends the subject NGPC until a notice of renewed coverage under the applicable general permit is issued or until notified by the Department, whichever occurs first. Please note that the Department may request you submit additional information in order to complete the processing of your NOI for the renewed coverage.

The Permittee shall not be held in violation of Hawaii Revised Statues, Chapter 342D-6(h) and HAR, Chapter 11-55 during the pendency of its NOI, so long as it acts consistently with the NGPC presently granted. Any non-compliance with the conditions of the administratively extended NGPC may be subject to penalties of up to $25,000 per violation per day.

It is the Permittee's responsibility to ensure that anyone working under this administrative extension of your NGPC understands and complies with the terms and conditions therein.

If you have any questions, please contact Ms. Joanna L. Seto, Supervisor of the Engineering Section, CWB, at 586-4309.

Sincerely,

FOR Chiyome Leinaala Fukino, M.D.
Director of Health

c: Mr. Randal Leong, DOT-HAR [via fax 587-1864 only]
Mr. Charles Schuster, EKNA Services, Inc. (w/Receipt No. 31732 for $500 Filing Fee)

APPENDIX B
TENANT LEASE AGREEMENT AND TENANT REVOCABLE PERMIT

Lease Agreement Addendum 1

Environmental Compliance - Lessee's Duties

ADDENDUM 1

ENVIRONMENTAL COMPLIANCE – LESSEE'S DUTIES

A. Definitions.

For purposes of this Lease, Lessee agrees and understands that the following terms shall have the following meanings:

"Environmental Laws" shall mean all federal, state and local laws of every nature including statutes, ordinances, rules, regulations, codes, notices, standards, directives of every kind, guidelines, permits, licenses, authorizations, approvals, interpretations of the foregoing by any court, legislative body, agency or official, judicial decisions, orders, rulings or judgments, or rules of common law which currently are in effect or which may come into effect through enactment, issuance, promulgation, adoption or otherwise, which in any way pertain to, relate to, or have any relevance to the environment, health or safety. These environmental laws include, but are not limited to, regulations and orders of the federal Environmental Protection Agency and of the State of Hawaii Department of Health.

"Hazardous Substance" shall mean and include any chemical, substance, organic or inorganic material, controlled substance, object, condition, waste, living organism, or combination thereof which is, may be, or has been determined by proper state or federal authority under any environmental law to be, hazardous to human health or safety or detrimental to the environment. This term shall include, but not be limited to, petroleum hydrocarbons, asbestos, radon, polychlorinated biphenyls (PCBs), methane, and other materials or substances that are regulated by state or federal authorities.

B. Lessee's Activities and Duties.

1. Compliance with Environmental Laws. Lessee agrees, at its sole expense and cost, to comply with all environmental laws that apply to the leased premises during the term of this lease, and Lessee's occupancy of, and activities on, the leased premises. This duty shall survive the expiration or termination of this lease which means that the Lessee's duty to comply with environmental laws shall include complying with all environmental laws, regulations and orders that may apply, or be determined to apply, to the occupancy and activities of the Lessee on the leased premises after the expiration or termination of this lease. Failure of the Lessee to comply with any environmental laws shall constitute a breach of this lease for which the Lessor shall be entitled, in its discretion, to terminate this lease and take any other action at law or in equity it deems appropriate. Lessee shall conform its operations with 49 CFR, Part 195 (Pipeline Safety), and shall install Time Domain Reflectivity (TDR) cable leak detection and monitoring equipment, which meet or exceed industry standards, adjacent to the fuel pipelines and related facilities, to provide an indication of any leak occurrence from any fuel pipeline or containment

device. In addition, the Lessee shall install a secondary containment wall/vaulting to prevent releases into the environment. The Lessee shall also develop, implement, and follow a written integrity management program that addresses the risks of each pipeline, and provides for periodic assessment of the integrity of each pipeline through internal inspection, pressure testing, or other equally effective assessment means, on a regular basis.

2. Hazardous Substances. Lessee shall not use, store, treat, dispose, discharge, release, generate, create, or otherwise handle any Hazardous Substance, or allow the same by any third person, on the leased premises (with the exception of the intended routine management of the petroleum products within the proposed pipeline) without first obtaining the written consent of the Lessor and complying with all environmental laws, including giving all required notices, reporting to, and obtaining permits from, all appropriate authorities, and complying with all provisions of this lease.

3. Notice to Lessor. Lessee shall keep Lessor fully informed at all times regarding all environmental law related matters affecting the Lessee or the leased premises. This duty shall include, without limited the foregoing duty, providing the Lessor with a current and complete list and accounting of all hazardous substances of every kind which are present on or about the leased premises and with evidence that the Lessee has in effect all required and appropriate permits, licenses, registrations, approvals and other consents that may be required of or by federal and state authorities under all environmental laws. This duty shall also include providing immediate written notice of any investigation, enforcement action, remediation, or other regulatory action, order of any type, or any legal action, initiated, issued, or any indication of an intent to do so, communicated in anyway to the Lessee by any federal or state authority, or individual, which relates in any way to any environmental law, or any hazardous substance, and the Lessee or the leased premises. As part of this written notice to the Lessor, the Lessee shall also immediately provide the Lessor with copies of all written communications from individuals, or state and federal authorities, including copies of all correspondence, claims, complaints, warnings, reports, technical data and any other documents received or obtained by the Lessee. At least thirty days prior to termination of this lease, or termination of the possession of the leased premises by Lessee, Lessee shall provide the Lessor with written evidence satisfactory to the Lessor that Lessee has fully complied with all environmental laws, including any orders issued by any governmental authority to the Lessee that relate to the leased premises.

4. Notice to Authorities. Lessee shall provide written notice to the Environmental Protection Agency and the State of Hawaii Department of Health at least sixty days prior to the termination of this lease, or sixty days prior to Lessee's termination of possession of the leased premises, whichever occurs first, that Lessee intends to vacate the leased premises and terminate its operations on those leased premises. Lessee shall allow the agents or representatives of said authorities access to the leased premises at any and all reasonable times for the purpose of inspecting the leased premises, and taking samples of any material for inspection or testing for compliance with any environmental laws. Lessee shall provide copies of said written notices to Lessor at the time said notices are provided to said authorities.

5. Disposal/Removal. Except for materials that are lawfully sold in the ordinary course of the Lessee's business, Lessee shall cause any hazardous substances to be removed from the leased premises for disposal, and to be transported from the leased premises solely by duly licensed hazardous substances transporters, to duly licensed facilities for final disposal as

required by all applicable environmental laws. Lessee shall provide Lessor with copies of documentary proof, including manifests, receipts, or bills of lading, which reflect that said hazardous substances have been properly removed and disposed of in accordance with all environmental laws.

6. Environmental Investigations and Assessments. The Lessee, at its sole cost and expense, shall cause to be conducted such investigations and assessments of the leased premises to determine the presence of any hazardous substance on, in, or under the leased premises as may be directed from time to time by the Lessor, in its sole discretion, or by any federal or state authority. The extent and number of any environmental investigations and assessments shall be determined by the Lessor or the federal or state authority directing said investigations and assessments to be conducted. Lessee shall retain a competent and qualified person or entity that is satisfactory to the Lessor or governmental authority, as the case may be, to conduct said investigations and assessments. Lessee shall direct said person or entity to provide the Lessor or governmental authority, if so requested, with testable portions of all samples of any soils, water, ground water, or other material that may be obtained for testing, and provide to the Lessor and the governmental authority written results of all tests on said samples upon completion of said testing.

7. Remediation. In the event that any hazardous substance is used, stored, treated, disposed on the premises, handled, discharged, released, or determined to be present on the leased premises, Lessee shall, at its sole expense and cost, remediate the leased premises of any hazardous substances, and dispose/remove said hazardous substance in accordance with paragraph 4. This duty to remediate includes strictly complying with all environmental laws and directives to the Lessee to remediate said hazardous substance from the Lessor. This duty to remediate shall include replacement of any materials, such as soils, so removed with material that is satisfactory to the Lessor and governmental authority, as the case may be. In the event Lessee does not remediate the leased premises to the same condition as it existed at the commencement of the lease, as determined by the Lessor, Lessee understands and agrees that Lessor may exercise its rights under the paragraph entitled Lessor's Right to Act, and until such time as the remediation is complete to the satisfaction of the Lessor, Lessee shall be liable for lease rent in the same manner and amount as if the lease had continued in effect during the period of remediation.

8. Restoration and Surrender of Premises. The Lessee hereby agrees to restore the leased premises, at its sole cost and expense, including the soil, water and structures on, in, or under the leased premises to the same condition as the premises existed at the commencement of this lease, fair wear and tear to the structures excepted. In the event Lessee does not restore the leased premises to the same condition as it existed at the commencement of the lease, as determined by the Lessor, Lessee understands and agrees that Lessor may exercise its rights under the paragraph entitled Lessor's Right to Act, and until such time as the restoration is complete to the satisfaction of the Lessor, Lessee shall be liable for lease rent in the same manner and amount as if the lease had continued in effect during the period of restoration.

9. Lessor's Right to Act. In the event Lessee fails for any reason to comply with any of its duties under this lease or under any environmental laws within the time set for doing so, or within a reasonable time as determined by the Lessor, Lessor shall have the right, but not the obligation, in its sole discretion, to perform those duties, or cause them to be performed. Lessee

hereby grants access to the leased premises at all reasonable hours to the Lessor, its agents, and anyone designated by the Lessor in order to perform said acts and duties. Any cost, expense, or liability of any type that may be incurred by the Lessor in performing said acts or duties shall be the sole responsibility of the Lessee, and Lessee hereby agrees to pay for those costs and expenses, and indemnify the Lessor for any liability incurred. This obligation shall extend to any costs and expenses incident to enforcement of Lessor's right to act, including litigation costs, attorneys fees, and the costs and fees for collection of said cost, expense or liability.

10. Release and Indemnity. Lessee hereby agrees to release the Lessor, its officers, agents, successors, and assigns from any liability of any kind, including, but not limited to, any liability for any damages, penalties, fines, judgments, or assessments that may be imposed or obtained by any person, agency, or governmental authority against the Lessee by reason of any hazardous substance that may be present by whatever means on, in or under the leased premises. The Lessee hereby agrees to indemnify, defend with counsel suitable to the Lessor, and hold harmless the Lessor from any liability that may arise in connection with, or by reason of, any occurrence involving any hazardous substance that may be alleged to be connected or related in any way with the leased premises, the Lessor's ownership of the premises, or this lease, including the presence of any hazardous substance on the leased premises.

11. Surety/Performance Bond for Cleanup/Restoration. At its sole cost and expense, Lessee shall provide the Lessor with a Bond, or other security satisfactory to Lessor, in the amount of $100,000.00 to assure removal of any hazardous substances, and the remediation and restoration of the leased premises during the term of, and at the conclusion of the lease so as to comply with the terms of this lease to the satisfaction of the Lessor, and in order to comply with environmental laws. Lessee shall provide written evidence that said Bond or security has been secured by the Lessee, which evidence shall indicate the term during which said Bond or other security shall irrevocably remain in effect.

12. Insurance. Effective at the commencement of this lease, Lessee shall obtain and keep in force a comprehensive liability and property damage policy of insurance issued by an insurer licensed to do business in the State of Hawaii, with limits of indemnity coverage no less than $1,000,000. Said policy of insurance shall provide coverage for personal injury or damage to property caused by hazardous substances or any occurrence that may constitute a violation of any environmental law by the Lessee. Said policy of insurance shall name the Lessor as an additional insured. Lessee shall provide proof of said insurance satisfactory to the Lessor which shall include, at a minimum, the coverage provided, and the term during which said policy shall be effective.

Excerpt from Standard Revocable Permit

Environmental Compliance - Permittee's Duties

26. SPECIAL TERMS AND CONDITIONS.

ENVIRONMENTAL COMPLIANCE – PERMITTEE'S DUTIES

A. Definitions.

For purposes of this Revocable Permit, Permittee agrees and understands that the following terms shall have the following meanings:

"Environmental Laws" shall mean all federal, state and local laws of every nature including statutes, ordinances, rules, regulations, codes, notices, standards, directives of every kind, guidelines, permits, licenses, authorizations, approvals, interpretations of the foregoing by any court, legislative body, agency or official, judicial decisions, orders, rulings or judgments, or rules of common law which currently are in effect or which may come into effect through enactment, issuance, promulgation, adoption or otherwise, which in any way pertain to, relate to, or have any relevance to the environment, health or safety. These environmental laws include, but are not limited to, regulations and orders of the federal Environmental Protection Agency and of the State of Hawaii Department of Health.

"Hazardous Substance" shall mean and include any chemical, substance, organic or inorganic material, controlled substance, object, condition, waste, living organism, or combination thereof which is, may be, or has been determined by proper state or federal authority under any environmental law to be, hazardous to human health or safety or detrimental to the environment. This term shall include, but not be limited to, petroleum hydrocarbons, asbestos, radon, polychlorinated biphenyls (PCBs), methane, and other materials or substances that are regulated by state or federal authorities.

B. Permittee's Activities and Duties.

1. Compliance with Environmental Laws. Permittee agrees, at its sole expense and cost, to comply with all environmental laws that apply to the premises during the term of this Revocable Permit, and Permittee's occupancy of, and activities on, the premises. This duty shall survive the expiration or termination of this Revocable Permit which means that the Permittee's duty to comply with environmental laws shall include complying with all environmental laws, regulations and orders that may apply, or be determined to apply, to the occupancy and activities of the Permittee on the premises after the expiration or termination of this Revocable Permit. Failure of the Permittee to comply with any environmental laws shall constitutes a breach of this Revocable Permit for which the State shall be entitled, in its discretion, to terminate this Revocable Permit and take any other action at law or in equity it deems appropriate.

2. Hazardous Substances. Permittee shall not use, store, treat, dispose, discharge, release, generate, create, or otherwise handle any Hazardous Substance, or allow the same by any third

person, on the premises without first obtaining the written consent of the State and complying with all environmental laws, including giving all required notices, reporting to, and obtaining permits from, all appropriate authorities, and complying with all provisions of this Revocable Permit.

3. Notice to the State. Permittee shall keep the State fully informed at all times regarding all Environmental law related matters affecting the Permittee or the premises. This duty shall include, without limit to the foregoing duty, providing the State with a current and complete list and accounting of all hazardous substances of every kind which are present on or about the premises and with evidence that the Permittee has in effect all required and appropriate permits, licenses, registrations, approvals and other consents that may be required of or by federal and state authorities under all environmental laws. This duty shall also include providing immediate written notice of any investigation, enforcement action, remediation or other regulatory action, order of any type, or any legal action, initiated, issued, or any indication of an intent to do so, communicated in anyway to the Permittee by any federal or state authority or individual which relates in any way to any environmental law or any hazardous substance and the Permittee or the premises. This written notice to the State shall include the Permittee immediately providing the State with copies of all written communications from individuals or state and federal authorities, including copies of all correspondence, claims, complaints, warnings, reports, technical data and any other documents received or obtained by the Permittee. At least thirty (30) days prior to termination of this Revocable Permit, or termination of the possession of the premises by Permittee, which ever shall first occur, Permittee shall provide the State with written evidence satisfactory to the State that Permittee has fully complied with all environmental laws, including any orders issued by any governmental authority to the Permittee that relate to the premises.

4. Notice to Authorities. Permittee shall provide written notice to the Environmental Protection Agency and the State of Hawaii Department of Health at least sixty (60) days prior to the termination of this Revocable Permit, or sixty (60) days prior to Permittee's termination of possession of the premises, whichever occurs first, the fact that Permittee intends to vacate the premises and terminate its operations on those premises. Permittee shall allow the agents or representatives of said authorities access to the premises at any and all reasonable times for the purpose of inspecting the premises and taking samples of any material for inspection or testing for compliance with any environmental laws. Permittee shall provide copies of said written notices to the State at the time said notices are provided to said authorities.

5. Disposal/Removal. Except for materials that are lawfully sold in the ordinary course of the Permittee's business and for which the Permittee has obtained all required authorizations from appropriate authorities including the prior written permission of the State to have said substance on the premises, Permittee shall cause any hazardous substances to be removed from the premises for disposal. This duty shall include the transportation of said hazardous substance from the premises solely by duly licensed hazardous substance transporters to duly licensed facilities for final disposal as required by all applicable environmental laws. Permittee shall provide the State with copies of documentary proof, including manifests, receipts or bills of lading, which reflect that said hazardous substances have been properly removed and disposed of in accordance with all environmental laws.

6. Environmental Investigations and Assessments. The Permittee, at its sole cost and expense, shall cause to be conducted such investigations and assessments of the premises to determine the presence of any hazardous substance on, in, or under the premises as may be directed from time to time by the State, in its sole discretion, or by any federal or state authority. The extent

and number of any environmental investigations and assessments shall be determined by the State or the federal or state authority directing said investigations and assessments to be conducted. Permittee shall retain a competent and qualified person or entity that is satisfactory to the State or governmental authority, as the case may be, to conduct said investigations and assessments. Permittee shall direct said person or entity to provide the State or governmental authority, if so requested, with testable portions of all samples of any soils, water, ground water or other material that may be obtained for testing and provide directly to the State and the governmental authority at the sole expense of the Permittee written results of all tests on said samples upon completion of said testing.

7. Remediation. In the event that any hazardous substance is used, stored, treated, disposed on the premises, handled, discharged, released, or determined to be present on the premises, or to have migrated from the premises, Permittee shall, at its sole expense and cost, remediate the premises, or any location off the premises to which it is determined that the hazardous substance has migrated, of any hazardous substances. Said duty to remediate includes the removal and disposal of said hazardous substances in accordance with paragraph 5. This duty to remediate includes strictly complying with all environmental laws and directives to remediate said hazardous substance issued from the State or any federal or State governmental authority charged with enforcing the Environmental laws. This duty to remediate shall include replacement of any materials, such as soils, removed with material that is satisfactory to the State and governmental authority, as the case may be.

8. Restoration and Surrender of Premises. The Permittee hereby agrees to restore the premises, at its sole cost and expense, including the soil, water and structures on, in, or under the premises, to the same condition as the premises existed at the commencement of this Revocable Permit, fair wear and tear to the structures excepted. In the event Permittee does not restore the premises to the same condition as it existed at the commencement of the Revocable Permit, as determined by the State, the Permittee understands and agrees that the State may exercise its rights under the paragraph entitled State's Right to Act, and until such time as the restoration is complete to the satisfaction of the State, Permittee shall be liable for Revocable Permit rent in the same manner and amount as if the Revocable Permit had continued in effect during the period of restoration.

