

# **Annual Compliance Report 2010**

**Honolulu Harbor, Hawaii**



**Prepared for**

**Hawaii Department of Transportation  
Harbors Division**

**Prepared by**

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**January 2011**



*"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."*

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Signature

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Date

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Authorized Representative of Harbors Division





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## LIST OF ACRONYMS AND ABBREVIATIONS

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ACR	Annual Compliance Report
BMP	Best Management Practice
CFR	Code of Federal Regulations
Co.	Company
CSRCP	Construction Site Runoff Control Program
CWB	Clean Water Branch
dba	Doing Business As
EMS	Environmental Management System Manual
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
ICC	International Coastal Cleanup
IEP	Inspection and Enforcement Plan
IDDE	Illicit Discharge Detection and Elimination
Inc.	Incorporated
LIDS	Low Impact Development Standards
LLC	Limited Liability Corporation
Ltd.	Limited
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

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**LIST OF ACRONYMS AND ABBREVIATIONS, CONTINUED**

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ORI	Outfall Reconnaissance Inventory
STOP	Stop the Ocean Pollution
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TBD	To Be Determined
TMK	Tax Map Key
TRP	Tenant Revocable Permit
TSI	Tenant Self-Inspection
USEPA	U.S. Environmental Protection Agency
WEE	Wikoliana Educational Excursions
WESTON	Weston Solutions, Inc.

## 1.0 INTRODUCTION

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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 HI03KB482. 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 2010 and presents areas that will be addressed in calendar year 2011. 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
- ✓ Summary of Future and Expended Budget Requirements.



### 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 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 in a letter dated May 19, 2003. The expiration date of that NGPC was November 19, 2007. However, 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 original permit and letter of 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 water.

The 2009 SWMP and ACR establish a baseline from which evaluations in future ACRs can be made. 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 ACR.



## 2.0 PUBLIC EDUCATION AND OUTREACH

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### Permit Requirements

*City and County of Honolulu Stormwater Stenciling, 2009*

*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 stormwater discharges and effectively prohibit unauthorized non-stormwater 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 Honolulu Harbor 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, and has been updated to reflect changes from 2009. A summary of the tenant changes is also presented on Table 2-1.

**Table 2-1      Updates to Tenant Inventory**

<b>Tenant</b>	<b>Status</b>	<b>Reason</b>
Aloha Tower Development Corporation	Removed	No longer leases property from Harbors.
American Divers, Incorporated (Inc.)	Removed	Name is no longer used; is now American Marine Corporation.
Bering Sea Eccotech, Inc.	Removed	No longer leases property from Harbors.
Can-Am Coating, Inc.	Removed	No longer leases property from Harbors.
City and County of Honolulu, Department of Transportation Services	Removed	No longer leases property from Harbors.
Container Storage Company of Hawaii, Inc.	Removed	Duplicate of Frank P. White Jr. Properties doing business as (dba) Container Storage Co.
Earth Tech, Inc.	Removed	No longer leases property from Harbors.
Ed Yamashiro, Inc.	Removed	Not a Harbors tenant.
EKNA Services	Removed	Not a Harbors tenant.
Five Star Roofing, Limited Liability Corporation (LLC)	Removed	No longer leases property from Harbors.
Fourth Mate Production, LLC	Removed	No longer leases property from Harbors.
G.W. Killebrew Company (Co.), Inc.	Removed	No longer leases property from Harbors.
GMB Vinyl, Inc. dba GMB Vinyl Fencing	Removed	No longer leases property from Harbors.
Hawaii Maritime Center	Combined	Same organization as "Friends of Falls of Clyde". Entered into the database as Friends of Falls of Clyde.
Hawaii Superferry	Removed	No longer lease property from Harbors.
Atlantis Cruises and Hawaiian Cruises	Combined	Combined in the database as Hawaiian Cruises dba Atlantis Cruises.  Note: in the 2009 ACR Atlantis Cruises and Atlantis Submarines were combined, however they will remain separate in the 2010 ACR as they have separate TRPs.
Honolulu Agency, Inc. & Oceanic Global Trading	Removed	No longer leases property from Harbors.

Tenant	Status	Reason
Imperium Renewable Hawaii LLC	Removed	No longer leases property from Harbors.
Island Beach Activities	Removed	No longer leases property from Harbors.
Joslin Service Corporation	Removed	No longer leases property from Harbors.
Kapalama Federal Credit Union	Removed	No longer leases property from Harbors.
Ko Olina Marina, LLC	Removed	Not a Harbors tenant.
MC & A, Inc.	Removed	No longer leases property from Harbors.
Mid Pac Petroleum	Removed	No longer leases property from Harbors.
Miller/Watts Constructors, Inc.	Removed	No longer leases property from Harbors.
Murao, Joy P., dba RJ Lunchwagon	Removed	No longer leases property from Harbors.
Newport Pacific Cabinets, Inc.	Removed	No longer leases property from Harbors.
Pacific Rim Trading Group, Limited (Ltd.)	Removed	No longer leases property from Harbors.
RSI Roofing and Building Supply	Removed	No longer leases property from Harbors.
Servco Pacific, Inc.	Removed	No longer leases property from Harbors.
David D. Chang and Eun Ik Chang, Shin Woo Corporation, Jeonju Makeolli US Company	Combined	The three names have the same location and owner. Entered into the database as David D. Chang and Eun Ik Chang dba Shin Woo Corporation
Suematsu, Nora dba United Equipment	Removed	No longer leases property from Harbors.
Transmarine Navigation Corporation	Removed	Not a Harbors tenant.
United Excavation Equipment Corporation	Removed	No longer leases property from Harbors.
Waikiki Marine Sales	Removed	No longer leases property from Harbors.
White Publishing Company	Removed	No longer leases property from Harbors.