9. State's Right to Act. In the event the Permittee fails for any reason to comply with any of its duties under this Revocable Permit or under any environmental laws within the time set for doing so, or within a reasonable time as determined by the State, the State shall have the right, but not the obligation, in its sole discretion, to perform those duties, or cause them to be performed. Permittee hereby grants access to the premises at all reasonable hours to the State, its agents and anyone designated by the State in order to perform said acts and duties. Any cost, expense or liability of any type that may be incurred by the State in performing said acts or duties shall be the sole responsibility of the Permittee and Permittee hereby agrees to pay for those costs and expenses and indemnify the State for any liability incurred. This obligation shall extend to any costs and expenses incident to enforcement of State's right to act, including litigation costs, attorneys fees and the costs and fees for collection of said cost, expense or liability.

10. Release and Indemnity. Permittee hereby agrees to release the State, its officers, agents, successors and assigns from any liability of any kind, including, but not limited to, any liability for any damages, penalties, fines, judgments or assessments that may be imposed or

obtained by any person, agency or governmental authority against the State and/or the Permittee by reason of any hazardous substance that may be present by whatever means on, in or under the premises. The Permittee hereby agrees to indemnify, defend with counsel suitable to the State, and hold harmless the State from any liability that may arise in connection with, or by reason of, any occurrence involving any hazardous substance that may be alleged to be connected or related in any way with the premises, the State's ownership of the premises, or this Revocable Permit, including the presence of any hazardous substance on the premises. Permittee understands and agrees that any assessments, fines or penalties that may be assessed against the Permittee or the State by reason of any environmental law violation concerning the premises shall be paid, complied with, and in every way satisfied by the Permittee and not the State.

11. Surety/Performance Bond for Cleanup/Restoration. At its sole cost and expense, Permittee shall provide the State with a Bond, or other security satisfactory to State, in the amount of **$ N/A** to assure removal of any hazardous substances and the remediation and restoration of the premises during the term of, and at the conclusion of the Revocable Permit so as to comply with the terms of this Revocable Permit to the satisfaction of the State and in order to comply with environmental laws. Permittee shall provide written evidence that said Bond or security has been secured by the Permittee which evidence shall indicate the term during which said Bond or other security shall irrevocably remain in effect.

12. Insurance. Effective at the commencement of this Revocable Permit, Permittee shall obtain and keep in force a comprehensive liability and property damage policy of insurance issued by an insurer licensed to do business in the State of Hawaii with limits of indemnity coverage no less than $500,000.00. Said policy of insurance shall provide coverage for personal injury and damage to property caused by hazardous substances or any occurrence that may constitute a violation of any environmental law by the Permittee or the State. Said policy of insurance shall name the State as an additional insured. Permittee shall provide proof of said insurance satisfactory to the State which shall include, at a minimum, the coverage provided and the term during which said policy shall be effective.

APPENDIX C
TENANT INVENTORY

Kalaeloa Barber's Point Harbor Tenant Inventory

Lessee	Mailing Address	City and Zip Code	Inspection POC	Phone Number	Lease	Revocable Permit	NPDES Permits
AES Kalaeloa Venture, LLC	91-086 Kaomi Loop	Kapolei, HI 96707	Sabrina Guanio	(808) 682-3412	H-89-14		
GLP Asphalt, LLC	PO Box 78	Honolulu, Hawaii 96810	Sara Thomas	203-2805			
Hawaiian Cement	99-1300 Halawa Valley Road,	Aiea, HI 96701	Dane Wurlitzer	532-3407	H-88-36; H-	H-88-1540	Exempt Mariti
Healy Tibbits Builders, Inc.	99-994 Iwaena Street, Suite A,	Aiea, HI 96701	Glen Toyama	682-6104		H-06-2538;H-92-1783	
Ko Olina Marina, LLC	92-1480 Aliiniui Drive,	Kapolei, HI 96707	Chuck Krause	8083880005	H-89-1		
Marisco, Ltd.	91-607 Malakole Road,	Kapolei, HI 96707	Stephen Hinton	808-306-5935	H-90-10	H-00-2224;H-99-2186;H-96-1901	HI-0021786
McCabe, Hamilton & Renny	P.O. Box 210,	Honolulu, HI 96810	Andrew Souza	808-479-0356		H-99-2160; H-96-1911; H-93-182	
Sause Bros., Inc.	705 North Nimitz Highway, Fl. 2	Honolulu, HI 96817	Wayne Stachel for HNL, M	HNL: (808)306-217			
The Phoenician, LLC	91-573 Malakole Road	Kapolei, HI 96707	John Gomersall	(808) 478-8031	201150200	GP2002-05-0317	HI R20B748
Trouble Free Corp.	P.O. Box 8260,	Honolulu, HI 96830	Chris Boyles	(808) 864-8864		H-03-2422	

APPENDIX D
EXAMPLE TENANT MAILING

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION
79 SOUTH NIMITZ HIGHWAY
HONOLULU, HAWAII 96813-4898

IN REPLY REFER TO:

HAR-EE
1592.12

September 28, 2011

TO: HARBORS DIVISION TENANTS

FROM: RANDY GRUNE
DEPUTY DIRECTOR - HARBORS

SUBJECT: ANNUAL TENANT STORM WATER SELF-INSPECTION FORM AND NOTIFICATION OF ANNUAL AWARENESS TRAINING

We require that you carefully read, fill-out and return the attached Tenant Self-Inspection (TSI) Form.

The returned TSI Form will provide us essential information about your operational activities and storm water management practices that will aid us to comply with mandated requirements of the Federal Water Pollution Act, commonly referred to as the Clean Water Act (CWA), and State of Hawaii requirements under the Department of Health, Hawaii Administrative Rules (HAR). The regulations are defined in Title 40, Code of Federal Regulations (40 CFR), Parts 122 and 123, and in the HAR, Chapter 11-55. The regulations establish a framework that governs the discharge of storm water runoff into waters of the United States, and could impose penalties of up to $27,500 per day per violation for non-compliance.

The Harbors Division has obtained coverage from the Department of Health to operate the storm drainage systems which discharge into Honolulu Harbor and Kalaeloa Barbers Point Harbor. The TSI Form is designed to help you and allow us to assess compliance with state and federal regulations, and our discharge permits. The form must be completely filled out and returned by October 31, 2011. Please send the completed TSI Form to the Harbors Division, Attention: Randal Leong, Environmental Engineer, 79 South Nimitz Highway, Honolulu, Hawaii 96813. You may also deliver the form in person to one of the two tenant training meetings detailed below.

We are enclosing three handouts pertaining to matters that all Harbors Division tenants need to be aware of. The three topics addressed are: (1) Washing of equipment and vehicles; (2) Construction of improvements for, on or within your area; and (3) Material Storage Best Management Practices.

We are also notifying you of our third annual mandatory storm water awareness training meetings where we will share information with all of our tenants about the present status of our Storm Water Management Programs established under the Honolulu Harbor and Kalaeloa Barbers Point Harbor

Small Municipal Separate Storm Sewer System (MS4) Permits. We will discuss the history and direction of the programs, how they impact your tenancy with Harbors Division and discuss the contents of the enclosed handouts.

For your convenience, two sessions will be provided for facility owners, environmental managers and/or other representatives of your company at the Honolulu Harbor Pier 2 Passenger Terminal on **October 19 and 20, 2011, from 10:00 am to 12:00 noon, with check-in starting at 9:30 am**. Please send at least one representative from your company to either of the two sessions. Parking is available at the Pier 2 Passenger Terminal parking lot at no charge.

If you have any questions, please contact Mr. Randal Leong, Harbors Environmental Engineer at 587-1962.

Att: Tenant Self-Inspection Form
Handouts (3)

STORMWATER
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

The State Department of Transportation, Harbors Division has developed the Storm Water Management Program (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://hawaii.gov/dot/harbors/library/storm-management-plan

Cover it; Clean it; Collect it; Keep our waters Clear!

Version 1.0, 10-03-2011

STORMWATER
BEST MANAGEMENT PRACTICES

Outdoor Material Storage

Responsible storage of chemicals, such as paints, solvents, and cleaners can significantly reduce polluted storm water 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 storm water. 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 storm water 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).

The State Department of Transportation, Harbors Division has developed the Storm Water Management Program (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.

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Cover it; Clean it; Collect it; Keep our waters Clear!

Version 1.0, 10-03-2011

STORMWATER
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 Storm Water Management Program (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 Storm Water Management Program (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://hawaii.gov/dot/harbors/library/storm-management-plan

Cover it; Clean it; Collect it; Keep our waters Clear!

Hawaii Department of Transportation – Harbors Division

Tenant Stormwater Compliance Self Inspection Form

Company Information	
Business Name(s)	
Mailing Address for HDOT Harbors Division Correspondence	
Street Address 1	
Street Address 2	
City, State	
Zip Code	
Point(s) of Contact for Stormwater Compliance	
Telephone Number	
Email Address	
Fax Number	
Tenant Since (month/year)	
Alternate Contact Name	
Facility Information (only facilities on Harbors Division property)	
Harbor(s)	☐ Honolulu Harbor ☐ Kalaeloa Barber's Point Harbor (check all that apply)
Facility Location(s)	☐ Same as above
(Pier, street address, building, or other directions for visitors)	
Tenant Information	
List Sub-tenants (if applicable)	
EPCRA Section 313 SIC Code	
Lease Number	
Permit Number	
Business Activity Description	

Pollution Prevention Info		
Do you use or store any oil products over 1,320 gallons total (over 24 55-gallon drums or bulk storage. Note: Count only containers over 55 gallons)?	☐ YES	☐ NO
(If no to above question, skip) Does your site have a SPCC Plan (Spill Prevention Control and Countermeasures) (Regulation-Title 40 CFR, Part 112)? If yes, please attach your current SPCC Plan, approved and certified by a registered Professional Engineer, if you did not submit it previously.	☐ YES	☐ NO
Do you have a National Pollutant Discharge Elimination System (NPDES) Permit or Notice of General Permit Coverage (NGPC), if so what is the number? _____	☐ YES	☐ NO
Do you generate any Hazardous Waste? If so identify the waste and provide your EPA Generator Identification Number. _____	☐ YES	☐ NO

Pollution Prevention Info (Continued)

What chemicals, which could pollute storm water runoff if released, are presently being stored on-site? (Attach additional sheets as necessary)

Chemical Name	Quantity	Method of Storage	Outdoor / Indoor

Check possible pollutants in storm water from your facility/site. This should include any chemicals that are used, stored, or disposed of in the areas where potential pollutants may come into contact with rainwater and/or water runoff. Also include lubrication oil leaks from service equipment and vehicles.

☐ Acid Waste	☐ Non-halogenated Solvents*	☐ Alkaline Waste	☐ Oils and Grease	☐ Arsenic
☐ Pesticides	☐ Cadmium	☐ Petroleum Hydrocarbons	☐ Chromium	☐ PCB's
☐ Copper	☐ Phenols	☐ Cyanide	☐ Selenium	☐ Halogenated Solvents
☐ Silver	☐ Herbicides	☐ Thallium	☐ Mercury	☐ Zinc
☐ Nickel	☐ Lubrication oil leaks	*(see 40 CFR 261.30 for a listing of non-halogenated solvents)		

Are there any other possible pollutants at your facility/site: (Identify them)

_____

Does your facility operate under a Department of Army Permit (Section 401 WQC)?	☐ YES	☐ NO

Are there any other Federal Permits that you are required to submit? If so identify the permits.

_____

Where does your storm water discharge?

_____

Do you have any floors/decks located in chemical storage areas	☐ YES	☐ NO
Do you have to submit SARA III reporting?	☐ YES	☐ NO

Please provide a copy of your facility plans/drawing.

Attach copies of any storm water studies conducted at your facility.

Pollution Prevention Info (Continued)

Non-storm water discharges can be activity-based (subtle) or overt (pipe connections). Activities based non-storm water discharges include, but are not limited to: wash water, diluted solvents/chemicals, floor/dock-apron sweeper waste, and spillage. Typical overt discharges include, but are not limited to: process wastewater, cooling water, and sanitary wastewater.

Any post-construction runoff control measures (such as detention basins and vegetated swales) on tenant premises must be maintained by the occupant as per the tenant lease agreement. These post-construction runoff controls will be identified during annual on site tenant inspections.

Are you aware of any non-storm water discharges or unauthorized connections to storm drains or groundwater surfaces at your facility? If yes, please describe location and nature of discharge. _____	☐ YES	☐ NO
Are floor drains or deck drains located in the areas of chemical storage or chemical use, present at your facility? If yes, where is the discharge point? ☐ Sanitary sewer ☐ Ground surface ☐ Unknown	☐ YES	☐ NO

Points of Contact for Water Pollution Reporting

The responsibility to maintain the cleanliness of Hawaii's coastal water lies with all Harbor tenants and users, and Hawaii residents. We all need to pitch in to anticipate, prevent and report inappropriate discharges. Reports of inappropriate discharges may be made to:

Point of Contact	**Telephone Number**
Marine Traffic Control Center	808-587-2076
Marine Cargo Specialist	808-587-2053
City and County of Honolulu Environmental Concern Hotline	808-768-3300
Department of Health, Clean Water Branch	808-586-4309
Coast Guard	1-800-424-8802

Feedback

We want to hear from you on how we can improve this program. Please fill out the comments section below to provide feedback on the information provided and the content of this form.

Did you find the information in this mailing useful?	☐ YES	☐ NO

Comments:

APPENDIX E
HARBORS TENANT TRAINING RECORDS

2011 TENANT STORM WATER POLLUTION PREVENTION AWARENESS TRAINING

Hawaii Department of Transportation – Harbors Division

Introduction

- Hawaii Department of Transportation – Harbors Division
  - Randy Grune – Deputy Director
  - Carter Luke PE – Engineering Program Manager
  - Randal Leong PE – Environmental Engineer
  - Jim Galariada – Environmental Health Specialist
- Weston Solutions, Inc.
  - David Johnson
  - Mark Ambler PE, PMP
  - Joe Weidenbach
  - Sandy Peterson
  - Anthony Rodriguez
- Hawaii Department of Health
  - Matthew Kurano

2011 TENANT ENVIRONMENTAL MANAGER OF THE YEAR

for Exemplary Management of a Tenant Stormwater Program Focused on Directing Meaningful Change

2011 TENANT ENVIRONMENTAL MANAGER OF THE YEAR

for Exemplary Management of a Tenant Stormwater Program Focused on Directing Meaningful Change

NATHAN KAPULE

For management of Young Brothers, Ltd.

AGENDA

- Regulatory Background
- Harbors (Small MS4) General Permit Requirements
  - Public Education
  - Public Participation
  - Illicit Discharge Detection and Elimination (IDDE) Program
  - Construction Site Run-Off Control
  - Post Construction Control
- Video Presentation (20 mins) – "Storm Watch"
- Pollution Prevention and Good Housekeeping
- Facility Inspections
- Enforcement Response Program
- Contact Information
- Questions and Answers

FEDERAL REGULATORY BACKGROUND

- Clean Water Act (40 CFR 100-149)
  - 1972 Clean Water Act– Swimmable, Fishable
  - 1987 Amendements – NPDES (National Pollutant Discharge Elimination System) regulations
- NPDES – Environmental Protection Agency Regulatory Authority
  - Phase I issued in 1990 – Individual Permit
    - Industrial Facilities (PENDING MODIFICATION AND RENEWAL)
    - Construction Sites > 5 acres (PENDING MODIFICATION AND RENEWAL)
    - Medium and Large Municiple Separate Storm Sewer System (MS4)
  - Phase II issued in 1999 – General Permit
    - Small MS4
    - Construction Sites > 1 acre, < 5 acres (PENDING MODIFICATION AND RENEWAL)
- MS4 – conveyance that is owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.; designed or used to collect or convey stormwater; and not combined with sewer.

Hawaii Regulatory Background

- NPDES regulatory authority is administered by Hawaii Department of Health
- Hawaii Administrative Rules (HAR)
  - Title 11Chapter 55 (11-55)
    - Water Pollution Control
  - Appendix K
    - NPDES General Permit Authorizing Discharges of Storm Water and Certain Non-Storm Discharges from Small MS4s
- Harbors Division – Notice of General Permit Coverage (NGPC)
  - HI 03KB482 – Honolulu Harbor Permit
  - HI 03KB488 – Kalaeloa Barbers Point Harbor Permit

RECENT PROGRAM HISTORY

- HDOT Harbors General Permit – May 19, 2003
- EPA Audit – December 2008
- Finding of Violation – June 18, 2009
- Tenant Inspections – 2009 (44)
- Inspection Reports – 2010
- Stormwater Management Plan Revision – Dec 2009
- Tenant Inspections – 2010 (All)
- Deficiency Letters – 2011

GENERAL PERMIT REQUIREMENTS

Minimum Control Measures

Each Mininum Control Measure Requires:

- Written Plan – SWMP
- BMP Implementation
- Training
- Reporting
- Enforcement

- Public Education & Outreach
- Public Participation & Involvement
- Illicit Discharge Detection & Elimination
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Pollution Prevention & Good Housekeeping

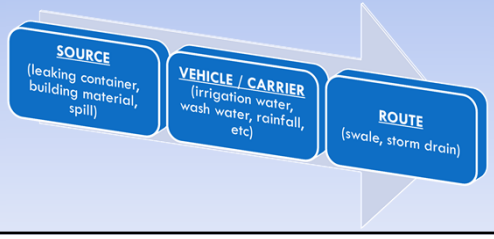
General Permit Allowable Discharges*

- Water Line Flushing
- Landscape Irrigation
- Diverted Stream Flows
- Rising Ground Water
- Uncontaminated Ground Water Infiltration
- Uncontaminated Pumped Ground Water
- Discharges from Potable Water Sources
- Air Conditioning Condensate
- Crawl Space Pumps and Footing Drains
- Dechlorinated Swimming Pool Water
- Discharges from Fire Fighting Activities

* Unless discharges "Cause or contribute to water quality objective exceedances."

UNDERSTANDING POLLUTANT TRANSPORT AND MANAGEMENT STRATEGIES

Understanding the source, vehicle, and route of storm drain pollution is key to cost effectively managing facilities and discharges.



STORM WATER BEST MANAGEMENT PRACTICES

What Are They?