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 2010 mailing was sent on 27 September and 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
  - Informed all tenants of the anticipated inspection schedule
- The Tenant Self-Inspection (TSI) form
  - Returned forms utilized for updating and tracking tenant operations and contact information
- The tenant inspection checklist
  - Provide advanced understanding of the inspection requirements
  - Allowed tenants to review and ask questions or seek further guidance prior to the inspections
- New BMP flyers
  - “Vehicle and Equipment Washing” Flier. The flier describes the flow pathway of pollutants into the storm drains, the responsibility of tenants to operate within parameters of the Harbors SWMP, and solutions the tenant may implement to stay in compliance.
  - “Vehicle and Equipment Fueling” Flier. The flier describes administrative and structural controls that are required to be implemented in order to prevent the flow of fuel-related pollutants into the storm drains.

A copy of this mailing and its attachments can be found in Appendix D. The updated TSI database for Honolulu Harbor is found in Appendix E. Future tenant mailings will be updated with new BMP flyers based on findings from the annual tenant inspections.

On November 3 and 5, 2010 Harbors Division held annual tenant educational workshops entitled, “Tenant Storm Water Pollution Prevention Awareness Training.” The agenda included background on applicable regulations presented by a HDOH Clean Water Branch representative, 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 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) Spill Documentation Form. 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, which were recorded in the spill documentation form. Please see Appendix L for the Honolulu Tower Log and Appendix G for the HAR-EE Spill Documentation Forms.

### BMP 2-1 Tenant Education and Outreach

Goals: 1) Generate tenant awareness of stormwater pollution. 2) Engage tenant interest in preventing stormwater 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	Sept 2010	Weston Solutions, Inc. (Weston)	Items were updated to include vehicle fueling and washing.
	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	To Be Determined (TBD) by December 2011.
Mail educational materials and reporting contacts to tenants	Number of educational materials distributed	100% of tenants received educational materials and reporting contacts	Sent Sept 2010. Registered mail receipt date varies	Harbors Environmental Section	206 mailings were sent (Honolulu and Kalaeloa Barbers Point Harbors)
	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	Include TSI guidance with 2011 flyer
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	No inquiries, however 21 notifications from the Honolulu Tower were received.
	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	Not tracked.

## 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.

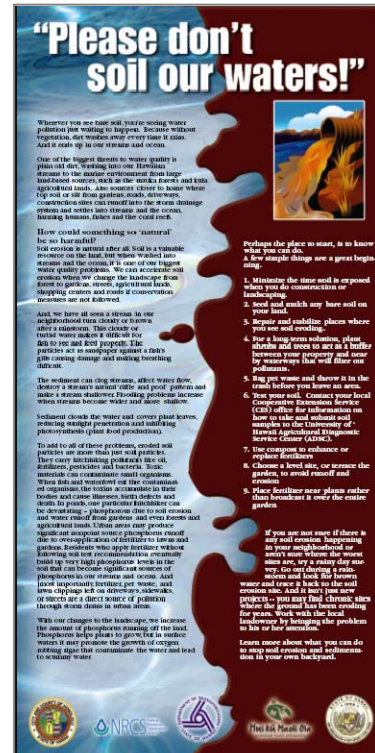
Public education activities includes posting signs that advise against dumping or discarding inappropriate materials where they may be carried into Harbor waters. Signs are posted at visible public locations, such as harbor entrances, comfort stations, meeting areas, and garbage collection stations.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

The Harbors storm water website is under construction, but currently 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 2010, Harbors Division will continue to foster relationships with other State agencies and develop new programs for public education and outreach in 2011.

In 2010 two Harbors tenants, Friends of Falls of Clyde and Wikoliana Educational Excursions (WEE), solicited volunteers for several large-scale activities, some of which are international endeavors to improve public awareness of coastal areas. The activities that occurred during 2010 are:

- ✓ International Coastal Cleanup (ICC) – September 25, 2010. A volunteer organization sponsored by the Ocean Conservancy that solicits participation from over 100 countries around the world, and in 2009 collected 6.7 million pounds of debris. The local theme for the ICC is “Get the Drift and Bag It.”
- ✓ Stop the Ocean Pollution (STOP) – April 4<sup>th</sup>, 2010. A volunteer storm drain stenciling and monitoring program that collects data for the ICC, which is a global volunteer organization sponsored by the Ocean Conservancy. STOP is also supported by large Harbors tenants such as Young Brothers that provide stencils for volunteers. The volunteers are primarily students from local schools.
- ✓ Keep America Beautiful – A cigarette and litter clean up activity that identified bus stops as key areas on Harbors where litter and cigarette filters accumulate.



*Ad placed in Honolulu Advertiser*





✓ Great American Cleanup – WEE solicited help from Harbors Division, Navy Seals, Navy Divers, and local crane operators to remove debris from the harbor floor on Worlds Ocean Day.

A flyer and volunteer sign-in sheet are included as Appendix H.

In 2011 Harbors tenants hope to participate in the Urban Waters International Coastal Cleanup, a program sponsored by both the EPA and the Ocean Conservancy similar to the ICC with an emphasis on Urban Waters.

## BMP 2-2 General Public Education and Outreach

Goals: 1) Generate tenant awareness of stormwater pollution. 2) Engage tenant interest in preventing stormwater 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	Tenant inspections identified optimal public locations for signs. Signs will be created and posted in 2011
	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 2011.
	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	Identified ICC data cards as potential source of tracking.
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 and will be posted in 2011.



Goals: 1) Generate tenant awareness of stormwater pollution. 2) Engage tenant interest in preventing stormwater 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
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 complete, however 15 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	25 September 2010	Harbors Division	Volunteer solicitation conducted and activity will be implemented in 2011
	Number of employee and public participants	An increase in participation from previous year	25 September 2010	Harbors Tenants, the public	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 2010.

### 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 stormwater 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 2011. 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 2011
	Number of Marine Cargo Specialist Attending Annual Storm water Training	Increasing attendance	NA	Harbors Oahu District; Marine Cargo Specialists; Harbor Agents	Training conducted in 2010
	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 monitoring performed.
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 2011
	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 Honolulu Harbor tenants in 2010, with the exception of eleven non-responsive tenants, whom Harbors will be pursuing enforcement actions against if inspections are not completed within a reasonable timeframe. Follow up calls were placed however they yielded no response. Before using enforcement actions Harbors will attempt to find updated contact information or speak to a tenant representative in person to make an inspection appointment.

Inspection of and outreach to commercial and industrial tenants was conducted to ensure the following:

- ✓ Establish a baseline of the level of compliance of tenants and 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-stormwater 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 2011.

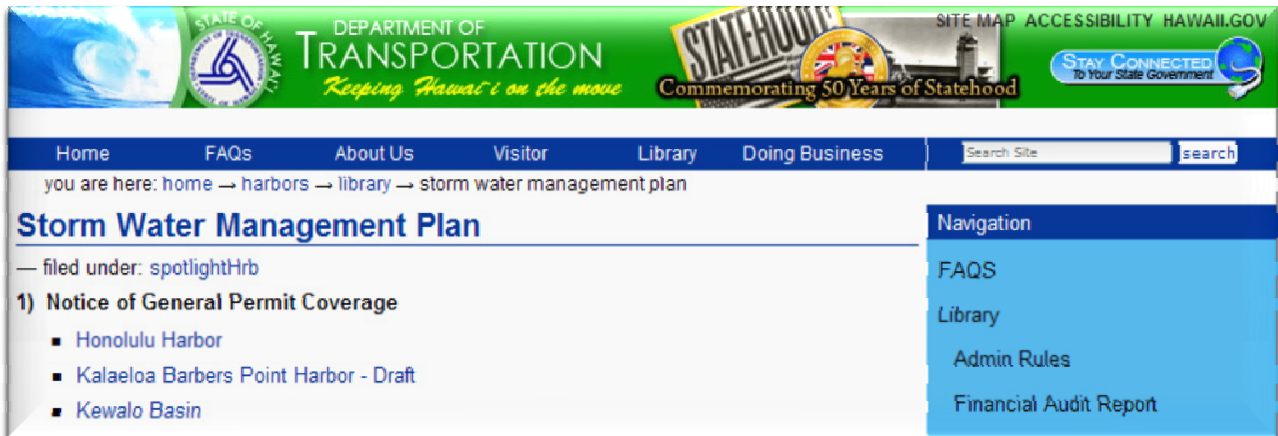
Overall, each of the tenants showed a willingness to cooperate and improve compliance with storm water regulations and the Harbor's SWMP. In most cases the tenant was unaware of the potential storm water impacts and/or that administrative and engineering controls were required for compliance with storm water regulations.

The 2010 tenant inspections found multiple tenants with illegal cross connections to the Harbor MS4. These findings included sinks and hoses that discharged onto the asphalt or directly into a storm drain. In these cases tenants were told to immediately discontinue the activity and take measures to prevent the activity in the future. Tenants were educated on the requirement to obtain an Industrial Waste Water Discharge Permit and secure a connection to the sanitary sewer system for all wash water.

### 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 being 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	Dec 2010	Harbors Environmental Section	Database is located at Harbors Division office
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% in 2010.	Dec 2010	Harbors Environmental Section, Weston, HDOT	158 of 170 (93%) Honolulu Harbor tenants were inspected in 2010. Non-responsive tenants expected to be inspected or removed by the end of 2010.
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	Tenant inspection findings will be completed in February 2011 whereupon they will be included in the database.

### 3.0 PUBLIC INVOLVEMENT/PARTICIPATION



#### Permit Requirements

<http://hawaii.gov/dot/harbors>

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

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### Permit Requirements

*Kaunakakai Harbor, Hawaii. February 2006.*

*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 159 of 170 tenants at the Honolulu Harbor (two tenants were located at both Honolulu and Kalaeloa Barbers Point Harbors) as stated in Section 2.4. 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 reports of inspection findings will be completed by the end of 2011.

The resultant 2010 inspection report for each inspection will be sent to each tenant in 2011. The inspection reports contain the following:

- ✓ An explanation of the objective of the inspections;
- ✓ Tenant contact information;
- ✓ Facility description;
- ✓ A summary of inspection observations;
- ✓ Risk ranking;
- ✓ Personnel training requirements; and
- ✓ Photo log.