Administrative and structural controls are utilized to

- **remove,**
- **contain, or**
- **treat pollutants**

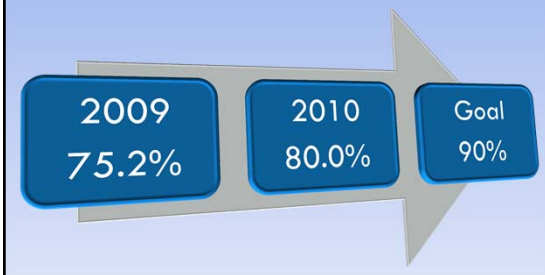
through

- **Source removal,**
- **Preventative containment, and**
- **Capture/treatment methods.**

- Administrative Controls
  - Laws and ordinances
  - Leases and tenant agreements
  - Inspections
  - Housekeeping
  - Material Handling and Storage Practices
  - Maintenance Schedules
- Structural Controls
  - Secondary Containment
  - Berms
  - Washracks
  - Silt Fencing
  - Exclusion
  - Drain Inlet Protection, etc…

Minimum Control Measure 1

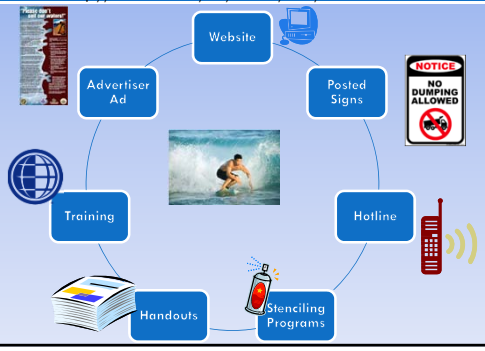
TENANT SELF INSPECTION FORM



Minimum Control Measures 1&2

Public Outreach &Participation

http://www.state.hi.us/dot/harbors/oahu/storm.htm



Minimum Control Measure 3

Illicit Discharge Detection & Elimination (IDDE) Program

Common sources of illicit discharges include -

- Sewage inflows from leaking sewage collection and transmission lines
- Commercial carwash and laundry wastewater
- Floor washing to shop drains
- Commercial Vehicle and Equipment washwater
- Potable line flushing that runs across hardscapes
- Pumping of vaults or trenches
- Construction activities
- Liquid wastes containing oil, paint, and process water
- Waste water from manufacturing or equipment processes
- Pesticides, herbicides, and other industrial chemicals

Minimum Control Measure 3

IDDE and Outfall Inspections

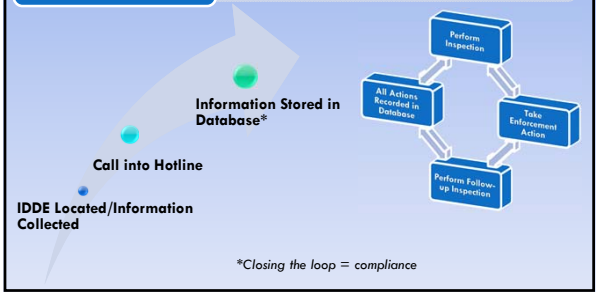
- Dry Weather Outfall Inspections will be performed to detect illicit discharges into outfalls.
- Dry Weather Flow indicates non-storm water discharges. Tracking these drain systems back to the source is an efficient way to detect Illicit.
- Utilize sampling, instruments, and observations to discern ground water vs potable water and presence of nutrients, toxic substances, sediments, bacteria, and general chemistry to "fingerprint" sources for abatement proceedings.

Illicit Discharges Threaten our Waters

REPORT IT!!
587-1962

ILLICT DISCHARGE REPORTING

Compliance Hotline • (808) 587-1962



*Closing the loop = compliance

Minimum Control Measure 4

CONSTRUCTION SITE RUNOFF CONTROL

Common Problems Found During Inspections

No sediment controls on-site
No erosion prevention
No sediment control for temporary stockpiles
No inlet protection
No BMPs to minimize vehicle tracking on to the road
Vehicle Tracking onto Streets
Improper solid waste or hazardous materials management
Dewatering at the construction site
Poorly maintained BMPs

BUILDING AND REMODELING

- All construction (even < 1 acre) must receive formal, written approval from HDOT Harbors Division
- All construction over 1 acre must receive NPDES permit from HDOH prior to breaking ground

Waste Management (Source Control)

Exposed Waste Management Subject to Rainfall and Birds

Unsecured / Unlocked Dumpster – Trespassing – Illegal Dumping

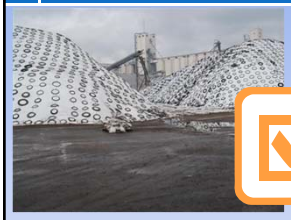
Waste Management

Secured Enclosure – Minimized Illegal Dumping. Add non-galvanized corrugated roofing to prevent rain runoff.

Secured Enclosure – Minimized Illegal Dumping. Add non-galvanized corrugated roofing to prevent rain runoff.

ZERO RUNOFF SOLUTION

Stockpiling (Source Control and Pollution Prevention)



Use Silt Fences to Contain Stockpiles

Cover Stockpiled Material
*Covers provide dust suppression and prevent polluted runoff.

Silt Fencing (Treatment)

Inspection and maintenance of BMP's is as important as installing them.
Improperly maintained silt fences are ineffective.

Silt Fencing

Vegetated Swale!!

Storm Drain Inlet Protection

(Pollution Prevention)

Storm Drain Inlet Protection

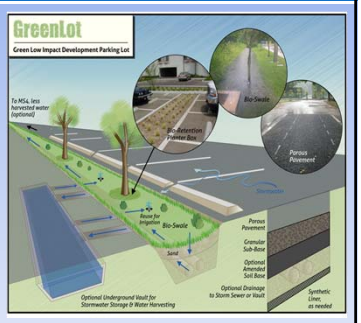
Cleaning Equipment (source control)

Construction Equipment Cleaning

Minimum Control Measure 5

Post-Construction Design Features

Goal: Eliminate and minimize exposure of pollutants to storm water and to capture and infiltrate / treat.



Minimum Control Measure 5

Post-Construction Controls

Considering water quality impacts early in the design process can provide long-term water quality benefits and lower administrative environmental management costs.

- **Low-Impact Development**
- **Green Design**
- **Site Specific/Innovative BMPs**
- **Infiltration**
- **Filtration**
- **Retention/Detention**
- **Isolation/Separation of Runoff from Processes**

Retrofits you can use to manage your site:

Eliminating Curbs and Gutters
Green Parking
Green Roofs
Rain Barrels / Cisterns
Protection of Natural Features
Urban Forestry
Grassed Swales
Infiltration Basin/Trench
Permeable Pavement
Porous Asphalt Pavement
Vegetated Filter Strip
Dry Detention Ponds
Storm Water Wetland

Minimum Control Measure 5

LOW-IMPACT DEVELOPMENT

- Significant Redevelopment = 5,000 ft^2
- Report → Change in Peak Flow

TABLE 2-1 Sample Results Table for Change in Peak Runoff Flow Rate

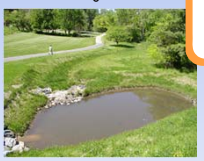
Location	C_i	C_f	I (in/hr)	A (ft^2)	Q_A (cfs)
Porous Pavement Parking Lot	0.20	0.25	2.0	90,150	29.7
Vegetated Bio-Swales Surrounding Parking Lot	0.20	0.10	2.0	12,000	-7.9
Greenroof on Adjacent Storage Warehouse	1.0	0.10	2.0	1,000	-5.9
TOTAL CHANGE IN PEAK RUNOFF FLOW:					15.9

- List BMPs
  - Bio-swale
  - Rain Barrels
  - Smart Irrigation
  - Etc.

Minimum Control Measure 5

Post-Construction Structural Controls


Drainage Swales


Storm Water Retention Ponds


Green Roofs

Minimum Control Measure 6

Pollution Prevention &Good Housekeeping

VIDEO Presentation

"Storm Watch"

Municipal Stormwater Pollution Prevention

EXCAL Visual Communications

Pollution Prevention & Good Housekeeping

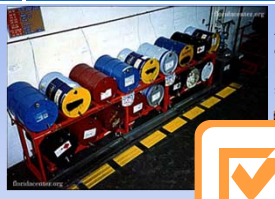
- Inventory of Activities and Potential Pollutants
- Proper Labeling and Handling of Cleaners, Solvents, and Chemicals
- Organized Chemical Storage
- Responsible Disposal of Chemicals
- Storage Procedures should include covering stored metals
- Proper site drainage should be in place
- Proper Equipment/Material Storage
- Timely Equipment O&M
- Site maintenance and cleaning procedures should be in place. They should address environmental considerations and they should include BMP's

Minimum Control Measure 6
Pollution Prevention & Good Housekeeping

Minimum Control Measure 6
Pollution Prevention & Good Housekeeping

Stocked metals should be covered to prevent heavy metal intrusion into waterways

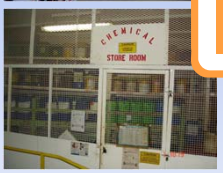
Minimum Control Measure 6
Pollution Prevention & Good Housekeeping



All drums should be in good, working condition. Inspections should be held regularly and any drums with damage should be replaced immediately.

Minimum Control Measure 6
Pollution Prevention & Good Housekeeping

Access to chemicals should be restricted to personnel trained in proper handling and disposal procedures; all must be labeled and have MSDS available



Flammable chemicals, solvents, and paints should be stored in a fireproof locker. Chemicals must be separated by combatibility

Minimum Control Measure 6
Pollution Prevention & Good Housekeeping

Do not overfill

Trash bin kept covered when not in use

Keep trash and debris from accumulating around the bin, because storm water will carry it out to the ocean

NEW PROGRAM
VEHICLE AND EQUIPMENT WASHING

- *"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]

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

Submit This for Approval:

- What are you Washing?
- Pressure Sprayer Flow Rate
- Vacuum Rate
- Berm/Drain Map
- Container Capacity
- Waste Disposal Plan

… Then Have This Onsite:

- Wet Vacuum
- Berm
- Proper Containment
- Proper Waste Disposal

VEHICLE AND EQUIPMENT WASHING

- Formal, written approval
- Contain Wash Water
- NO Wash Water → Storm Drain
- Example: 3.5 GPM Spray → 7 GPM Vacuum
- Enough storage for job?
- Proper transport and disposal
- Is the rinsate staying onsite?

3.5 GPM SPRAYER → 7 GPM VACUUM → 350 GALLON TOTE FOR 1 HOUR WASH → WHERE WILL THE RINSATE OR SLUDGE GO? → WHERE WILL THE SEDIMENT GO?

Vehicle and Equipment Washing (Pollution Prevention)

Vehicle and Equipment Washing (Pollution Prevention)

No grinding, painting, welding, or sand blasting

Containment and Collection is required!

Vehicle and Equipment Washing

Permitted Vehicle Wash Rack

Temporary Only: Wash water and debris require off-site disposal; Minimize detergants and overspray

Spill Prevention and Response

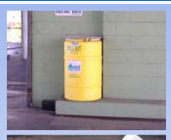
- PREVENTION FIRST!!
- Proper Storage
  - Secondary Containment
  - Protected from equipment damage
  - Install shut-off controls, overfill protection, etc…
  - Stored away from storm drains
- Proper filling and handling procedures
  - Use drip pans
  - Use drop cloths

Control → Contain → Capture

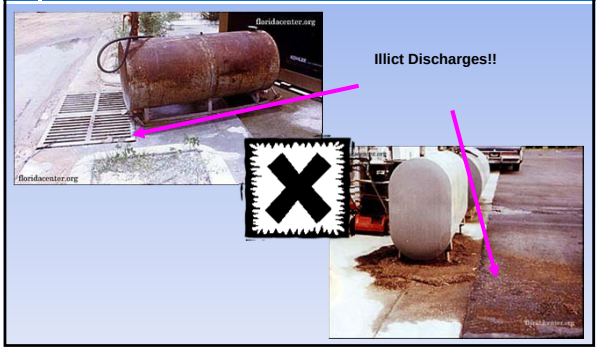
Spill Prevention and Response

SPILL RESPONSE

- Assess the Spill
  - What Spilled
  - How Much Spilled
  - Where did it Spill; Surface Water Impacted?
  - Toxic or Hazardous Substance?
- Stop the release
- Contain the Spill
- Clean the Spill
- Properly Dispose of Materials
- Report All Spills
  - Small Spills should be tracked internally
  - Large Spills
    - Harbors Environmental
    - Hawaii Department of Health
    - U.S. Coast Guard



Secondary Containment



Illict Discharges!!

Secondary Containment



Option: Add overhead coverage to eliminate exposure and reduce management of ponded water potentially containing pollutants

Secondary Containment (Pollution Prevention)

- Keep locked to prevent unwanted discharge
- If excess storm water collects, inspect for sheen and/or test storm water to determine whether there are contaminates present


- If no contaminates present, supervise and document discharge of clean storm water and relock valve

Spill Prevention and Response

Procedures should focus on prevention first. Then clean up if spills still occur


Best Management Practices – Vehicle Pans/Pads


Best Management Practices – Spill Kit

Best Management Practices – Trench Drain

Best Management Practices – Equipment Wash Area

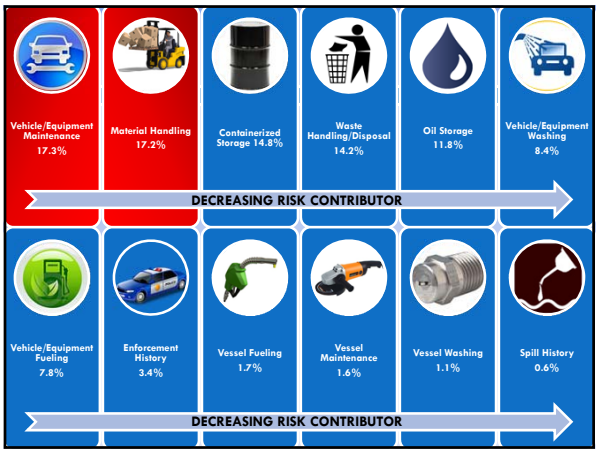
Best Management Practices – Covered Metal Bin

Best Management Practices – Rain Barrel

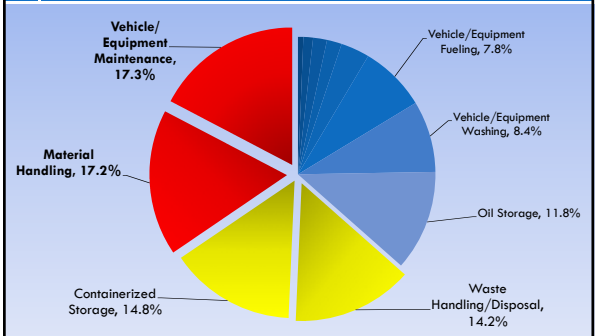
Tenant Facility Inspections

- 1 week notification
- High Priority Tenants First, then ALL TENANTS
- Inspection Checklist
- Inspection Report and Findings to be provided following Site Visits
- Follow-up Inspections will be scheduled if required
- SERIOUS VIOLATIONS WILL RESULT IN IMMEDIATE ACTION
  - Depending on the severity of the discharge, regulatory actions may be pursued.
  - All inspection results and actions will be added to our database.
- Risk ranking developed based on findings

FACILITY INSPECTIONS



RISK RANKING – DISTRIBUTION



VEHICLE/EQUIPMENT MAINTENANCE RISK

- 0 = No maintenance activities are conducted.
- 1 = Maintenance activities are conducted entirely indoors, on a small scale, with minimal potential for discharge of pollutants.
- 2 = Maintenance activities are conducted entirely indoors, on a large scale, with minimal potential for discharge of pollutants.
- 3 = Maintenance activities are conducted in a covered area with moderate potential for discharge of pollutants.
- 4 = Maintenance activities are conducted outdoors or in an area with minimal potential for discharge of pollutants
- **5** = Maintenance activities are conducted outdoors or in an area with significant potential for discharge of pollutants. ***(Automatic trigger to high risk designation)***

Construction Site Inspections

Site Inspections will be held on active construction sites to ensure NPDES is being properly followed.

Inspections will focus on proper BMP Management to reduce Illicit discharges into the Harbor's storm drain system.

Construction Site Inspections

Enforcement Response Program

Regulatory Mechanisms

- Hawaii Administrative Rules (HAR)
- Hawaii Revised Statutes (HRS)
- Tenant Leases/Revocable Permits
- 40 CFR - Clean Water Act & NPDES
- Other Applicable State & Federal Regulations

Penalties for Lack of Compliance (dependant on severity of violation)

- Verbal Warnings
- Written Notices
- Citation with Monetary Fines
- Stop Work Orders
- Abatement by Harbors Division with Reimbursement by the Responsible Party
- Lease/Permit Termination
- Referral to HDOH or Other Appropriate Regulatory Agency
- Monetary Fines – Up to $27,500 Per Day!!!
- Mandatory Minimum Penalties under CWA.

STORM WATER CONTACTS

FIRST CALL HARBORS HOTLINE

- Harbors Hotline @ (808) 587-1962

DISCHARGES

- Marine Traffic Control Unit @ (808) 587-2076

SERIOUS OFFENSES

- Hawaii Department of Health, Clean Water Branch @ (808) 586-4309
- U.S. Coast Guard @ (800) 424-8802
- USEPA @ (808) 541-2721

REMOVE! CONTAIN! TREAT!
KEEP OUR WATERS CLEAN……..

QUESTIONS OR COMMENTS?

A single tin of paint can contaminate millions of gallons of water!