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.

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.

Overall, all tenants that had discrepancies were unaware of storm water regulations pertaining to the issue and showed willingness to comply immediately.



#### 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	30 Dec 2009	Harbors Environmental Section	Outfall maps were submitted with SWMP. No change from 2009.
	Sources of outfall discharges identified	100% of sources identified	October 2010	Harbors Environmental Section	Outfall discharges identified in reports. See Appendix J.

#### 4.2.2 Outfall Reconnaissance Inventory

An annual dry weather ORI was performed from June to October 2010 by the Harbors Environmental Health Specialist. The ORI was made at low tide and describes outfall conditions, flow characteristics, and descriptions of the surrounding areas. Wet weather observations were conducted on December 28, 2010. Records of outfall inspections 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;
- ✓ Overall characterization, ranging from Unlikely (0 to 1 indicators present), Potential (two indicators present), Suspect (three or more indicators present), and Obvious;
- ✓ Qualitative measurement of flow at the outfall; and
- ✓ Notes that include observations of conditions, surroundings, ocean life, human activity, and other information not already covered by the form.

**Table 4-1 Honolulu Harbor Dry Weather Inspections**

Pier	Outfall	Date	Indicator of Illicit Discharge	Flow	Notes
4	4	6/10/2010	Suspect	-	Submerged, Aama crabs
9	2	6/14/2010	Unlikely	Moderate flow	Sidewalk cleaning was being conducted. Follow-up letter sent to tenant requesting dry cleaning methods or containment of all wash water.
9	4	6/14/2010	Unlikely	Moderate flow	
10	6	6/14/2010	Unlikely	Trickle flow	
11	1	6/14/2010	Unlikely	Trickle flow	
11	2	6/14/2010	Unlikely	Trickle flow	
21	4	7/12/2010	Potential	Trickle Flow	
21	-	7/12/2010	-	-	Sewer coming out from bathrooms on end. Notified Oahu District Maintenance for Repair
27	-	7/12/2010	-	-	Leaking water hatch. Notified Oahu District Maintenance for Repair.
28	1	7/12/2010	-	-	Water hatches leaking. Notified Oahu District Maintenance for Repair.
35	5	8/9/2010	Unlikely	Moderate flow	Potentially from ice plant. Most likely due to vehicle washing. Further investigation to be conducted. Follow-up letter sent to tenant. See Appendix M.
36	-	8/9/2010	Unlikely	Water line leak	Potable water line under pier leaking. Notified Oahu District Maintenance.
38	1	-			Discharge observed outside of ORI inspections. Not recorded on form.
38	3	-			Discharge observed outside of ORI inspections. Not recorded on form.
42	1	8/9/2010	Unlikely	Trickle Flow	Coming from under pipe
51A	2	10/5/2010	Unlikely	Trickle Flow	Follow-up required to determine flow source
51A	4	10/5/2010	Unlikely	Trickle Flow	Follow-up required

Pier	Outfall	Date	Indicator of Illicit Discharge	Flow	Notes
51A	6	10/5/2010	Potential	Trickle Flow	Follow-up required to determine flow source
51A	7	10/5/2010	Unlikely	Moderate flow	Follow-up required to determine flow source
51A	8	10/5/2010	Unlikely	Moderate flow	Follow-up required to determine flow source
52	-	10/5/2010	-	-	Water leak under start of pier 52. Notified Oahu District Maintenance.

- No information entered on form.  
Unlikely 0-1 indicators present  
Potential 2 indicators present  
Suspect 3 or more indicators present  
Obvious 100% certainty of illicit discharge

**Table 4-2 Honolulu Harbor Wet Weather Inspections**

Pier	Outfall	Date	Indicator of Illicit Discharge	Flow	Notes
21	-	12/28/10	-	-	Hi-Sea was observed washing vehicles. They were notified to stop washing activities. The issue was brought to the attention of the Harbors Property Manager.  Pier 21 Lunchroom grease trap is not efficient in collecting grease.
34	-	12/28/10	-	-	Sheen observed in the open channel coming from upstream of Harbors property. Preventative booms are in-place.
37	-	12/28/10	-	-	Slight sheen and waste coming from Pacific Ocean Procedures and Uncle's Fish Market

- No information entered on form.  
Unlikely 0-1 indicators present  
Potential 2 indicators present  
Suspect 3 or more indicators present  
Obvious 100% certainty of illicit discharge

### 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	October 2010	Harbors Environmental Section	Completed
Wet weather inspections of outfalls	Percentage of outfalls inspected	20% of outfalls inspected on-time	28 December 2010	Harbors Environmental Section	Completed for Piers 21-38
Collect and analyze reports of illicit discharges.	Number of apparent illicit discharges reported.	100% of illicit discharges found	28 December 2010	Harbors Environmental Section	3 illicit discharges found.
Input inspection findings into database.	Percentage of findings input into database	100% of findings	January 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 HAR-EE Spill Documentation Form, available in Appendix G of this document. There were no illicit discharges reported through the hotline in 2010. 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 2010; 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 L. Please see BMP 4-3. The Honolulu Tower is required to notify Harbors Division Environmental Section on all environmental issues. Records of this notification can be found in Appendix G.

Below is a summary of an environmental incident that was reported to Harbors during 2010.

On November 9, 2010 approximately 1-gallon of petroleum-contaminated water was released into the canal at Pier 34. The source was a known, non-Harbors construction site and timely and proper notification was conducted by the site supervisor. Booms and sorbent material were laid out to protect Harbor waters. The incident was recorded on the HAR-EE Spill Documentation Form and can be found in Appendix G.

### 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	NA	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 2010
	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 stormwater 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 2010. 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 actions 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. A summary of tenant rankings and inspection frequencies will be completed following the inspection of all Harbors tenants.

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 2010 as a result of inspections. See BMP 4-4. However, there were five noted activities that had potential to cause illicit discharges. Records of these incidents and their enforcement actions are summarized in Table 4-3 and attached as Appendix M.

**Table 4-3      Record of Observations and Actions Taken**

<b>Tenant</b>	<b>Date of Incident</b>	<b>Description</b>	<b>Action Taken</b>
Dependable Hawaiian Express	3/14/10	A vehicle washing contractor of the tenant was observed washing trucks. The contractor claimed that his washing method was approved by the USEPA.	The contractor was ordered by the tenant to cease washing activities until further information could be obtained from Harbors and USEPA.
Hawaiian Ice	3/16/10	A vehicle maintenance worker was observed with a hose and truck wash brush.	The person was informed of Harbors policy toward vehicle washing.  The employee stopped what he was doing and indicated that he would inform his supervisor.
Kerr Pacific dba Hawaii Flour Mills	4/16/10	An employee was observed by Harbor Police to be using a fire hose to wash down the outside of a building.	The tenant was stopped and a Notice of Apparent Water Quality Violation was sent. A follow up was conducted during inspections and a response letter was requested.
Aloha Tower	6/14/10	Individuals were observed	A letter was written to the Aloha Tower

Tenant	Date of Incident	Description	Action Taken
Marketplace		washing down the bar area at one of Aloha Tower Marketplace's vendor locations.	Marketplace informing them of the incident and Harbors Regulations. A response letter was requested and follow up was conducted during inspections..
Meadow Gold	11/15/10	Three individuals were observed to be washing Meadow Gold trucks with a pressure washer and brushes. Soapy water was observed to be flowing toward a storm drain inlet.	The individuals were informed of Harbor regulation and asked to contact Harbors Division. A letter was sent to the Domestic Commercial Fishing Village Tenants Association warning them of potential administrative actions if the matter is not addressed.

#### 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	December 2010	Harbors Environmental Section	Completed rankings for 158 tenants. Expected 170 tenants by the end of 2010.
Perform initial investigation upon discovery or notification of a suspected illicit discharge or connection.	Percentage of reports investigated	100% investigated	NA	Harbors Environmental Section	Investigations were conducted during 2010 tenant inspections. 100% of reports were investigated.
Follow up investigation of illicit discharge	Percentage of investigations followed up	100% Follow up	NA	Harbors Environmental Section	100%
If enforcement action has taken place, perform follow up inspection within two weeks of initial inspection	Same as above	Same as above	NA	Harbors Environmental Section	Follow up conducted during tenant inspections.



Goal: Eliminate illicit discharges through inspection and enforcement.					
Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
Initiate investigation of complaints transmitted by HDOH regarding facilities within its jurisdiction	Percentage of reports investigated	100%	NA	Harbors Environmental Section	100%

#### 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 concerning the components and goals of the SWMP. Please see BMP 4-5. It should be noted that the observations recorded in Table 4-3 were made by Harbor Oahu District Enforcement (HAR-OE) personnel as a result of the storm water awareness training in 2009. HAR-OE will continue with annual refresher training to ensure continued reporting of observed storm water deficiencies. 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 stormwater pollution,
- ✓ Warning and enforcement procedures, and
- ✓ Recording incidents.

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

As stated in the SWMP, Harbors Division will 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 stormwater IDDE training materials	Training materials address all relevant IDDE aspects and are up to date	IDDE is addressed	March 2010	Harbors Environmental Section, Weston	Completed
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	March 2010	Harbors Environmental Section, Weston	Completed. HAR-OE also in attendance.

## 5.0 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

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### Permit Requirements

*Drain Inlet Control, Barbers Point. January 2006.*

*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. The Harbors Division Engineering Branch 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.

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 Stormwater 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 Clean Water Branch 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 Harbors Division for review and comment. In 2010 the following plans were reviewed by Harbors Division:

**Table 5-1 Summary of Plans Reviewed**

Location	Project
Pier 9 and 10	Pier Improvements – Deck Reconstruction
Pier 29	Yard Reconstruction
Pier 2	Realignment of traffic / road improvements
Pier 2	Fencing
Pier 20	Film Set Construction

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. Applications submitted during 2010 are summarized in Table 5-2 and can be found in Appendix N.

**Table 5-2 Summary of Applications for Connection / Discharge**

Location	NPDES File No.	Description of Connection/Discharge
Pier 1	HI R80D538	Hawaii Stevedores, Inc. mobile harbor crane maintenance facility
Pier 38	HI R10B571	Hawaiian Ice Lots 4 and 5 at Domestic Commercial Fishing Village

Storm water BMPs are reviewed by HDOH Clean Water Branch (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	Percentage of construction	100% of plans reviewed	NA	All HDOT Engineering	2 connection permit

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
plans for potential impacts in respective areas	plans reviewed			Branch Sections	applications received. Please see Appendix N.
Review plans for stormwater considerations during pre- and post-construction phases	Percentage of construction plans reviewed	100% of plans reviewed	NA	Harbors Design, Maintenance and Environmental Section	Construction plans with potential stormwater impact reviewed.
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	Applications reviewed but not tracked.
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	Plans reviewed but not tracked.