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Suite 2301
841 Bishop Street
Honolulu, HI 96813
808-275-2900
Fax: 808-585-7378

HDOT HARBORS
STORMWATER MANAGEMENT
TENANT TRAINING
October 19, 2011

SIGN-IN SHEET

COMPANY	PRINT NAME	SIGNATURE	PHONE/EMAIL	VOLUNTEER FOR CLEAN-UP?
HAWAII STEVEDORES	KEN CHUNG	[signature]	808-927-2740	
Reef Development of	ISLANDER ARITAY	[signature]	478-5840	
CENTRAL PACIFIC DIST.	ROY RAZON	[signature]	840-0787	
Aloha Cargo Transport	Tracy Fujikawa	[signature]	748-7895	
Harbors/Kalaeloa	Logan Williams IV	[signature]	682-6428	
PF MARINE	PAUL FUKUNAGA	[signature]	842-1330	✓
Asphalt Hawaii	Aaron Stewart	[signature]	343-5229	
Windward Moving Pacific Divers	GREG HOMILD	[signature]	808-845-6100	✓
R.S. NAKAMURA WELDING	RODNEY NAKAMURA	[signature]	228 2551	
MILLER INDUSTRIES	RODNEY NAKAMURA	[signature]	8480855	
ALUMINUM SHAKE ROOF	RODNEY NAKAMURA	[signature]	8478885	
Jeonju Makgeolli USA Shin Woo Corporation	DAVID CHANG	[signature]	853-1122 / todavidchang@yahoo.com	
Robert Marcos Inc	Mark Gaulke	[signature]	864-1703 / rmimarkg@aol.com	
POP Fishing & Marine	ARLEN WALSTON	[signature]	478-8997	
Performance Landscape	Mariko Ziv	[signature]	232-8988	
Honolulu Marathon	RONALD CHEN	[signature]	2552602 ; jchen@honolulumarathon.com	
P&R Water Taxi	Ralph DeWitt	[signature]	554-3436	
AKANA TRUCKING	Raquel Pacheco	[signature]	845-9825	

100227

COMPANY	PRINT NAME	SIGNATURE	PHONE/EMAIL	VOLUNTEER FOR CLEAN-UP?
Meadow Gold Dairies	Jayson Fujimoto	[signature]	808-944-5978 jayson_fujimoto@deanfoods.com	
Pasha Hawaii	Trevor Kubo	[signature]	294-3765 trevor_kubo@pashanet.com	
BellaPietra	David Donaldson	[signature]	587-7779 david@bellapietra.com	No
Harbors Division	Neal MIYASATO	[signature]	587-2007 neal.h.miyasato@hawaii.gov	
Harbor Division	Joy Mckee	[signature]	832-3845	
Young Brothers/Ltd	Nathan Kapule	N. Kapule	5439398/nkapule@ nkapule@htbyb.com	yes

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HDOT HARBORS
STORMWATER MANAGEMENT
TENANT TRAINING
October 19, 2011

SIGN-IN SHEET

COMPANY	PRINT NAME	SIGNATURE	PHONE/EMAIL	VOLUNTEER FOR CLEAN-UP?
HARDY CONST	Melvin R. Hardy	Melvin R. Hardy	226-5343	✓
Phoenician LLC.	Greg Powell	Greg Powell	226-8575	
Friends of Hokulea	Jay Dowsett		256-4841	
HAJALEE INC	Irene Yang		841-8687	
Horizon Lines	FRANK ROZNOSIC		864-4638	
Steinke Bros. Inc	Robert Steinke		478-9777	
AALA Ship Service	RODNEY TAMAMOTO		478-8732	
HAWAIIAN ICE CO.	MARSHALL JOY		538-6918 marshall@hawice.com	
"	RONNETTE HAMADA		"	
Pt R Water Taxi	Steve Morita		388-4458	
ROBERT MARCOS INC	ROBERT MARCOS		841-1123	
Sun Chong	Patrick Lam		383-1756 lampatrick108@gmail.com	
Jas. W. Glover, LTD.	Keola Goo		864-0368 keolag@glover-ltd.com	
Sause Bros	Wayne Stachel		306-7177 waynes@SAUSE.COM	
KANO TRUCKING	Layne Kano		216-9474 lkano@hawaii.rr.com	
AMAZON CONSTR. CO. INC.	Duston Onaga		841-6595	
Meadow Gold Dairies	Darrel Tajima		944-5958 darrel_tajima@cleanfoods.com	
STATE OF HAWAII DAR-OM	MICHAEL K. FEELEY		322-3845 MICHAEL.K.FEELEY@HAWAII.GOV	

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STORMWATER MANAGEMENT
TENANT TRAINING
October 20, 2011

SIGN-IN SHEET

COMPANY	PRINT NAME	SIGNATURE	PHONE/EMAIL	VOLUNTEER FOR CLEAN-UP?
Pioneer Machinery	Rodney T. Yee	Rodney T. Yee	808- 371-4892	
HAR DOT OCG	Vandy Sibounheuang	Vandy Sibounheuang	808- 537-2310	
Tropical J's, Inc.	Charis Cabral	Charis Cabral	808- 848-0888	
HB/YB	RANDY LAU		753-7340 / rlau@hbyb.com	
PACIFIC SHIPYARDS INT'L	WES ANSAI		2213916 / wansai@pacificshipyards.com	
ISLAND MOVERS, INC.	PATRICK HEE		839-1120 / pathe@hawaiitree.net	
HCAP Head Start	Phil B. Sales		847-2400	
Matson	Enriqueta Tanaka		848-1241 etanaka@matson.com	
~~Y. Hata & Co., Ltd.~~	ATTILIO K. LEONARDI	Attilio K. Leonardi	447-4333 aleonardi@yhata.com	
NANAKULI HOUSING	WILBERT BARBED		306-3526	
HCAP	Alfred B Remo		398-5074	
RCP Const.	Kevin Close		841-4574	
Custom-Bilt Metals	Mandy Fowler	Mandy Fowler	845-1806	
Lt. Tommy Medeiros	HARBOR POLICE		368-5995	

COMPANY	PRINT NAME	SIGNATURE	PHONE/EMAIL	VOLUNTEER FOR CLEAN-UP?
ATLANTIS SUBMARINES	KEKUA KELII	[illegible]	386-0123/kkelii@atlantisadventures.com	
FRIENDS OF FALLS OF CLYDE	SUSAN YAMAMOTO	[illegible]	595-4263 / gevision@hawaii.rr.com	
State of HI, D.O.T.	Elmer Hirano	[illegible]	832-3846 elmer.hirano@hawaii.gov	
DOT Harbors Division	Gregory K. Gomes	[illegible]	832-3848 gregory.gomes@hawaii.gov	
Triple F Dist.	Natalie Hew-Len	[illegible]	590-0003 nat@fffhawaii.com	
Pendleton Flour Mills, LLC	Timothy Byam	[illegible]	527-3272 tbyam@pfmills.com	
DOWS MAKIKI INC	DOUGLAS GAY	[illegible]	9493787	
Patricia Shinsato	Industrial Chemicals	[illegible]	842-4116/icl@clearwire.net	
STATE DOT	JIM GALARIADA	J. Galariada		
HI-SEA HAWAII FISHING	KEVIN VAN	[illegible]	808-282-1452	

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HDOT HARBORS
STORMWATER MANAGEMENT
TENANT TRAINING
October 20, 2011

SIGN-IN SHEET

COMPANY	PRINT NAME	SIGNATURE	PHONE/EMAIL	VOLUNTEER FOR CLEAN-UP?
Clean Island Council	PATRICK GILLEN	Patrick Gillen	958 307 1500	
Matson Navigation	Keahi Birch	Keahi Birch	848-1252 kbirch@matson.com	
EAST WEST MARKETING	BOB BARGAMENTOW		753-7964	
Marisco Ltd.	Brett Houseman		864-1171 / bhouseman@marisco.net	
QUICK MOVE	EUGENE FONTANILLA		285-4785	
THE CUSTOM COMPANY	CAROLINE PASCUA		841-4441	
Pacific Shipyards Inte.	Jenifer Haught		434 825 4807	
NCAD Head Start	Manny Galarza		271-2921	Yes
" "	Edward Chan	Edward Ch	" "	yes
Sea Engineering	TOR HARRIS		(503) 978-6800 tharris@seaengineering.com	
DOT / Harbors	DON KAULUKUKUI		8323848	
Ron's Concrete Specialty	James Mainaaupo		(808) 845-0467 jmainaaupo@tonsaenterprise	
Control Tech LLC	Barbara Hayashi		(808) 8477490 / etechllc@lava.net	
Hi-Tec Roofing	Cynthia Seffer		841-7663 aahitec@aol.com	
DOT - Harbors	ALAN MURAKAMI		587-2070 alan.murakami@hawaii.gov	
THE SUSSEX CO	TONY SUSSEX		537-3001 TONYSUSSEX@GMAIL.COM	
THE BOYS CLUB	TONY SUSSEX		537-3001 TONYSUSSEX@GMAIL.COM	

APPENDIX F
TENANT ENVIRONMENTAL MANAGER OF THE YEAR AWARD

EXECUTIVE CHAMBERS

HONOLULU

NEIL ABERCROMBIE
GOVERNOR

October 19, 2011

Mr. Nathan Kapule
Safety and Environmental Manager
Young Brothers, Ltd.
P. O. Box 3288
Honolulu, Hawaii 96801-3288

Dear Mr. Kapule:

I am pleased to present you with our first annual Department of Transportation Harbors Division Tenant Environmental Manager of the Year Award.

The Harbors Division will annually recognize an outstanding Tenant Environmental Manager that implements meaningful change in their facility environmental practices and company environmental culture. I laud your efforts as a leader in implementing environmental policies for your company.

Your environmental program was chosen from 44 tenant programs that were evaluated during the annual Storm Water Compliance inspections in 2009 and 2010. The award represents the positive contributions you and your company have made toward protecting our valuable ocean resources. The changes and programs implemented at your facility and your valuable influence in making environmental awareness a key component of your company culture is genuinely appreciated. Your program is a model for similar facilities and an example for others to follow as they improve their environmental systems.

Please continue to work with the Harbors Division and all Harbors Division tenants in keeping our ocean resources clean and ensuring its protection for future generations.

Sincerely,

Neil Abercrombie

NEIL ABERCROMBIE
Governor, State of Hawaii

THE STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION

presents the

2011 TENANT ENVIRONMENTAL MANAGER OF THE YEAR

to

NATHAN KAPULE

for

Exemplary Management of a Tenant Stormwater Program Focused on Directing Meaningful Change

CATEGORY A

APPENDIX G
STORMWATER HOTLINE OCCURRENCE TRACKING FORM

Hawaii Department of Transportation – Harbors Division

Stormwater Hotline Occurrence Tracking (SHOT) Form

LINE ITEM	FORM FIELD		
Caller Information			
Caller Name			
Caller Company			
Telephone Number			
Email Address			
Date/Time Received			
Occurrence Information			
☐ Information Request	☐ Discharge Reporting	☐ Complaint	☐ Commendation
☐ Information Request			
Information Requested			
Actions Taken			
Additional Information			
☐ Discharge Reporting			
Address or Location of Discharge			
Time/Date of Discharge			
Substance/Amount Discharged (if known)			
Media into which the discharge occurred: ☐ Air ☐ Water ☐ Natural Ground ☐ Concrete/Asphalt ☐ Stream ☐ Ocean Other:_____			
Responsible Party (if known)			
Cause of Discharge (if known)			
Clean-up Actions Taken (if applicable)			
Notifications Made/Actions Taken by Harbors Division			
Follow Information			

LINE ITEM	FORM FIELD
☐ **Complaint**	
Nature of Complaint	
Complaint Details	
Notifications Made/Actions Taken by Harbors Division	
☐ **Commendation**	
Commendation Details	
Notifications Made/Actions Taken by Harbors Division	

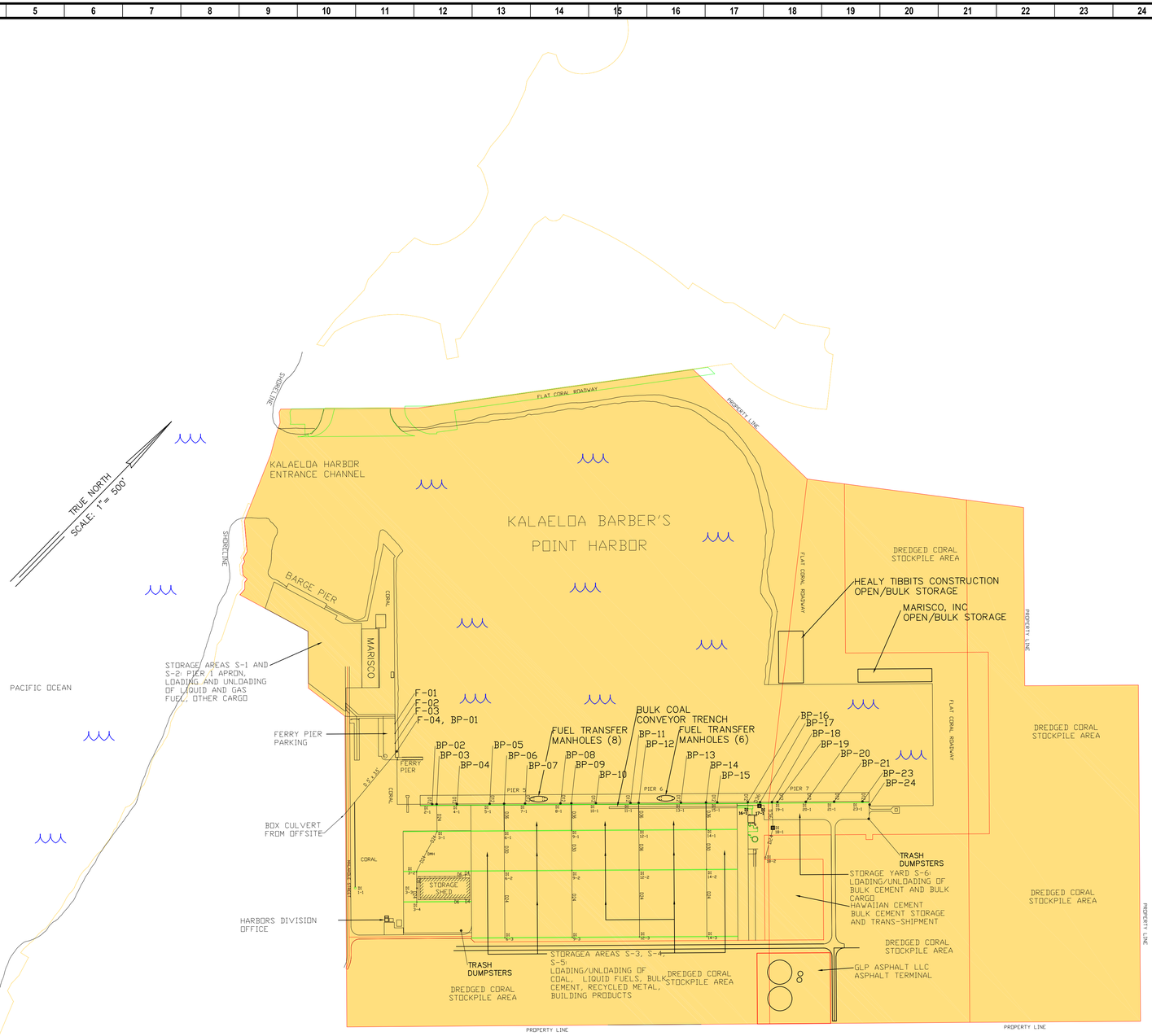
Points of Contact for Immediate Response	
In the event of an emergency needing immediate response, call the numbers listed below:	
Point of Contact	**Telephone Number**
Marine Traffic Control Center	808-587-2076
Marine Cargo Specialist	808-587-2053
City and County of Honolulu Environmental Concern Hotline	808-768-3300
Department of Health, Clean Water Branch	808-586-4309
Coast Guard	1-800-424-8802

APPENDIX H
HONOLULU MARINE TRAFFIC CONTROL TOWER REPORTS

Hawaii Department of Transportation – Harbors Division
Annual Compliance Report Summary of Tower Logs
Kalaeloa Barber's Point Harbor, 2011

Date	Time	Action Taken
1/5/2011	2107	BPH SEC DENISE RPTS CEMENT DUST ALL OVER THE BPH AREA COMING FROM VSL OCEAN SUNRISE AT P7 - U1 NFYD (WILL CALL THE AGENT) U1 RPTS BRUCE OF WNLI WAS NFYD TO INFORM THE CAPT OF THE VSL OCEAN SUNRISE TO CEASE DUSTY OPERATIONS
1/7/2011	916	PILOT #9 ON BOARD INBOUND VESL EPSON TRADER II INTO BP-6 NTFD TWR THAT THERE IS AN UNIDENTIFIED SUBSTANCE IN THE WATER LEADING FROM KO`OLINA OUT OF THE CHANNEL RUNNING ALONG THE SHORELINE WEST OF THE BP CHANNEL. TWR LEFT A MSG FOR HAR-OCB.
1/7/2011	942	HAR-OCB NTFD TWR THAT HE CONTACTED BRUCE WITH KO`OLINA WHO RECEIVED NO REPORT OF THE SUBSTANCE. HAR-OCB WILL INVESTIGATE AND NTFY THE TWR.
1/7/2011	1020	HAR-OCB NTFD TWR THAT SUBSTANCE IN THE WATER @ BPH IS RUN OFF FROM ALL THE RAIN WE'VE BEEN HAVING, AND THERE IS NO OIL IN THE WATER.
1/28/2011	1726	BPH SECURITY REPT A LARGE HYDRAULIC SPILL AT THE PHOENICIAN BOAT RAMP. THEY HAVE IT BLOCKED OFF TO PREVENT ANY FROM ENTERING THE WATER. IT WAS CAUSED BY HAWAIIAN RECYCLING & THEY ARE IN THE PROCESS OF CLEANING IT UP. HAR-OC, U3, DAVID (FSO), PO MATHENY (USCG), KILO 3 ALL NTFD LEFT MESSAGE FOR LOGAN (BPH) TO CALL TOWER

APPENDIX I
UPDATED SMALL MS4 OUTFALL MAP



ENGINEER/ARCHITECT STAMP

Kalaeloa Harbor Storm Water Drainage and Outfalls

Hawaii DOT Harbors Division Storm Water Management Program
Hawaii Department of Transportation – Harbors Division

WESTON SOLUTIONS

DRAWN	DATE	CONTRACT NO.
CHKD BY	CHKD DATE	WORK ORDER NUMBER

REVISION	DATE	DESCRIPTION OF REVISION

DRAWING SCALE

SHEET 4-2

APPENDIX J
OUTFALL RECONNAISSANCE INVENTORY REPORTS

OUTFALL RECONNAISSANCE INVENTORY FORM

Section 1: Background Data

Subwatershed:		Outfall ID:	SP-01
Today's date:	12/16/14	Time (Military):	1420
Investigators:	AA JW	Form completed by:	NR
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde: 2357934	Longitude: 0591612	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	2004

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[ ] Circular [ ] Eliptical [X] Box [ ] Other: _____	[ ] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 6ft x 1.5ft	In Water: [ ] No [X] Partially [ ] Fully With Sediment: [X] 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 [X] No *If No, Skip to Section 5*				
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-02	
Today's date: 12/16/11		Time (Military): 1412	
Investigators: MR JW		Form completed by: MR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 2001	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

2 strts from BP-03

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-03	
Today's date: 12/16/11		Time (Military): 1410	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 2066	

Land Use in Drainage Area (Check all that apply):

- [x] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- [ ] Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

65 ft from BP-04

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[x] Closed Pipe	[x] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[x] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[x] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 24	In Water: [ ] No [x] Partially [ ] Fully With Sediment: [x] 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 [x] No *If No, Skip to Section 5*				
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-04	
Today's date: 12/16/11		Time (Military): 1408	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1999	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- [ ] Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

8 Strts from BP-05

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BB-05	
Today's date: 12/16/11		Time (Military):	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1998	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

3 Strts from BB-06

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-06	
Today's date: 12/16/11		Time (Military): 1402	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1997	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- [ ] Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.
8 Shots from BP-07

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 36"	In Water: [ ] No [X] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-07	
Today's date: 12/18/11		Time (Military): 1358	
Investigators: AR TW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1996	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- [ ] Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

10 Stwks from BP-08 ; 2-12" within 20 ft

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-08	
Today's date: 12/16/11		Time (Military): 1354	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1995	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.
4 Shots from BP-09

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID:	BP-09
Today's date:	12/16/11	Time (Military):	1352
Investigators:	AR JW	Form completed by:	AR
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	1994

Land Use in Drainage Area (Check all that apply):

- [x] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

8 shots from BP-10

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[x] Closed Pipe	[x] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[x] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[x] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 36	In Water: [ ] No [x] Partially [ ] Fully With Sediment: [x] 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 [x] No *If No, Skip to Section 5*				
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-10	
Today's date: 12/16/11		Time (Military): 1350	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1993	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

10 stmts from BP-11

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No *If No, Skip to Section 5*				
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-11	
oday's date: 12/16/11		Time (Military): 1344	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1992	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- [ ] Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