### 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. Harbors Division requires construction site operators to prevent pollutants from sediment, erosion, and waste from entering the storm system by use of structural controls and BMPs.

### 5.1.3 Site Inspection and Enforcement

Construction sites are inspected for compliance with the stormwater-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-stormwater 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 stormwater-related requirements can be found in Appendix P. Please see BMP 5-2.

**Table 5-3 Summary of Construction Inspections**

Project Number	Project Title	Dates Inspected	Corrective Actions
HC 10185	Reconstruction of Pier 51 Container Yard	3/31	None
HC10290	Air Condition Repairs at Admin Building	3/1, 4/28, 9/30	None
HC10328	FY07 One-Year Maintenance for Pavement Repairs at Horizon	4/1, 4/13, 11/9, 11/17	Ensured dust control.
HC10363	Pier and Fender Repairs at Pier 51	3/3, 3/31	None
HC10365	Improvised Explosive Devices Threat Prevention	4/12	None
HC10377	Subsidence Repairs and Finger Demolition at Pier 21	3/16, 3/31, 4/7, 4/27,	None
HC10378	FY09 One-Year Maintenance for Pavement Repairs at Matson	3/16, 3/31, 4/13, 4/21	None
HC10391	Repair Pavement at Piers 39-40	3/16, 3/31, 4/10, 4/27	None
HC10400	Methane Mitigation, Piers 36-	3/31	

Project Number	Project Title	Dates Inspected	Corrective Actions
	38		
HC10402	Bulkhead Repairs at Pier 27	3/16, 3/31, 4/8	None
HC10405	Floor Repairs at Ground Floor Admin Building	3/1, 3/31, 4/8, 4/20,	None
HC10410	Structure Repairs at Piers 9-11 (Phase 1)	6/22, 7/19, 8/24, 9/23, 10/27, 11/17, 12/8	Demolition work allowed overspill of chips. Corrected immediately.
HC10421	Seal Hatches at Piers 1-2	5/26, 9/1, 9/14	Dust control and waste runoff control ensured.
HC10436	Repair Utility Trench Covers at Pier 1	11/16	Ensured daily waste removal.
HMP20901	Barge Term Imp at Pier 39 Shed Demo and Yard Lighting Addition	1/18, 3/1,4/13, 4/27	None
Non-Harbors Construction Projects			
N/A	Hawaiian Ice	4/1, 4/15, 5/3	Sediment controls needed improvements. Improvements noted on subsequent inspection.
N/A	Pier 24 Storm Drain	4/1, 4/15, 5/3	Various oil spots to be cleaned before end of project. Required contractor to provide drip pans.



## 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 P for reports.
	Number of construction sites inspected	100% of construction sites	Throughout 2010	Harbors Division, Site Inspectors	19 sites
Incorporate inspection of storm water components into inspection program	Construction site storm water deficiencies are reduced	Deficiencies are reduced from previous year	Throughout 2010	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 any violations for the annual reports	Completeness of inventory	100% of construction sites, inspections, resolutions, and violations recorded	Throughout 2010	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 2010 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 Q. 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 stormwater 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. Harbors Engineering Branch has not yet developed educational materials. These educational materials are planned to be included in an educational package to be distributed during the pre-construction meeting. Educational materials will include construction storm water BMPs and will be available electronically on the website or in hard copy upon request. 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.

### 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	March 2010	Harbors Environmental Section	Developed in 2010. See Appendix Q.
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	March 2010	Harbors Environmental Section	Training conducted in March 2010.
Provide educational materials for plan reviewers	Percent of plan reviewers receiving educational materials	100% of plan reviewers received educational materials	March 2010	Harbors Construction and Environmental Section	100%
Provide educational package to construction sites	Percentage of construction sites covered	100%	NA	Harbors Engineering Branch	To be developed in 2011.
Post educational materials on Harbors website	Increase views to website	Increased views from previous year	NA	Harbors Web Master	Website under construction.

## 6.0 POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

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### Permit Requirements

*Vegetated Swale, Kahului, Hawaii*

*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 Stormwater 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 2010. 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 stormwater					
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 Honolulu 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 2010. 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 2010

#### **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					
<b>Activity</b>	<b>Evaluation Indicators (or Measurable Goals)</b>	<b>Milestones</b>	<b>Date Performed</b>	<b>Action Performed by</b>	<b>Status/ Comments</b>
Create database to track operation and maintenance practices	Create a database	Database has been created	NA	Harbors Environmental Section	To be created in 2011
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 2011
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 2011.

### **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 educational package will includes:

- ✓ 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 2011 after 2010 inspection data is compiled
Distribute educational packet in TSI Mailing	Percentage of tenants in receipt of mailing	100%	NA	Harbors Environmental Section	Educational materials were developed
Post information on Harbors Division website	Track number of views	Greater than previous year	NA	Harbors Web Master	Information to be posted in 2011
Conduct training	Percentage of employees and tenants trained	Greater than previous year	NA	Harbors Environmental Section	Training to be conducted in 2011

## 7.0 POLLUTION PREVENTION/GOOD HOUSEKEEPING

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### Permit Requirements

*Hawaii Harbor (left) and Sand Island (right), January 2006*

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 K.

#### 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; three are dedicated to Honolulu Harbor. Sweeping includes all common areas and certain areas on tenant facilities where cleaning is requested. Sweeping is performed according to the following schedule presented in Table 7-1.

**Table 7-1 Grounds Maintenance Sweeping Schedule**

Location	Frequency	Duration (Hours)
Young Brothers	M, Th	2.5
Matson	Tu, F	2.75
Horizon Lines Terminal	W	3
Aloha Cargo Pier 1	Once per month	2.5
Kewalo Basin	T, F	1
Piers 10, 11	M, F	1
Sand Island Base Yard	T, W	1
Fishing Village Parking Lot and Road Ways, Pier 35	Once per week	1.5
Piers 30, 31, 32 and Shed Areas	Twice per week	1.5
Piers 27, 28, 29	Twice per week	1.5
Piers 18, 19, 23, 24	Twice per week	1.5
Channel Street, Pier 2 Outside and Inside of Shed Areas	M, F	3
Pier 1 Entrance	Twice per week	1
Piers 1, 2 Common Roadways	Twice per week	1

All waste from Honolulu and Kalaeloa Harbors are combined and disposed of at the appropriate disposal contractors. Sweeper waste is disposed of at PVT Land Company. This year approximately 178.28 tons of sweeper waste was removed for disposal. 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 2010 approximately 7.13 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 and Kalaeloa Harbors. All disposal receipts are kept as supporting documentation of compliance with storm water regulations. All values are for both Honolulu and Kalaeloa.

**Table 7-2 Waste Destination and Amounts**

Waste Type	Destination Facility	Amount
Lead Acid Batteries	Exide Technologies	130 batteries
Green Waste	Hawaiian Earth Products	7.13 tons
Refuse	Covanta Energy Honolulu Resource Recovery	110.81 tons
Sweeper Waste	PVT Land Company, Ltd.	178.28 tons
Sweeper Waste	Waimanalo Gulch	36.94 tons
Recycled Metal	Shnitzer Steel Hawaii Corp.	15.92 tons
Discarded Tires	Unitek Solvent Services, Inc.	139 tires

### **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 2010 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	September 2010	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 stormwater pollution prevention. Please see Appendix O.

#### **7.2.1 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 F. 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 depict examples of proper and improper BMPs were also presented to illustrate acceptable procedures.

### **BMP 7-2      Tenant Education, Employee and Contractor Education**

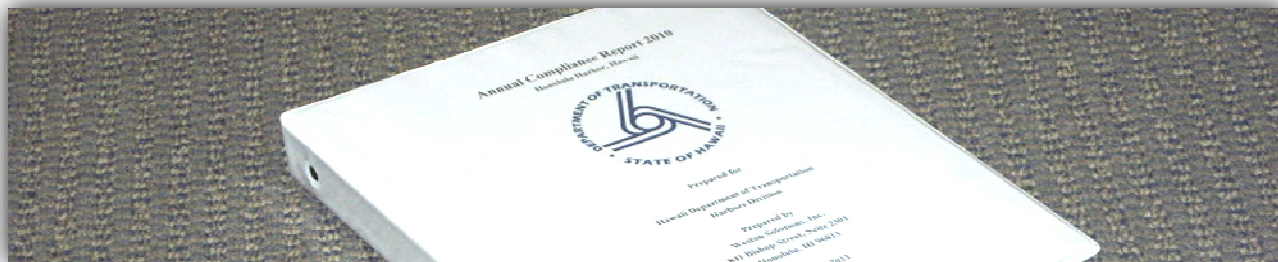
Goal: To prevent pollutants from reaching the storm sewer system by using preventative maintenance practices and BMPs.					
Activity	Evaluation Indicators (or Measurable Goals)	Milestones	Date Performed	Action Performed by	Status/ Comments
Develop educational materials and distribute to tenants and contractors	Percentage of tenants in receipt of educational materials	100% of tenants	September 2010	Weston	TSI attachments provided information and tips on housekeeping practices. Will develop contractor educational materials in 2011.
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 2010. Please see Appendix O.

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## **8.0 ADDITIONAL ANNUAL COMPLIANCE REPORT REQUIREMENTS**

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### **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 EPA 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 2010 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**

- ✓ Use TSI responses to assess the effectiveness of the annual mailing program
- ✓ Add additional educational materials
- ✓ Record hotline inquiries and track response time
- ✓ Post signs that advise against dumping
- ✓ Complete Harbors website
- ✓ 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
- ✓ Determine appropriate inspection frequencies per tenant according to the Harbors EMS
- ✓ 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 NSWDS observations

#### **8.3.4 Construction Site Runoff Control**

- ✓ Dependent on construction plan submittal
- ✓ Perform construction site plan and permit reviews
- ✓ 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.