2 Strats

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No *If No, Skip to Section 5*				
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-12	
Today's date: 12/16/11		Time (Military): 1343	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.
3 Starts From BP-27

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 36"	In Water: [ ] No [X] 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 [X] No *If No, Skip to Section 5*				
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID:	BP-13
Today's date:	12/16/11	Time (Military):	1336
Investigators:	AR JW	Form completed by:	AR
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	1988

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.
7 Struts from BP-14

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No *If No, Skip to Section 5*				
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-14	
Today's date: 12/16/11		Time (Military): 1334	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1987	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 36"	In Water: [ ] No [X] Partially [ ] Fully With Sediment: [X] 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 [X] No *If No, Skip to Section 5*				
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-15	
Today's date: 12/16/11		Time (Military): 1321	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1985	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.
2 Struts from BP-16

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____ / [X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12	In Water: [X] No [ ] Partially [ ] Fully / With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*		
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-16	
Today's date: 12/16/11		Time (Military): 1320	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1984	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.
3 Struts from BP-17

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-17	
Today's date: 12/16/11		Time (Military): 1316	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1983	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.
4 Strts from BP-18

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 36"	In Water: [ ] No [X] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-18	
Today's date: 12/16/14		Time (Military): 1314	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1982	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [X] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- [ ] Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

1 Strut from BP-19

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 36"	In Water: [ ] No [X] Partially [ ] Fully With Sediment: [X] 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 [X] No *If No, Skip to Section 5*				
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-19	
Today's date: 12/16/11		Time (Military): 1312	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1981	

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): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

3 Starts from BP-20

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 (If present)	☐ 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-20	
Today's date: 12/16/11		Time (Military):	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1980	

Land Use in Drainage Area (Check all that apply):

- [x] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

5 shots from BP-21

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[x] Closed Pipe	[x] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[x] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[x] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [x] No [ ] Partially [ ] Fully With Sediment: [x] 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 [x] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP -21	
Today's date: 12/16/11		Time (Military): 1308	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1979	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

8 Struts from BP-22

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP- 22	
Today's date: 12/16/11		Time (Military): 1306	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1978	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

1 Strut away from BP-23

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-23	
Today's date: 12/14/11		Time (Military): 1305	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1977	

Land Use in Drainage Area (Check all that apply):

- [x] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

~~Struts 22 ft Apart~~ 8 struts from BP-24

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[x] Closed Pipe	[x] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[x] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[x] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [x] No [ ] Partially [ ] Fully With Sediment: [x] 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 [x] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-24	
Today's date: 12/14/11		Time (Military): 1300	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1976	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

Struts are 22' apart

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID:	BP-~~14~~ 25
oday's date:	12/16/11	Time (Military):	~~132~~ 1330
Investigators:	AR JW	Form completed by:	AR
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	1986

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): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.
Possible we missed – 3 Stubs left of 36" BP-14

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 (If present)	☐ 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown. ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID:	BP-12 26
oday's date:	12/16/14	Time (Military):	1338
Investigators:	AR JW	Form completed by:	AR
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	1989

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

3 STWTS SOM BP-14

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-27	
Today's date: 12/16/11		Time (Military): 1340	
Investigators: AR JW		Form completed by: AR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 1990	

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.
5 Structs from BP-26

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 12"	In Water: [X] No [ ] Partially [ ] Fully With Sediment: [X] 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 [X] No	*If No, Skip to Section 5*			
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:		Outfall ID: BP-28	
Today's date: 12/16/11		Time (Military): 1415	
Investigators: MR JW		Form completed by: MR	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: 2002	

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): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.
2 Strks from BP-02

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 (If present)	☐ 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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

Subwatershed:	Outfall ID: BP-29
Today's date: 12/16/11	Time (Military): 1426
Investigators: AR JW	Form completed by: AR
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0
Latitutde: 2357925 Longitude: 0591622	GPS Unit: GPS LMK #:
Camera: Nikon-	Photo #s: 2005

Land Use in Drainage Area (Check all that apply):

- [X] Industrial
- [ ] Ultra-Urban Residential
- [ ] Suburban Residential
- [ ] Commercial
- [ ] Open Space
- [ ] Institutional
- [ ] Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
[X] Closed Pipe	[X] RCP [ ] CMP [ ] PVC [ ] HDPE [ ] Steel [ ] Other: _____	[X] Circular [ ] Eliptical [ ] Box [ ] Other: _____	[X] Single [ ] Double [ ] Triple [ ] Other: _____	Diameter/Dimensions: 18"	In Water: [ ] No [X] Partially [ ] Fully With Sediment: [X] 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 [X] No *If No, Skip to Section 5*				
Flow Description (If present)	[ ] 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	0' "	Ft, In	
	Measured length	0' "	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)
Notes: Potential tidal influence due to low tide					

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 ☐ Other:	sediment and algae
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

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)?

APPENDIX K
HARBORS GROUND MAINTENANCE SPILL CLEANUP LOG

Appendix A

JANUARY 2011

MONTHLY SPILL LOG

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved

NO OIL SPILLS FOR JANUARY 2011
DON KAULEINAMOKU MAINTENANCE AND REPAIR SUPERVISOR OF HAR?OCG
DOT/HARBOR DIVISION/STATE OF HAWAII

Appendix A

MONTHLY SPILL LOG

February 2011

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved

NO OIL SPILLS FOR FEBRUARY 2011
DON KAULEINAMOKU MAINTENANCE AND REPAIR SUPERVISOR OF HAR/OCG
DOT/HARBORS DIVISION/STATE OF HAWAII

Appendix A

MONTHLY SPILL LOG MARCH 2011

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved
3/23/2011	oil	1/2 gallon	unkown	no		pier 37 time;7:35am spill coming from refuse contau container.cleaned spill with oil pads,4-u degreaser & oil dust.clean up crew mac,ken,nels nelson(refuse crew).

DON KAULEINAMOKU MAINTENANCE AND REPAIR SUPERVISOR II OF DOT/HARBOR DIVISION /OCG
STATE OF HAWAII

Appendix A

MONTHLY SPILL LOG

April 2011

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved

NO SPILLS FOR THE MONTH OF APRIL 2011

DON KAULEINAMOKU MAINTENANCE AND REPAIR SUPERVISOR II
DEPARTMENTOOF TRANSPORTATION
HARBOR DIVISION
STATE OF HAWAII
SANITATION AND GROUNDS UNITS

Appendix A

MAY 2011

MONTHLY SPILL LOG

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved

NO OIL SPILLS TO REPORT FOR THE MONTH OF MAY 2011

DON KAULEINAMOKU , MAINTENANCE AND REPAIR SUPERVISOR II, DOT/HARBOR DIVISION/ HAR OCG
STATE OF HAWAII

Appendix A

JUNE 2011

MONTHLY SPILL LOG

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved
6/8/2011	OIL	1/2 gl. gallon	unkown	no		PARK GANG LABOR CREW CLEANED OIL SPILL THAT WASDDISCOVERD COMING OUT OF REFUSE CONTAINER. UESD 4-U DEGREASER, WATER, OIL PADS & DUST ABSORBENT. PIERS 17. GANG
6/22/2011	paint	1/4 gl.	unkown	no		
6/22/2011	paint	1/4 gallon	unkown	no		sweeper crew cleaned paint spil at pier 18 with 4-u degreaser water, pads & oil dust.

DON KAULEINAMOKU MAINTENANCE AND REPAIR SUPERVISOR II
STATE OF HAWAII/DOT/HARBOR DIVISION / SANITATION AND GROUNDS UNITS

FOR THE MONTH OF JUNE 2011

Appendix A

July 2011

MONTHLY SPILL LOG

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved
7/5/11	OIL MIX WITH WATER	6"x3'	UNKNOWN	NO		OIL & WATER MIX WAS FOUND UNDER REFUSE CONTAINER AT PIER 37. REFUSE CREW NOTIFIED SUPERVISOR AND PROCEEDED TO CLEAN THE SPILL. REFUSE CREW AND THE GENERAL LABOR CREW WHO MET THE REFUSE CREW CLEANED PIER 37 USED 1 1/2 GALLONS OF DEGREASER WITH WATER, 24 OIL PADS AND 1/2 BAG OF OIL SPONGE. SPILL WAS REPORTED AT 0652 HRS AND AREA WAS SECURED AT 0719 HOURS
7/5/11	OIL SPILL	1'x1'	UNKNOWN	NO		OIL WAS FOUND ON THE GROUND NEXT TO A REFUSE CONTAINER AT PIER 36. LABORERS NOTIFIED SUPERVISOR AND PROCEEDED TO CLEAN THE AREA. LABOR CREW USED 3 OIL PADS, 1/4 GALLON DEGREASER WITH WATER AND 1/6 OF A BAG OF OIL SPONGE SPILL WAS REPORTED AT 0650 AND AREA WAS SECURED AT 0700 HOURS
7/27/2011	oil spill	1/2 glln.	unkown	no		labor crew report pier 36 time 12;15pm oil coming out from benneth refuse container. cleaned spill with 4u degreaser water oil pads & oil dust absorbent.

Don Kauleinamoku MAINTENANCE AND REPAIR SUPERVISOR FOR THE MONTH OF JULY 2011
STATE OF HAWAII/DOT/HARBOR DIVISION/SANITATION AND GROUND UNITS

Appendix A

MONTHLY SPILL LOG

August 2011

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved
8/15/011	oil	1qúart	HSI STEVEDORE	N		on 8/15/2011 at 9:10am labor cleaned oil spill at pier 2 makai shed possible came from forklift.materials used:4-u degreaser,water,oil pads,dust absorbent.

DON KAULEINAMOKU MAINTENANCE AND REPAIR SUPERVISOR II FOR THE MONTH OF AUGUST 2011
STATE OF HAWAII/DEPARTMENT OF TRANSPORTATION/HARBOR DIVISION/SANITATION AND GROUND UNITS

Appendix A

MONTHLY SPILL LOG

September 2011

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved
9/1/2011	oil	1/4qrt.	unkown	no		REFUSE CREW REPORT SPILL AT PIER 37 time 7:41am.CLEANED SPILL WITH 4U DEGREASER,WATER,PADS, DUSTABSORBENT.

DON KAULEINAMOKU MAINTENANCE AND REPAIR SUPERVISOR II FOR THE MONTH OF SEPTEMBER 2011
STATE OF HAWAII/DEPARTMENT OF TRANSPORTATION/HARBOR DIVISION/SANITATION AND GROUND UNITS

Appendix A

MONTHLY SPILL LOG

OCTOBER 2011

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved
10/14/11	OIL	1/4 QRT. UNKOWN		N		crew report oil spill at pier 18 11:54am.cleaned with pads,4-u,water,dust.oil came fr from refuse container.
10/31/2011	unknown	2 bags oil absorbent granuels.		No		7;30am pier 10 shed labor crew sweeped up oil granuels from ground left over from cruise ship.

Appendix A

November 2011

MONTHLY SPILL LOG

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved
11/16	oil	1/2gl.	unkown	no		pier 36 oil containment center at 6:45am labor crew report oil comming from underside of cont.center.cleaned with 4-u, water,powder & pads.

DON KAULEINAMOKU -MAINTENANCE AND REPAIR SUPERVISOR II FOR THE MONTH OF NOVEMBER 2011
STATE OF HAWAII/DEPARTMENT OF TRANSPORTATION/HARBOR DIVISION/SANITATION AND GROUND UNIT

Appendix A

December 2011

MONTHLY SPILL LOG

Date	Material Spilled	Quantity	Responsible Person(s)	Discharge to Storm Drain or Ocean? (Y/N)	If Yes, Identify Water Body	Describe Clean-up Method, Disposal, and Group and Individuals Involved

APPENDIX L
HARBORS EMPLOYEE TRAINING RECORDS

Weston Solutions, Inc
Suite 2301
841 Bishop Street
Honolulu, HI 96813
808-275-2900
Fax: 808-585-7378

HDOT HARBORS
STORMWATER GENERAL AWARENESS
EMPLOYEE TRAINING
MAY 27, 2011

SIGN-IN SHEET

AFFILIATION	PRINT NAME	SIGNATURE	EMAIL	VOLUNTEER FOR CLEAN-UP?
Weston	Mark Ambler		mark.ambler@westonsolutions.com	X
State of Hi Harbors	Elmer Hirano		elmer.hirano@hawaii.gov	
State of Hi Harbors	Tommy Medeiros		Thomas.P.Medeiros@hawaii.gov	
DOT/HARBORS	Bill Davis		Bill.Davis@hawaii.gov	
DOT Harbors	Ray Aukai		Ray.Aukai@hawaii.gov	
DOT Harbors - SGT	John Todt		John.Todt@hawaii.gov	
DOT HARBORS - Ops Supe	ALAN MURAKAMI		alan.murakami@hawaii.gov	
DOT HARBORS - Security	DAVID LEE		DAVID.L.LEE@HAWAII.GOV	
DOT HARBORS - PM	ERIC LEONG		eric.leong@hawaii.gov	

APPENDIX M
WATER POLLUTION PREVENTION SPECIFICATIONS

ARTICLE XXX – TEMPORARY WATER POLLUTION, DUST, AND EROSION CONTROL

XXX.XX Description. This section is required for all work and describes the following:

(A) A detailed site-specific Best Management Practices (BMP) Plan including diagrams and narratives; constructing, maintaining, and repairing temporary water pollution, dust, and erosion control measures at the project site including local material sources, work areas and access roads; removing and disposing of wastes and hazardous wastes; and control of fugitive dust (defined as uncontrolled emission of solid airborne particulate matter from any source other than combustion). For projects that require a National Pollutant Discharge Elimination System (NPDES) Appendix C General Permit from the Department of Health (DOH), the Site-Specific Construction Best Management Practices (SSCBMP) Plan required for the permit shall satisfy this requirement.

(B) Compliance with applicable State and Federal permit conditions.

(C) Work associated with dewatering and hydrotesting activities and compliance with conditions of the NPDES general permit coverage authorizing discharges associated with construction activity dewatering and hydrotesting.

Requirements of this section also apply to the Contractor's storage sites.

XXX.XX Materials. Materials shall conform to the following:

(A) Slope Drains. Slope drains may be constructed of pipe, fiber, mats, erosion control fabric, geotextiles, rubble, portland cement concrete, bituminous concrete, plastic sheets, or other materials acceptable to the Engineer.

(B) Grass. Grass shall be quick growing species such as rye grass, Italian grass, or cereal grasses. Grass shall be suitable to the area and provide a temporary cover that will not compete later with permanent cover. Alternative grasses are allowable if acceptable to the Engineer.

(C) Fertilizer and Soil Conditions. Fertilizer and soil conditioners shall be a standard commercial grade acceptable to the Engineer.

(D) Silt Fences. Silt fences shall be synthetic filter fabric mounted on posts and embedded in compacted ground in accordance with contract documents, and shall be in compliance with ASTM D6462, Standard Practice for Silt Fence Installation.

(E) Berms. Berms shall be gravel or sand wrapped with geotextile material. Alternate materials are allowable if acceptable to the Engineer.

Alternate materials or methods to control, prevent, remove and dispose of pollution are allowable if acceptable to the Engineer.

XXX.XX Construction.

(A) Preconstruction Requirements.

(1) Water Pollution, Dust, and Erosion Control Meeting. The contractor shall be required to submit a site-specific BMP plan to the Engineer and address all comments by the Engineer. After the site-specific BMP plan is accepted in writing by the Engineer, the Contractor shall schedule a meeting with the Engineer 14 days before the start of construction work to discuss the sequence of work, and plans and proposals for water pollution, dust, and erosion control.

(2) Water Pollution, Dust, and Erosion Control Submittals. The Contractor shall submit the following site-specific BMP plan for approval by the Engineer prior to the start of work:

(a) Written site-specific BMP plan shall include the following:

1. Identification of potential pollutants and their sources.

2. A list of all material and heavy equipment to be used during construction.

3. Descriptions of the methods and devices used to minimize the discharge of pollutants into State waters and drainage systems.

4. Description of maintenance and subsequent removal of any erosion or siltation control devices

5. Method(s) of removal and disposal of solid and hazardous wastes encountered or generated during construction.

6. Method(s) of removing and disposing concrete and asphalt pavement cutting slurry, concrete curing water, and hydrodemolition water.

7. Method(s) of containing, removing and disposing of demolition dust and debris to minimize the discharge of pollutants into State waters and drainage systems.

8. Spill kit contents and location.

9. Fugitive dust control, including dust from grinding, sweeping, or brooming off operations or combination thereof.

10. Method(s) of storing and handling of hazardous materials (i.e. oils, paints, etc.) and other products used for the project.

11. Method(s) of concrete washout/waste control.

12. Good housekeeping practices.

a. Minimize tracking of sediment offsite from project entrances and exits.

b. Litter management.

13. Other factors that may cause water pollution, dust and erosion.

(b) Provide plan(s)/drawing(s) showing location of:

1. Water pollution, dust and erosion control devices.

2. Material storage and handling areas, and other staging areas.

3. Storage of aggregate (indicate types of aggregate), asphalt cold mix, soil and waste.

4. Concrete truck washouts.

5. Toilet facilities.

6. Fueling and maintenance of vehicles and other equipment.

7. Areas of soil disturbance in cut and fill.

8. Areas of vegetative practices to be implemented.

9. Drainage patterns; including a separate drawing for each phase of construction that alters drainage patterns.

(c) Provide details of BMP to be installed or utilized.

(d) Indicate approximate date when BMP will be installed and removed.

(e) Construction schedule.

(f) Name(s) of specific individual(s) designated responsible for water pollution, dust and erosion controls on the project site. Include home, business and cellular telephone numbers, fax numbers and e-mail addresses.

(g) Description of fill material to be used.

The Contractor shall date and sign the site-specific BMP plan. Keep an accepted copy on site throughout the duration of the project. Revisions to the plan shall be included with the original plan. Modify contract documents to conform to revisions. Include actual date of installation and removal of BMP. Obtain written acceptance by the Engineer before revising BMP.

The Contractor shall follow guidelines in the "Best Management Practices Manual for Construction Sites in Honolulu," in developing, installing, and maintaining BMP for the project. Follow City and County of Honolulu Soil Erosion Guidelines for all projects on Oahu. Use respective Soil Erosion Guidelines for Maui, Kauai and Hawaii County projects. Information can be found at the respective County websites.

(B) Construction Requirements. No work shall be allowed to begin until submittals detailed in Subsection XXX.XX(A)(2) – Water Pollution, Dust, and Erosion Control Submittals are completed and accepted in writing by the Engineer.

For projects that require an NPDES Appendix C General Permit from the DOH, furnish and install a rain gage in a secure location to monitor rainfall at the project site. Provide the rain gage with a tolerance of at least 0.05 inches of rainfall, and an opening of at least 1-inch diameter. Install rain gage on project site in an area that will not deter rainfall from entering the gage opening. Maintain the rain gage and replace the gage if stolen, it does not function properly or accurately, is worn out, or needs to be relocated. Do not begin field work until the rain gage is installed and the site-specific BMP are in place.

Address all comments received from the Engineer.

Modify and resubmit plans and construction schedules to correct conditions that develop during construction which were unforeseen during the design and pre-construction stages.

Coordinate temporary control provisions with permanent control features throughout the construction and post-construction period.

BMP shall be in place and operational at the end of the workday.

Install and maintain either or both stabilized construction entrances and wheel washes to minimize tracking of dirt and mud onto roadways. Restrict traffic to stabilized construction areas only. Clean dirt, mud, or other material tracked onto the road immediately. Modify stabilized construction entrances to prevent mud from being tracked onto roadways.

Chemicals may be used as soil stabilizers for either or both erosion and dust control if acceptable to the Engineer.

Cover exposed surface of materials completely with tarpaulin or similar device when transporting aggregate, soil, excavated material or material that may be a source of fugitive dust.

Cleanup and remove any pollutant that can be attributed to the Contractor.

Install or modify BMP due to change in the Contractor's means and methods, or for omitted condition that should have been allowed for in the accepted site-specific BMP plan or a BMP that replaces an accepted site-specific BMP that is not satisfactorily performing.

Properly maintain BMP. For projects that require an NPDES Appendix C General Permit from the DOH, inspect, prepare a written report and make repairs to BMP. Maintain records of BMP inspections for the duration of the project. Submit copies of the inspection reports to the Engineer upon request. Inspections shall be made at the following intervals:

(1) Weekly during dry periods.

(2) Within 24 hours of any rainfall of 0.5 inches or greater which occurs in a 24-hour period.

(3) Daily during periods of prolonged rainfall.

(4) When existing erosion control measures are damaged or not operating properly as required by the site-specific BMP plan.

Remove, replace or relocate any BMP that must be removed, replaced or relocated due to potential or actual flooding, or potential danger or damage to the project or public.

The Contractor's designated representative specified in Subsection XXX.XX(A)(2)(f) shall address any BMP concerns brought up by the Engineer within 24 hours of notification, including weekends and holidays. Should the Contractor fail to satisfactorily address these concerns, the Engineer reserves the right to employ outside assistance or use the Engineer's own labor forces to provide necessary corrective measures. The Engineer will charge the Contractor such incurred costs plus any associated project engineering costs. The Engineer will make appropriate deductions from the Contractor's monthly progress estimate. Failure to apply BMP shall result in either or both the establishment and increase in the amount of retainage due to unsatisfactory progress or withholding of monthly progress payment. Continued failure to apply BMP may result in one or more of the following: the Contractor being fully responsible for all additional costs incurred by the State, suspension of the Contract, or cancellation of the Contract.

(C) Hydrotesting Activities. If work includes removing, relocation or installing waterlines, and the Contractor elects to flush waterline or discharge hydrotesting effluent into State waters or drainage systems, obtain a Notice of General Permit Coverage (NGPC) authorizing discharges associated with hydrotesting waters from the DOH Clean Water Branch (CWB). If a permit is required, prepare and submit permit application (CWB-Notice of Intent (NOI) Form F) to the DOH CWB.

Do not begin hydrotesting activities until the DOH CWB has issued a NGPC. Hydrotesting operations shall be in accordance with conditions in the NGPC. Submit a copy of the NPDES Hydrotesting Waters Application and Permit to the Engineer.

(D) Dewatering Activities. If excavation of backfilling operations require dewatering, and the Contractor elects to discharge dewatering effluent into State waters or existing drainage systems, obtain a NGPC authorizing discharges associated with construction activity dewatering from the DOH CWB. If a permit is required, prepare and submit permit application (CWB-NOI Form G) to the DOH CWB.

Do not begin dewatering activities until the DOH-CWB has issued a NGPC. Conduct dewatering operations in accordance with the conditions in the NGPC. Submit a copy of the NPDES Dewatering Application and Permit to the Engineer.

XXX.XX Measurement.

(A) Installation, maintenance, monitoring, and removal of the BMP will be paid on a lump sum basis. Measurement for payment will not apply.

(B) The Engineer will only measure additional water pollution, dust and erosion control required and requested by the Engineer on a force account basis in accordance with Subsection 109.06 -- Force Account Provisions and Compensation of the *Hawaii Standard Specifications for Road and Bridge Construction, 2005*.

XXX.XX Payment. The Engineer will pay for accepted pay items listed below at contract price per pay unit, as shown in the proposed schedule. Payment will be full compensation for work prescribed in this section and contract documents.

The Engineer will pay for the following pay item when included in the proposed schedule:

Pay Item	**Pay Unit**
Installation, Maintenance, Monitoring, and Removal of BMP	Lump Sum

No progress payment will be authorized until the Engineer accepts in writing the site-specific BMP plan or when the Contractor fails to maintain the project site in accordance with the accepted BMP plan.

The Contractor shall reimburse the State within 30-days for the full amount of all outstanding costs incurred by the State for all citations or fines received as a result of the Contractor's non-compliance with regulations.

APPENDIX N
HARBORS CONSTRUCTION INSPECTION REPORTS

Print Form

SITE-SPECIFIC COMPLIANCE, BMP, POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

(TO BE COMPLETED BEFORE COMMENCEMENT OF GRADING OR SITE-WORK AND THEN EVERY TWO WEEKS FROM OCTOBER THROUGH APRIL, OTHERWISE, BI-MONTHLY)

Harbors Division will not allow grading or site-work to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the plans for site-specific compliance, BMPs and pollution prevention are implemented correctly and in the right locations.

Project Title: Perimeter Fencing at Honolulu and Kalaeloa Barbers Point NGPC No. N/A

Project No.: H. C. 10239 12:12pm

Contractor: Mocon Corporation sunny

Verified By: Joe Cheng JC Date: 02/22/11

(HDOT Project Inspector/Engineer's Signature)

EROSION CONTROL - SLOPES/EXPOSED AREAS

Location	Date Disturbed	Erosion Control Measure established	Type of Erosion Control used	Acceptable (yes/no)	Comments
None					

Notes/Actions:

Pier 39 Fence modification. No ground disturbance anticipated in this project.

To be performed by: _____ on or before: _____

SEDIMENT CONTROL

Location	Type of Control (Silt fence, inlet protection, etc.)	Acceptable? (Yes/No)	*Rate Effectiveness of Control	Comments
None				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

To be performed by: _____ on or before: _____

STABILIZED CONSTRUCTION ENTRANCE

Location	Type of Stabilization	Acceptable? (Yes/No)	*Effectiveness of method used	Comments
None				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

STRUCTURAL CONTROLS (SEDIMENT BASINS)

(Check for Condition of Basin and Condition of outfall)

Location	Type of Sediment Basin	Acceptable? (Yes/No)	*Effectiveness of Sediment Basin	Comments
None				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

OTHER CONSTRUCTION ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Sawcutting	N/A	
Dust Control	N/A	
Dewatering	N/A	

CONTRACTOR ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Concrete Washout/Waste	N/A	
Vehicle/Equipment Fueling	N/A	No vehicle or equipment fueling on site.
Vehicle/Equipment Cleaning	N/A	No vehicle or equipment cleaning on site.
Vehicle/Equipment Maintenance	N/A	No vehicle or equipment maintenance on site.
Material Storage	N/A	No material storage on site.
Spill Prevention/Control	N/A	
Waste Storage/Disposal	N/A	

Print Form

SITE-SPECIFIC COMPLIANCE, BMP, POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

(TO BE COMPLETED BEFORE COMMENCEMENT OF GRADING OR SITE-WORK AND THEN EVERY TWO WEEKS FROM OCTOBER THROUGH APRIL, OTHERWISE, BI-MONTHLY)

Harbors Division will not allow grading or site-work to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the plans for site-specific compliance, BMPs and pollution prevention are implemented correctly and in the right locations.

Project Title: Perimeter Fencing at Honolulu and Kalaeloa Barbers Point NGPC No. N/A

Project No.: H. C. 10239 11:17am

Contractor: Mocon Corporation sunny

Verified By: Joe Cheng JC Date: 03/10/11

(HDOT Project Inspector/Engineer's Signature)

EROSION CONTROL - SLOPES/EXPOSED AREAS

Location	Date Disturbed	Erosion Control Measure established	Type of Erosion Control used	Acceptable (yes/no)	Comments
None					

Notes/Actions:

Pier 1 Fence modification. No ground disturbance anticipated in this project.

To be performed by: _____ on or before: _____

SEDIMENT CONTROL

Location	Type of Control (Silt fence, inlet protection, etc.)	Acceptable? (Yes/No)	*Rate Effectiveness of Control	Comments
None				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

To be performed by: _____ on or before: _____

STABILIZED CONSTRUCTION ENTRANCE

Location	Type of Stabilization	Acceptable? (Yes/No)	*Effectiveness of method used	Comments
None				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

STRUCTURAL CONTROLS (SEDIMENT BASINS)

(Check for Condition of Basin and Condition of outfall)

Location	Type of Sediment Basin	Acceptable? (Yes/No)	*Effectiveness of Sediment Basin	Comments
None				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

OTHER CONSTRUCTION ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Sawcutting	N/A	
Dust Control	N/A	
Dewatering	N/A	

CONTRACTOR ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Concrete Washout/Waste	N/A	
Vehicle/Equipment Fueling	N/A	No vehicle or equipment fueling on site.
Vehicle/Equipment Cleaning	N/A	No vehicle or equipment cleaning on site.
Vehicle/Equipment Maintenance	N/A	No vehicle or equipment maintenance on site.
Material Storage	N/A	No material storage on site.
Spill Prevention/Control	N/A	
Waste Storage/Disposal	N/A	

Print Form

SITE-SPECIFIC COMPLIANCE, BMP, POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

(TO BE COMPLETED BEFORE COMMENCEMENT OF GRADING OR SITE-WORK AND THEN EVERY TWO WEEKS FROM OCTOBER THROUGH APRIL, OTHERWISE, BI-MONTHLY)

Harbors Division will not allow grading or site-work to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the plans for site-specific compliance, BMPs and pollution prevention are implemented correctly and in the right locations.

Project Title: Perimeter Fencing at Honolulu and Kalaeloa Barbers Point NGPC No. N/A

Project No.: H. C. 10239 02:30pm

Contractor: Mocon Corporation sunny

Verified By: Joe Cheng Date: 03/22/11

(HDOT Project Inspector/Engineer's Signature)

EROSION CONTROL - SLOPES/EXPOSED AREAS

Location	Date Disturbed	Erosion Control Measure established	Type of Erosion Control used	Acceptable (yes/no)	Comments
None					

Notes/Actions:

New Post Holes - Dirt removed from site as holes are being drilled.

To be performed by: _____ on or before: _____

SEDIMENT CONTROL

Location	Type of Control (Silt fence, inlet protection, etc.)	Acceptable? (Yes/No)	*Rate Effectiveness of Control	Comments
None				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

To be performed by: _____ on or before: _____

STABILIZED CONSTRUCTION ENTRANCE

Location	Type of Stabilization	Acceptable? (Yes/No)	*Effectiveness of method used	Comments
None				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

STRUCTURAL CONTROLS (SEDIMENT BASINS)

(Check for Condition of Basin and Condition of outfall)

Location	Type of Sediment Basin	Acceptable? (Yes/No)	*Effectiveness of Sediment Basin	Comments
None				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

OTHER CONSTRUCTION ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Sawcutting	N/A	
Dust Control	N/A	
Dewatering	N/A	

CONTRACTOR ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Concrete Washout/Waste	N/A	
Vehicle/Equipment Fueling	N/A	No vehicle or equipment fueling on site.
Vehicle/Equipment Cleaning	N/A	No vehicle or equipment cleaning on site.
Vehicle/Equipment Maintenance	N/A	No vehicle or equipment maintenance on site.
Material Storage	N/A	No material storage on site.
Spill Prevention/Control	N/A	
Waste Storage/Disposal	N/A	

SITE-SPECIFIC COMPLIANCE, BMP, POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

(TO BE COMPLETED BEFORE COMMENCEMENT OF GRADING OR SITE-WORK AND THEN EVERY TWO WEEKS FROM OCTOBER THROUGH APRIL, OTHERWISE, BI-MONTHLY)

Harbors Division will not allow grading or site-work to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the plans for site-specific compliance, BMPs and pollution prevention are implemented correctly and in the right locations.

Project Title: Repair Bollards at Piers 31-33, Honolulu Harbor NGPC No. N/A

Project No.: HC 10423 10:15AM

Contractor: Integrated Construction, Inc. SUNNY

Verified By: _____ Date: 04/21/2011

(HDOT Project Inspector/Engineer's Signature)

EROSION CONTROL - SLOPES/EXPOSED AREAS

Location	Date Disturbed	Erosion Control Measure established	Type of Erosion Control used	Acceptable (yes/no)	Comments
N/A					No ground disturbance.

Notes/Actions:

Project started on 4/19/11. Subcontractor is on site to core the pier deck while general contractor is removing the bollards.

To be performed by: _____ on or before: _____

SEDIMENT CONTROL

Location	Type of Control (Silt fence, inlet protection, etc.)	Acceptable? (Yes/No)	*Rate Effectiveness of Control	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

To be performed by: _____ on or before: _____

STABILIZED CONSTRUCTION ENTRANCE

Location	Type of Stabilization	Acceptable? (Yes/No)	*Effectiveness of method used	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

STRUCTURAL CONTROLS (SEDIMENT BASINS)

(Check for Condition of Basin and Condition of outfall)

Location	Type of Sediment Basin	Acceptable? (Yes/No)	*Effectiveness of Sediment Basin	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

OTHER CONSTRUCTION ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Sawcutting	Yes	Vacuum is on site and actively being used to suck up slurry.
Dust Control	Yes	Using vacuum is on site.
Dewatering	N/A	No dewatering activity involved today.

CONTRACTOR ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Concrete Washout/Waste	N/A	No concrete pouring observed today.
Vehicle/Equipment Fueling	N/A	No equipment fueling observed on site.
Vehicle/Equipment Cleaning	N/A	No equipment cleaning observed on site.
Vehicle/Equipment Maintenance	N/A	No vehicle/equipment maintenance observed on site.
Material Storage	Yes	Materials are mostly stored on pick-up trucks.
Spill Prevention/Control	Yes	
Waste Storage/Disposal	Yes	Wastes are hauled away from job site each day. Told contractor to clean up debris at the end of each day.

Print Form

SITE-SPECIFIC COMPLIANCE, BMP, POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

(TO BE COMPLETED BEFORE COMMENCEMENT OF GRADING OR SITE-WORK AND THEN EVERY TWO WEEKS FROM OCTOBER THROUGH APRIL, OTHERWISE, BI-MONTHLY)

Harbors Division will not allow grading or site-work to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the plans for site-specific compliance, BMPs and pollution prevention are implemented correctly and in the right locations.

Project Title: Repair Bollards at Piers 31-33, Honolulu Harbor NGPC No. N/A

Project No.: HC 10423 12:50PM

Contractor: Integrated Construction, Inc. SUNNY

Verified By: _____ Date: 05/2/2011

(HDOT Project Inspector/Engineer's Signature)

EROSION CONTROL - SLOPES/EXPOSED AREAS

Location	Date Disturbed	Erosion Control Measure established	Type of Erosion Control used	Acceptable (yes/no)	Comments
N/A					No ground disturbance.

Notes/Actions:

Subcontractor is on site to core the pier deck while general contractor is removing the bollards.

Inspected by Joe Cheng.

To be performed by: _____ on or before: _____

SEDIMENT CONTROL

Location	Type of Control (Silt fence, inlet protection, etc.)	Acceptable? (Yes/No)	*Rate Effectiveness of Control	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

To be performed by: _____ on or before: _____

STABILIZED CONSTRUCTION ENTRANCE

Location	Type of Stabilization	Acceptable? (Yes/No)	*Effectiveness of method used	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

STRUCTURAL CONTROLS (SEDIMENT BASINS)

(Check for Condition of Basin and Condition of outfall)

Location	Type of Sediment Basin	Acceptable? (Yes/No)	*Effectiveness of Sediment Basin	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

OTHER CONSTRUCTION ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Sawcutting	Yes	Vacuum is on site and actively being used to suck up slurry.
Dust Control	Yes	Using vacuum is on site.
Dewatering	N/A	No dewatering activity involved today.

CONTRACTOR ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Concrete Washout/Waste	N/A	No concrete pouring observed today.
Vehicle/Equipment Fueling	N/A	No equipment fueling observed on site.
Vehicle/Equipment Cleaning	N/A	No equipment cleaning observed on site.
Vehicle/Equipment Maintenance	N/A	No vehicle/equipment maintenance observed on site.
Material Storage	Yes	Materials are mostly stored on pick-up trucks.
Spill Prevention/Control	Yes	
Waste Storage/Disposal	Yes	Wastes are hauled away from job site each day. Told contractor to clean up debris at the end of each day.

SITE-SPECIFIC COMPLIANCE, BMP, POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

(TO BE COMPLETED BEFORE COMMENCEMENT OF GRADING OR SITE-WORK AND THEN EVERY TWO WEEKS FROM OCTOBER THROUGH APRIL, OTHERWISE, BI-MONTHLY)

Harbors Division will not allow grading or site-work to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the plans for site-specific compliance, BMPs and pollution prevention are implemented correctly and in the right locations.

Project Title: Repair Bollards at Piers 31-33, Honolulu Harbor NGPC No. N/A

Project No.: HC 10423 10:30AM

Contractor: Integrated Construction, Inc. CLOUDY

Verified By: _____ Date: 12/9/2011

(HDOT Project Inspector/Engineer's Signature)

EROSION CONTROL - SLOPES/EXPOSED AREAS

Location	Date Disturbed	Erosion Control Measure established	Type of Erosion Control used	Acceptable (yes/no)	Comments
N/A					No ground disturbance.

Notes/Actions:

Contractor resumed work on 12/8/11 since the work stopped around May 2011.

To be performed by: _____ on or before: _____

SEDIMENT CONTROL

Location	Type of Control (Silt fence, inlet protection, etc.)	Acceptable? (Yes/No)	*Rate Effectiveness of Control	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

To be performed by: _____ on or before: _____

STABILIZED CONSTRUCTION ENTRANCE

Location	Type of Stabilization	Acceptable? (Yes/No)	*Effectiveness of method used	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

STRUCTURAL CONTROLS (SEDIMENT BASINS)

(Check for Condition of Basin and Condition of outfall)

Location	Type of Sediment Basin	Acceptable? (Yes/No)	*Effectiveness of Sediment Basin	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

OTHER CONSTRUCTION ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Sawcutting	N/A	No sawcutting today.
Dust Control	Yes	Boards are used to fill the expansion gap to catch debris.
Dewatering	N/A	No dewatering activity involved today.

CONTRACTOR ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Concrete Washout/Waste	N/A	No concrete pouring observed today.
Vehicle/Equipment Fueling	N/A	No equipment fueling observed on site.
Vehicle/Equipment Cleaning	N/A	No equipment cleaning observed on site.
Vehicle/Equipment Maintenance	N/A	No vehicle/equipment maintenance observed on site.
Material Storage	Yes	Materials are mostly stored on pick-up trucks.
Spill Prevention/Control	Yes	
Waste Storage/Disposal	Yes	Wastes are hauled away from job site each day. Told contractor to clean up debris at the end of each day.

Print Form

SITE-SPECIFIC COMPLIANCE, BMP, POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

(TO BE COMPLETED BEFORE COMMENCEMENT OF GRADING OR SITE-WORK AND THEN EVERY TWO WEEKS FROM OCTOBER THROUGH APRIL, OTHERWISE, BI-MONTHLY)

Harbors Division will not allow grading or site-work to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the plans for site-specific compliance, BMPs and pollution prevention are implemented correctly and in the right locations.

Project Title: Repair Bollards at Piers 31-33, Honolulu Harbor NGPC No. N/A

Project No.: HC 10423 9:00AM

Contractor: Integrated Construction, Inc. CLOUDY

Verified By: _____ Date: 12/28/2011

(HDOT Project Inspector/Engineer's Signature)

EROSION CONTROL - SLOPES/EXPOSED AREAS

Location	Date Disturbed	Erosion Control Measure established	Type of Erosion Control used	Acceptable (yes/no)	Comments
N/A					No ground disturbance.

Notes/Actions:

Final inspection on 12/28/11.

To be performed by: _____ on or before: _____

SEDIMENT CONTROL

Location	Type of Control (Silt fence, inlet protection, etc.)	Acceptable? (Yes/No)	*Rate Effectiveness of Control	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

To be performed by: _____ on or before: _____

STABILIZED CONSTRUCTION ENTRANCE

Location	Type of Stabilization	Acceptable? (Yes/No)	*Effectiveness of method used	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

STRUCTURAL CONTROLS (SEDIMENT BASINS)

(Check for Condition of Basin and Condition of outfall)

Location	Type of Sediment Basin	Acceptable? (Yes/No)	*Effectiveness of Sediment Basin	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

OTHER CONSTRUCTION ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Sawcutting	N/A	No sawcutting today.
Dust Control	N/A	No dust created today.
Dewatering	N/A	No dewatering activity involved today.

CONTRACTOR ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Concrete Washout/Waste	N/A	No concrete pouring observed today.
Vehicle/Equipment Fueling	N/A	No equipment fueling observed on site.
Vehicle/Equipment Cleaning	N/A	No equipment cleaning observed on site.
Vehicle/Equipment Maintenance	N/A	No vehicle/equipment maintenance observed on site.
Material Storage	Yes	No materials stored on site.
Spill Prevention/Control	Yes	
Waste Storage/Disposal	N/A	

Print Form

SITE-SPECIFIC COMPLIANCE, BMP, POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

(TO BE COMPLETED BEFORE COMMENCEMENT OF GRADING OR SITE-WORK AND THEN EVERY TWO WEEKS FROM OCTOBER THROUGH APRIL, OTHERWISE, BI-MONTHLY)

Harbors Division will not allow grading or site-work to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the plans for site-specific compliance, BMPs and pollution prevention are implemented correctly and in the right locations.

Project Title: EMBANKMENT REPAIRS AT KALAELOA BARBERS PT. HARBOR NGPC No. WQC 0000780

Project No.: HC 10414 12:00 PM

Contractor: HAWAIIAN DREDGING CONSTRUCTION CO., INC. SUNNY

Verified By: RODNEY YAMANE (HDOT Project Inspector/Engineer's Signature) Date: 02/02/11 ~~02/03/11~~

EROSION CONTROL - SLOPES/EXPOSED AREAS

Location	Date Disturbed	Erosion Control Measure established	Type of Erosion Control used	Acceptable (yes/no)	Comments
CRANE DEPLOYMENT ZONE	01/31/11		STRAW WATTLES	ACKNOWL EDGED	WATTLES EMPLOYED AROUND THE PERIMETER

Notes/Actions:

CRANE USED TO DRIVE SHEET PILES INTO PLACE

To be performed by: _____ on or before: _____

SEDIMENT CONTROL

Location	Type of Control (Silt fence, inlet protection, etc.)	Acceptable? (Yes/No)	*Rate Effectiveness of Control	Comments
N/A				NO DRAIN INLETS PRESENT

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

To be performed by: _____ on or before: _____

STABILIZED CONSTRUCTION ENTRANCE

Location	Type of Stabilization	Acceptable? (Yes/No)	*Effectiveness of method used	Comments
NONE				N/A

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

STRUCTURAL CONTROLS (SEDIMENT BASINS)

(Check for Condition of Basin and Condition of outfall)

Location	Type of Sediment Basin	Acceptable? (Yes/No)	*Effectiveness of Sediment Basin	Comments
NONE				N/A

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

OTHER CONSTRUCTION ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Sawcutting		N/A
Dust Control		N/A
Dewatering		N/A

CONTRACTOR ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Concrete Washout/Waste	ACKNOWLEDGED	SET UP IN STORAGE AREA, PLASTIC POOLS
Vehicle/Equipment Fueling	ACKNOWLEDGED	DRIP PANS EMPLOYED, SPILL KIT ON HAND
Vehicle/Equipment Cleaning	N/A	NO EQUIPMENT CLEANING ON SITE
Vehicle/Equipment Maintenance	N/A	NO EQUIPMENT MAINTENANCE ON SITE
Material Storage	ACKNOWLEDGED	STOCKPILED IN STORAGE AREA, SILT FENCE ERECTED
Spill Prevention/Control	ACKNOWLEDGED	SPILL KIT PRESENT
Waste Storage/Disposal	ACKNOWLEDGED	ALL CONSTRUCTION DEBRIS REMOVED FROM SITE DAILY/ NO WASTE STORAGE

Print Form

SITE-SPECIFIC COMPLIANCE, BMP, POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

(TO BE COMPLETED BEFORE COMMENCEMENT OF GRADING OR SITE-WORK AND THEN EVERY TWO WEEKS FROM OCTOBER THROUGH APRIL, OTHERWISE, BI-MONTHLY)

Harbors Division will not allow grading or site-work to commence until the project engineer or qualified project inspector have inspected the construction site to determine if the plans for site-specific compliance, BMPs and pollution prevention are implemented correctly and in the right locations.

Project Title: EMBANKMENT REPAIRS AT KALAELOA BARBERS PT. HARBOR NGPC No. WQC 0000780

Project No.: HC 10414 10:00AM

Contractor: HAWAIIAN DREDGING CONSTRUCTION CO., INC. HAZY - VOG

Verified By: RODNEY YAMANE Date: 2/16/11

(HDOT Project Inspector/Engineer's Signature)

EROSION CONTROL - SLOPES/EXPOSED AREAS

Location	Date Disturbed	Erosion Control Measure established	Type of Erosion Control used	Acceptable (yes/no)	Comments
CRANE DEPLOYMENT ZONE	01/31/11		STRAW WATTLES	ACKNOWLEDGED	WATTLES EMPLOYED AROUND THE PERIMETER

Notes/Actions:

CRANE USED TO DRIVE SHEET PILES INTO PLACE - CRANE REMOVED 2/8/11.

To be performed by: _____ on or before: _____

SEDIMENT CONTROL

Location	Type of Control (Silt fence, inlet protection, etc.)	Acceptable? (Yes/No)	*Rate Effectiveness of Control	Comments
N/A				NO DRAIN INLETS PRESENT

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

To be performed by: _____ on or before: _____

STABILIZED CONSTRUCTION ENTRANCE

Location	Type of Stabilization	Acceptable? (Yes/No)	*Effectiveness of method used	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

STRUCTURAL CONTROLS (SEDIMENT BASINS)

(Check for Condition of Basin and Condition of outfall)

Location	Type of Sediment Basin	Acceptable? (Yes/No)	*Effectiveness of Sediment Basin	Comments
N/A				

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:

_____

_____

_____

To be performed by: _____ on or before: _____

OTHER CONSTRUCTION ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Sawcutting		NONE
Dust Control		NONE
Dewatering		NONE
IN WATER CONSTRUCTION(SHEET PILES)	ACKNOWLEDGED	SILT CURTAIN EMPLOYED

CONTRACTOR ACTIVITIES

Activity	Adequate BMPs? (Yes/No)	Comments
Concrete Washout/Waste	ACKNOWLEDGED	SET UP IN STORAGE AREA(PLASTIC POOLS)
Vehicle/Equipment Fueling	ACKNOWLEDGED	DRIP PANS EMPLOYED, SPILL KIT ON HAND
Vehicle/Equipment Cleaning	N/A	NO EQUIPMENT CLEANING ON SITE
Vehicle/Equipment Maintenance	N/A	NO EQUIPMENT MAINTENANCE ON SITE
Material Storage	ACKNOWLEDGED	STOCKPILED IN STORAGE AREA, SILT FENCE ERECTED
Spill Prevention/Control	ACKNOWLEDGED	SPILL KIT PRESENT
Waste Storage/Disposal	ACKNOWLEDGED	ALL CONSTRUCTION DEBRIS REMOVED FROM SITE DAILY/ NO WASTE STORAGE

APPENDIX O

HARBORS CONSTRUCTION PLAN REVIEWER/INSPECTOR TRAINING RECORDS

EMPLOYEE STORM WATER MANAGEMENT TRAINING
CONSTRUCTION INSPECTION

Hawaii Department of Transportation – Harbors Division

INTRODUCTION

- Hawaii Department of Transportation – Harbors Division
  - Engineering Branch
- Weston Solutions, Inc.
  - Mr. David Johnson
  - Mr. Mark Ambler PE/PMP

AGENDA

- Regulatory Background
- Small MS4 General Permit Requirements
- DOT-HARBORS Construction Program
- Construction Site Stormwater Runoff Control
  - Plan Review
  - Site Inspections and Video
    - BMPs for Construction Sites in Hawaii
  - Enforcement Actions
  - Reporting
  - Educational Outreach
- Contact Information
- Question/Comments

REGULATORY BACKGROUND - FEDERAL

- Clean Water Act (40 CFR 100-149)
  - 1972 Clean Water Act– Swimmable, Fishable
  - 1987 Amendements – NPDES (National Pollution Discharge Elimination System) regulations
- Effluent Limitation Guidelines and Standards for the Construction and Development Point Source Category (40 CFR 450)
- NPDES – Environmental Protection Agency Regulatory Authority
  - Phase I issued in 1990 – Individual Permit
    - Industrial Facilities
    - Construction Sites > 5 acres
    - Medium and Large Municiple Separate Storm Sewer System (MS4)
  - Phase II issued in 1999 – General Permit
    - Small MS4
    - Construction Sites > 1 acre < 5 acres
- MS4 – conveyance that is owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.; designed or used to collect or convey stormwater; and not combined with sewer.

REGULATORY BACKGROUND - HAWAII

- NPDES regulatory authority is issued to Hawaii Department of Health by the EPA
- Hawaii Administrative Rules (HAR)
  - Title 11Chapter 55 (11-55)
    - Water Pollution Control
  - **Appendix C**
    - **Storm Water Associated with Construction Activity**
  - Appendix K
    - NPDES General Permit Authorizing Discharges of Storm Water and Certain Non-Storm Discharges from Small MS4s
- Harbors Division – Notice of General Permit Coverage (NGPC)
  - HI 03KB482 – Administravitely extended in October 2007
  - HI 03KB488 – Administratively extended in October 2007

INTENT OF NPDES PROGRAM

- NPDES ensures that Non-Storm Water Discharges (NSWDs) are NOT allowed into the ocean
- Exceptions:

Small MS4 General Permit Requirements

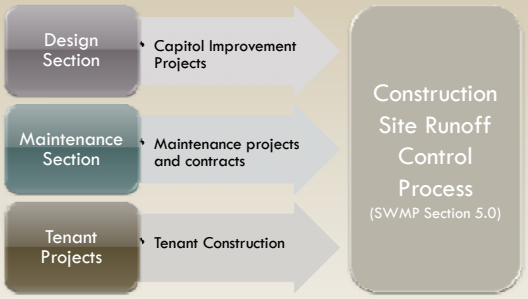
Minimum Control Measures

- Public Education & Outreach
- Public Participation & Involvement
- Illicit Discharge Detection & Elimination
- **Construction Site Runoff Control**
- **Post-Construction Runoff Control**
- Pollution Prevention & Good Housekeeping

Construction Site Runoff Control

- Defined in Section 5.0 of the Storm Water Management Plan
- The purpose is to prevent construction projects from polluting storm water during and after construction
- The program includes:
  - Plan Review
  - Site Inspections
  - Enforcement
  - Reporting
  - Educational Outreach

Where Do Construction Projects Originate?



Construction Discharge Permit

Construction Site Runoff Control Plan:
- **Plan Review**
- Site Inspections
- Enforcement Actions
- Reporting
- Educational Outreach

- Construction site operators must submit a CWB-NOI Form when a construction activity results in the disturbance of greater or equal to 1 acre (includes base yard)
- The form must be submitted at least 30 calendar days prior to construction
- Both the General Form and the Site Specific Construction BMP Plan must be filled out and $500 filing fee submitted
  - See handouts for SSCBMP (2/15/2011)

http://hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html

CWB-NOI General Forms

Construction Site Runoff Control Plan:
- **Plan Review**
- Site Inspections
- Enforcement Actions
- Reporting
- Educational Outreach

- Owner information
- Owner Type
- Operator Information
- Facility/Project Information
- List of Receiving Waters
- Authorized Representatives

http://hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html

CWB-NOI SSCBMP Plan

Construction Site Runoff Control Plan:
- **Plan Review**
- Site Inspections
- Enforcement Actions
- Reporting
- Educational Outreach

- Project Dates
- Certification
- Owner Information
- Contractor Information
- Facility Information
- Receiving Waters
- Drain System
- Existing Pollution Sources (Site History)
- Site Disturbance Calculations
- Storm Water Flow Estimates
- Construction Phasing
- Maps and Plans

http://hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html

CWB-NOI SSCBMP PLAN (cont.)

Construction Site Runoff Control Plan:
- **Plan Review**
- Site Inspections
- Enforcement Actions
- Reporting
- Educational Outreach

- Storm Water Flow Chart
- Planned Construction BMPs
- Maps and Plans
- Training
- Project Schedule
- NPDES Inspection Schedule
- Contingency Plan
- BMP Specification Sheets
- Post-Construction Pollution Control Measures

http://hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html

Who Reviews the Stormwater Plans?

Construction Site Runoff Control Plan:
- **Plan Review**
- Site Inspections
- Enforcement Actions
- Reporting
- Educational Outreach

- Design Section → Designer/Engineer Review
- Maintenance Section → Designer/Engineer Review
- Tenant Projects → DOT-HAR Environmental Section Review

http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=116&minmeasure=4

EMS Manual as a Tool for Plan Review

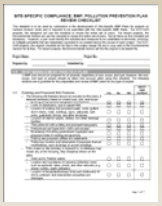
Construction Site Runoff Control Plan:
- **Plan Review**
- Site Inspections
- Enforcement Actions
- Reporting
- Educational Outreach

- Harbors' Environmental Management System Manual Appendix H Contains tools for managing internal and tenant construction activities
  - Plan Review checklist
  - Plan Amendment and Review Form

Site-Specific Compliance, BMP, Pollution Prevention Plan Review Checklist

Construction Site Runoff Control Plan:
- **Plan Review**
- Site Inspections
- Enforcement Actions
- Reporting
- Educational Outreach

- For review of Construction Plan and NOI Forms
  - Designers & Engineers
- No grading or site work will commence until Harbors has verified that regulations are met
- Filed in the project design file and a copy sent to DOT-HAR Environmental Section



Site-Specific Compliance, BMP, Pollution Prevention Plan Amendment Review Form

Construction Site Runoff Control Plan:
- **Plan Review**
- Site Inspections
- Enforcement Actions
- Reporting
- Educational Outreach

- For amendment of Construction Plan and NOI Forms
- Responsibility depends on phase of process
  - Planning
  - Construction
  - Post-Construction Controls
- No grading or site work will commence until Harbors has verified that regs are met.
- File with Review Checklist

NON-NPDES Project Plan Review

Construction Site Runoff Control Plan:
- **Plan Review**
- Site Inspections
- Enforcement Actions
- Reporting
- Educational Outreach

- Projects Less than 1 Acre
  - Maintenance Projects
  - Tenant Projects
  - Other?
- To Be Developed
  - BMP Manual
  - SWPPP Template
  - Plan Review Form
  - Site Inspection Form

USEPA: 10 Elements of an Effective Review

Construction Site Runoff Control Plan:
- **Plan Review**
- Site Inspections
- Enforcement Actions
- Reporting
- Educational Outreach

http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=116&minmeasure=4

Construction Site Inspection Tools

- Appendix G: Inspection and Enforcement Manual
  - Section 5.0 Inspection Procedures
- Appendix H: Construction Program
  - Inspection and Maintenance Report Form
- HDOH-CWB SSCBMP Plan
  - Inspection Checklist

Construction Site Inspections

Construction Site Runoff Control Plan:
- Plan Review
- **Site Inspections**
- Enforcement Actions
- Reporting
- Educational Outreach

- Construction Site Inspections are dictated by *Harbors EMS Manual Appendices G & H*
- Inspections will occur after approval of plans to ensure that BMPs have been installed and maintained
- Contractor will not be allowed to begin grading or site work until Harbors has documented inspection.
- Inspections will continue throughout the life of the project.
  - Rainy season (Oct-Apr): every two weeks
  - Dry Season (May-Sept): every two months

Inspector Roles and Responsibilities

Construction Site Runoff Control Plan:
- Plan Review
- **Site Inspections**
- Enforcement Actions
- Reporting
- Educational Outreach

- Professional Responsibility – Show common courtesy toward facility personnel by
  - Scheduling inspections ahead of time
  - Giving a courtesy call at least 20 minutes before inspection
  - Asking permission to take photos
  - Providing introductions and credentials
  - Providing facility with copy of findings
  - Thanking facility personnel

Inspector Roles and Responsibilities

Construction Site Runoff Control Plan:
- Plan Review
- **Site Inspections**
- Enforcement Actions
- Reporting
- Educational Outreach

- Safety Responsibility – Protect yourself from accidents
  - Wearing appropriate gear (hard hat, steel-toed shoes)
  - Assessing hazards in surroundings and acting appropriately
  - Ensure you have proper safety for hazards known at the site (i.e. HAZWOPER requirements for environmentally impaired sites)
- Documentation Responsibility
  - Take photos
  - Take complete notes with locations, dates, and times
  - Obtain contact information for representative for follow up or future inspections

Construction Pre-Inspection

Construction Site Runoff Control Plan:
- Plan Review
- **Site Inspections**
- Enforcement Actions
- Reporting
- Educational Outreach

- Collect and analyze background information on tenant/construction site
  - Records of environmental assets
  - Past inspection records
  - Property management files
  - Maps
  - Plans
  - NOI General Form & SSCBMP Plan Review
- Develop strategy for inspection. What are the specific concerns/goals?
- Prepare safety equipment
- Unannounced inspections are allowed, but only recommended for higher levels of enforcement
- Announced inspections allow time for gathering of records and making appropriate representative available

Construction Pre-Inspection

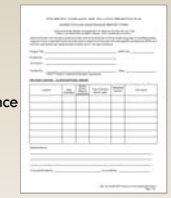
Construction Site Runoff Control Plan:
- Plan Review
- **Site Inspections**
- Enforcement Actions
- Reporting
- Educational Outreach

- If tenant or contractor is hostile, Harbor police can escort
- A conference may allow tenant/operators to locate additional documents or key personnel
- A site representative must accompany the inspector to answer questions and describe operations

Site Inspections

Construction Site Runoff Control Plan:
- Plan Review
- **Site Inspections**
- Enforcement Actions
- Reporting
- Educational Outreach

- *Inspection procedures will follow Section 5.0 of IEP. Substitute reporting requirements with:*
- *Site Specific Compliance, BMP, Pollution Prevention Plan Inspection and Maintenance Report Form*
- Sections covered:
  - Erosion control
  - Sediment controls
  - Stabilized construction entrance
  - Structural controls
  - Other construction activities
  - Contractor activities



Non-NPDES Site Inspections

Construction Site Runoff Control Plan:
- Plan Review
- **Site Inspections**
- Enforcement Actions
- Reporting
- Educational Outreach

- *Program in Development*
- *BMP Plan Review*
- *Simplified Inspection Checklist*
- *Approval Process for repeat operations*
  - *Street Cleaning*
  - *Painting*
  - *Building Maintenance*
  - *Etc…*

Video

Video Review

- 1st Priority – Minimize erosion
- 2nd Priority – Prevent pollution runoff from leaving site
- Update BMPs when there is a change in
  - Construction process
  - Environment
- Erosion Control Measure – Source prevention
- Sediment Control Measure – Stops pollution after it has eroded
- Tracking Controls – Prevents/minimizes sediment from leaving site on vehicles

EROSION CONTROL - SLOPES/EXPOSED AREAS

Location	Date Disturbed	Erosion Control Measure established	Type of Erosion Control used	Acceptable (yes/no)	Comments
North perimeter	2/18/10	yes	Silt Fence	No	Fence is damaged and maintenance records not provided

Notes/Actions:
Damaged area of silt fence is allowing sediment to leave property. Contractor must repair silt fence.

To be performed by: ABC Construction on or before: 3/4/10

SEDIMENT CONTROL

Location	Type of Control (Silt fence, inlet protection, etc.)	Acceptable? (Yes/No)	*Rate Effectiveness of Control	Comments
Nimitz Gate	Drain Inlet Protection	No	Poor	Not maintained, breached control

(* Effectiveness Rating: Excellent, Very Good, Good, Fair, Poor)

Notes/Actions:
Drain inlet protection is insufficient. Immediate replacement/repair required.

ABC Construction 3/4/10

To be performed by: _____ on or before: _____


PICK-UP
SHIT BOX


BRUTE


SCHWING

Pier 29 Container Yard Construction

BMP Plan Layout Map

Photograph 1 - Petroleum Contaminated Soil Stockpile – Covering Required.

Photograph 2 – Recessed excavation prevents storm water erosion/run-off

WESTON SOLUTIONS	Project Title: Hawaii Department of Transportation – Harbors Division	Date: 3/2/2011
	Work Order Number: Storm Water Management – Construction Inspection Pier 29 – HC 10354	Pages: 1 of 3

Photograph 3 – Primary sediment control device not maintained. Filter socks should remain overlapped and in place. Note secondary filter installed inside drop drain.

Photograph 4 – BMP not properly installed. Filter socks not overlapped. Gaps enable sediment to enter the harbor.

WESTON SOLUTIONS	Project Title: Hawaii Department of Transportation – Harbors Division	Date: 3/2/2011
	Work Order Number: Storm Water Management – Construction Inspection Pier 29 – HC 10354	Pages: 2 of 3

Photograph 5 – BMP not maintained. Filter sock repair/replacement required.

Photograph 6 – State Discharge Point #2. Double filtration with evidence of sediment removal and maintenance on the project site. No evidence of sediment at the discharge point.

WESTON SOLUTIONS	Project Title: Hawaii Department of Transportation – Harbors Division	Date: 3/2/2011
	Work Order Number: Storm Water Management – Construction Inspection Pier 29 – HC 10354	Pages: 3 of 3

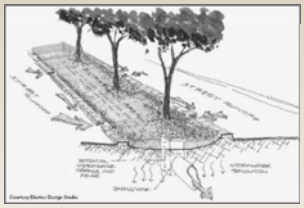
Low Impact Development Standard

Construction Site Runoff Control Plan:
- Plan Review
- **Site Inspections**
- Enforcement Actions
- Reporting
- Educational Outreach

- *Appendix K of SWMP*
- *Manage storm water as close to the source as possible and limit discharge to MS4 receiving waters*
- *New or Redevelopment >5,000 sq.ft. impervious surface*
- Submittal Requirements
  - Peak flow rate calculation
  - Installation design specifications
  - Performance specifications
  - Operations and Maintenance Manuals
- Options
  - BioSwales, Green Roofs, Bio-Retention Planter Box, Porous Sidewalk, Rain Barrels, Curb Openings, Amended Soil, ect…

Post-Construction Controls

Post-Construction Storm Water Management starts early on in the design process! Tools like Low-Impact Development and Green Design can be used to create a cost effective system for managing runoff from your sites.



Create a Hydrologically Functional Site!!!

Post-Construction Controls

Considering water quality impacts early in the design process can provide long-term water quality benefits.

- **Low-Impact Development**
- **Green Design**
- **Site Specific/Innovative BMPs**
- **Infiltration**
- **Filtration**
- **Retention/Detention**
- **Isolation/Separation of Runoff from Processes**

Options you can use to manage your site:

Eliminating Curbs and Gutters
Green Parking
Green Roofs
Protection of Natural Features
Urban Forestry
Grassed Swales
Infiltration Basin/Trench
Permeable Pavement
Porous Asphalt Pavement
Sand and Organic Filters
Vegetated Filter Strip
Dry Detention Ponds
In-Line Storage
Storm Water Wetland

Post-Construction Controls

Drainage Swales

Storm Water Retention Ponds

Green Roofs

EMS Manual as a Tool for Enforcement

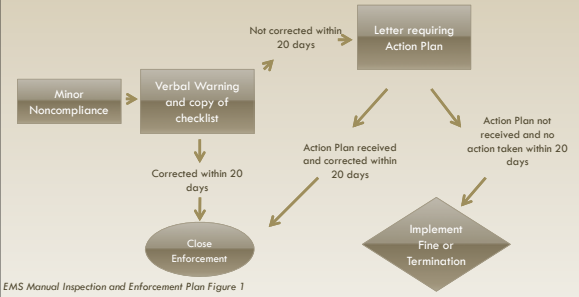
- Appendix G: Inspection and Enforcement Manual
  - Section 6.0 Enforcement Procedures
- Appendix H: Construction Program
  - Inspection and Maintenance Report Form
  - Plan Amendment Review Form

Enforcement Actions

Construction Site Runoff Control Plan:
- Plan Review
- Site Inspections
- **Enforcement Actions**
- Reporting
- Educational Outreach

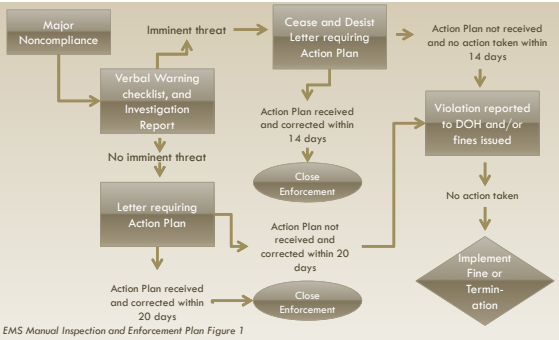
- EMS Manual Appendix G Inspection and Enforcement Plan Section 6.0 directs tenant enforcement
- Contract language directs construction operator enforcement

Minor Enforcement Actions for Tenants



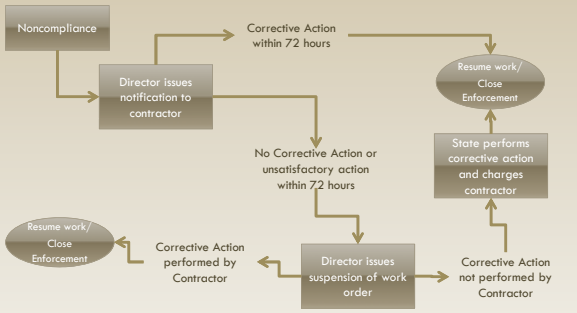
EMS Manual Inspection and Enforcement Plan Figure 1

Major Enforcement Actions for Tenants



EMS Manual Inspection and Enforcement Plan Figure 1

Example Construction Enforcement Actions from Pier 29



Specifications and Proposal for Construction of Pier 29 Container Yard

Enforcement Actions

- Construction Site Runoff Control Plan:
- Plan Review
- Site Inspections
- **Enforcement Actions**
- Reporting
- Educational Outreach

- Recommended enforcement actions can be noted on the Inspection and Maintenance Report Form

- Letter of Action will be submitted by Harbor Administrator or Director

Enforcement Actions

Regulatory Mechanisms

- Hawaii Administrative Rules (HAR)
- Hawaii Revised Statutes (HRS)
- Tenant Leases/Revocable Permits / Construction contracts
- 40 CFR - Clean Water Act & NPDES
- Other Applicable State & Federal Regulations

Penalties for Lack of Compliance (dependant on severity of violation)

- Verbal Warnings
- Written Notices
- Citation with Monetary Fines
- Stop Work Orders
- Abatement by Harbors Division with Reimbursement by the Responsible Party
- Lease Termination
- Referral to HDOH or Other Appropriate Regulatory Agency

Enforcement Actions

- Construction Site Runoff Control Plan:
- Plan Review
- Site Inspections
- **Enforcement Actions**
- Reporting
- Educational Outreach

- Corrective actions regarding inadequate BMPs must be rectified and reflected in an amended BMP Plan
- Changes to BMP Plan must be logged in the Plan Amendment Review Form
- Form must be included in tenant file

Reporting

- Construction Site Runoff Control Plan:
- Plan Review
- Site Inspections
- Enforcement Actions
- **Reporting**
- Educational Outreach

- Construction Program Site Specific Compliance, BMP, Pollution Prevention Plan
  - Review Checklist,
  - Inspection and Maintenance Report Form, and
  - Plan Amendment Review Form
- Must be filed in for tracking and record-keeping purposes
- Specific tracking procedures to be developed

Educational Outreach

- Construction Site Runoff Control Plan:
- Plan Review
- Site Inspections
- Enforcement Actions
- Reporting
- **Educational Outreach**

- Training workshops for plan reviewers
- Harbors develops annual educational materials
- Educational Materials will be available on Harbors website

Outreach to Contractors

- Construction Site Runoff Control Plan:
- Plan Review
- Site Inspections
- Enforcement Actions
- Reporting
- **Educational Outreach**

- Resources for specific BMP procedures
  - Best Management Practices Manual for Construction Sites in Honolulu (DES, GCA)
  - Rules Relating to Soil Erosion Standards and Guidelines (DPP)
  - USEPA Website: Menu of BMPs http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm
  - 40 CFR 450 -- Effluent Limitation Guidelines and Standards for the Construction and Development Point Source Category

Storm Water Contacts

First Call Harbors Hotline

- Harbors Hotline @ (808) 587-1962
- Construction Engineer @ (808) 587-1866

Discharges

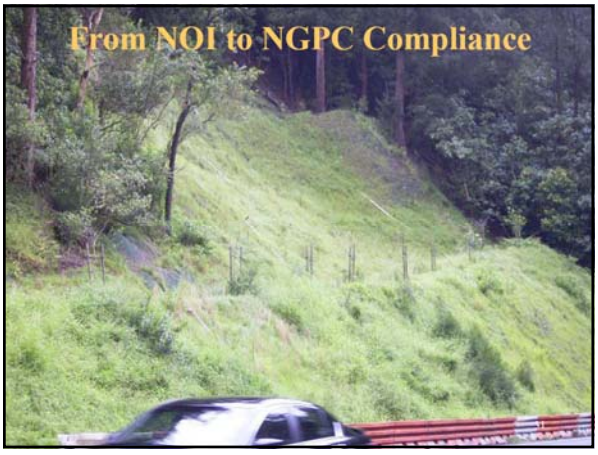
- Marine Traffic Control Unit @ (808) 587-2076

Serious Offenses

- Hawaii Department of Health, Clean Water Branch @ (808) 586-4309
- U.S. Coast Guard @ (800) 424-8802
- USEPA @ (808) 541-2721

REMOVE! CONTAIN! TREAT!
KEEP OUR WATERS CLEAN……..

- Questions?
- Comments?



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HDOT HARBORS STORMWATER MANAGEMENT EMPLOYEE TRAINING (ENGIN. BR.) JUNE 28, 2011

SIGN-IN SHEET

AFFILIATION	PRINT NAME	SIGNATURE	EMAIL	VOLUNTEER FOR CLEAN-UP?
HAR-EM	DALE ANDRES	Dale Andres	dale.andres@hawaii.gov	
-ED	Jonathan Yee	[signature]	jonathan.s.yee@hawaii.gov	
HAR. EC	Andy Chan	[signature]	andy.chan@hawaii.gov	
HAR-EP	ARNOLD LIU	[signature]	arnold.liu@hawaii.gov	
Weston	Mark Ambler	[signature]	mark.ambler@westonsolutions.com	
Weston	Dave Johnson	[signature]	dave.johnson@westonsolutions.com	
~~Wes~~ HAR-EC	Lauren Tokura	[signature]	lauren.m.tokura@hawaii.gov	
HAR. EC	Joe Cheng	[signature]	joe.cheng@hawaii.gov	
HAR-E	Carter Luke		carter.luke@hawaii.gov	

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HDOT HARBORS
STORMWATER MANAGEMENT
EMPLOYEE TRAINING (ENGINEERING BR.)
JUNE 28, 2011

SIGN-IN SHEET

AFFILIATION	PRINT NAME	SIGNATURE	EMAIL	VOLUNTEER FOR CLEAN-UP?
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HAR-EC	RODNEY YAMANE		RODNEY.K.YAMANE@HAWAII.GOV	
HAR-ED	RANDY HIRAKI		RANDAL.HIRAKI@HAWAII.GOV	
HAR-EE	RANDAL LEONG		randal.leong@hawaii.gov	
HAR-EP	DEAN WATASE		dean.watase@hawaii.gov	
" "	SANDRA ROSSETTER		sandra.c.rossetter@hawaii.gov.	
HAR-ESP	SHARILYN IKEDA		sharilyn.s.ikeda@hawaii.gov	

APPENDIX P
STORM DRAIN CLEANING LOGS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION
BARBERS POINT KALAELOA

TRANSMITTAL SHEET

DATE: 1/10/12 # OF PAGES: 5

TO: Randal COMPANY:

PHONE: FAX:

FROM: LOGAN WILLIAMS IV HARBORS DIVISON

PHONE: 682-6428 FAX: 673-7413

REMARKS: 4 drain cleaning and 1 sweeper log

KALAELOA DRAIN CLEANING CHART

P-5A	0-300'	SET-1	SET-2	SET-3	SET-4	DATE OF CLEANING	REMARK
	0-150	X				10-5-11	-OCG
	150-300	X				10-6-11	-OCG
~100	00		X			10-13-11	-11

NOTE: 10-25-11 to 12-8-11 Equipment/Back Hoe Down/Leak

KALAELOA DRAIN CLEANING CHART

P-5B	300-1100'	SET-1	SET-2	SET-3	SET-4	DATE OF CLEANING	REMARK
	900 - 1100	X				8-23-11	-OCS
	710 - 900	X				9/7/11	11
	550 - 750	X				9-8-11	11
	300 - 550	X				9-20-11	11

KALAELOA DRAIN CLEANING CHART

P-6	1100-1900'	SET-1	SET-2	SET-3	SET-4	DATE OF CLEANING	BY. REMARK
1100'	1300'	X				10-3-11	AES O.K. L.W
1300	1500	X				10-4-11	AES O.K. L.W.
1500	1700'	X				10-5-11	AES. O.K. L.W
1700'	1900'	X				10-6-11	AES O.K. L.W
1300'	1500'		X			10-7-11	A/P O.K. L.W
1500'	1700'		X			10-8-11	A/P
1100'	0900'		X			10-25-11	OCG

KALAELOA DRAIN CLEANING CHART

P-7	1900-2700	SET-1	SET-2	SET-3	SET-4	DATE OF CLEANING	REMARK
	2300-2200	X				5-26-11	- OCG
	2350-2300	X				5-31-11	"
1900	1900-2050	X				10-11-11	- OCG
2050	2200	X				10-12-11	- OCG
2200	2460	X				10-19-11	"
2400	2700	X				10-20-11	"

mulch in str.
"

KALAELOA HARBOR SWEEPER LOG

P-1	F/P	P-5A	P-5	P-6	P-7	OTHERS	BY:	DATE:
	X		X	X			OCG	5/12/09
		X			X		"	5-13-09
X						office	"	6-2-09 sand
				X			"	6-15-09 Coal
				X				6-[illegible]
	X				X			6-[illegible]
MAIAKOLE RD. John-Wyn								7-7-09
				X				> 7-22/7-23 Coal
				X				
MALAKOLE RD. + office area								8-25-09
X	X	X						9-16-09
			X	X				9-23-09
				X	X			10-1-09
				X				10-8-09
MALAKOLE RD + John-Wyn								6-21-10
X	X	X						6-28-10
			X	X				8-12-10
					X			8-31-16
		X	X					
		X	X					> 9-13 to 8/14/10 Coal
				X			A.E.S	11-24-10
		x	X	X			OCG	6-16-11
MALAKOLE RD + John Wyn							"	6-29-11
X	X	X					OCG	10-26-11
			X	X			"	10-27-11
				X	X		"	10-28-11
MALAKOLE RD / John Wyn / F/P							"	12-[illegible]-11
				X-2			A.E.S	12-4-11
				X-2			"	12-5-11
				X-2			"	12-6-11
				X-2			AES	12-7-11
				X-2			AES	12-8-11
				X-2			"	12-9-11
				X-2			AES	12-10-11
				X-2			AES	12-11-11
				X-2			AES	12-26-11
				X-2			AES	12-27-11
				X-2			"	12-28-11
				X-2			"	12-29-11
				X-2			"	12-30-11
				X-2			"	12-31-11