#### **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
- ✓ 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 annual inspections and 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**

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**Notice of General Permit Coverage, Honolulu Harbor  
Small Municipal Separate Storm Sewer System  
File No. HI 03KB482**







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

In reply, please refer to:  
EMD / CWB

03KB482.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)  
Honolulu Harbor Small Municipal Separate Storm Sewer System  
Honolulu, Oahu, Hawaii  
File No. HI 03KB482**

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 Honolulu 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 03KB482**, 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. Dean Yanagisawa, Highways Division, Oahu District, Department of Transportation  
(w/o encls.) [via fax 831-6725 only]  
Mr. Gerald Takayesu, Storm Water Quality Branch, City and County of Honolulu,  
Department of Environmental Services (w/o encls.) [via fax 692-5520 only]  
Mr. Charles G. Schuster, P.E., Edward K. Noda and Associates, Inc. (w/ Receipt No. 03553  
for \$500 Filing Fee only)

**Administrative Extension of General Permit Coverage,  
Honolulu Harbor  
Small Municipal Separate Storm Sewer System  
File No. HI 03KB482**







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

In reply, please refer to:  
EMD / CWB

03KB482.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)**  
**Honolulu Harbor Small Municipal Separate Storm Sewer System**  
**Honolulu, Oahu, Hawaii**  
**File No. HI 03KB482**

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 Honolulu Harbor, a Class A, Marine Water Embayment.

The Honorable Barry Fukunaga  
October 19, 2007  
Page 2

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

Sincerely,

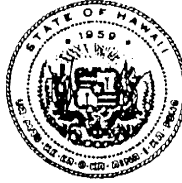
  
FOR Chiyome Leinaala Fukino, M.D.  
Director of Health

c: Mr. Randal Leong, DOT-HAR [via fax 587-1864 only]  
Mr. Charles Schuster, EKNA Services, Inc. (w/Receipt No. 31731 for \$500 Filing Fee)

RECEIVED  
OCT 26 2007

EKNA SERVICES, INC.

LINDA LINGLE  
GOVERNOR OF HAWAII



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

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

In reply, please refer to  
DOH/CWB

03KB482.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)  
Honolulu Harbor, Honolulu, Oahu, Hawaii  
File No. HI 03KB482**

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 Statutes, 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.

The Honorable Barry Fukunaga  
October 19, 2007  
Page 2

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. 31731 for \$500 Filing Fee)

RECEIVED  
OCT 26 2007

EKNA SERVICES, INC.

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**APPENDIX B**

**TENANT LEASE AGREEMENT AND TENANT REVOCABLE PERMIT**

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# **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.**

**30 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 constitute 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.

**40 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.

**70 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.

**80 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.

**90 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.

**:0 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.

**;0 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.

**340 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.

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**APPENDIX C**

**TENANT INVENTORY**

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Hawaii Department of Transportation Harbors Division  
Tenant Inventory - Honolulu Harbor

Tenant	Honolulu Facility Location	Type	Address	Address1	Inspection POC	Phone Number	Secondary Phone Number	E-mail
1726, INC. dba MARK GLEN AUCTIONS	KMR 928 E	Tenant	4224 Waialae Avenue, Suite 334,	Honolulu, HI 96816-5307	Roger	284-1543		mark@markglenauctions.com
AALA Produce, INC. dba AALA SHIP SERVICE	Pier 32	Tenant	869 North Nimitz Highway,	Honolulu, HI 96817-4517	Rodney Tamamoto	808-576-0566		sales@aalaship.com
AIRCRAFT SERVICE INTERNATIONAL GROUP / HAWAII FUELING FACILITIES CORPORATION	Pier 51-A	Tenant	3201 Aoole Street	Honolulu, HI 96819	Glenn Jinbo	630-0572		ron.barringer@asig.com
AKANA TRUCKING, INC.	KMR 920 outside fenced	Tenant	209 Hao,	Honolulu, HI 96821	Kevin M Akana	845-9825		<a href="mailto:akanatrucking@hawaiiintel.net">akanatrucking@hawaiiintel.net</a>
ALOHA AGRICULTURAL CONSULTANTS, INC. dba NIU NURSERY	Keehi	Tenant	P.O. Box 17220	Honolulu, HI 96817	Sidney Goo	845-5991	225-3507	<a href="mailto:sidgoo@msn.com">sidgoo@msn.com</a>
ALOHA CARGO AGENCY, INC.	Pier 1	Tenant	677 Ala Moana Blvd., Suite 917	Honolulu, HI 96813	Thomas Crescenzi	479-8260		tom@acthi.com
ALOHA CONTAINER SALES & RENTAL, INC.	Keehi, across La Mariana	Tenant	P.O. Box 30936	Honolulu, HI 96820	Richard D. Preston II (Rick Preston)	(808) 843-1301		<a href="mailto:alohacontainersales.rental@hawaiiintel.net">alohacontainersales.rental@hawaiiintel.net</a>
ALOHA LIQUEURS, INC	KMR 929	Tenant	5 Sand Island Access Road, Box 118,	Honolulu, HI 96819	Dave Fazendin	(808) 841-5787		
ALOHA TOOL & RENTAL, INC. dba Honolulu RECOVERY SYSTEMS CO.	Pier 60	Tenant	207 Puuhale Road	Honolulu, HI 96819	Craid Matsuo	(808) 841-3179		
Aloha Tower Markerplace	1 Aloha Tower Drive	Tenant	1 Aloha Tower Drive	Honolulu, HI 96813	Marlene	556-2310	528-5700	<a href="mailto:information@alohatower.com">information@alohatower.com</a>
ALUMINIUM SHAKE ROOFING, INC.	KMR 919	Tenant	5 Sand Island Access Road, Building 919-B,	Honolulu, HI 96819	Fred Rehm	847-8885		fredrehm@hawaiiintel.net
AMAZON CONSTRUCTION COMPANY, INC.	KMR 920 outside fenced	Tenant	5 Sand Island Access Road, Box 139,	Honolulu, HI 96819	duston onaga	(808) 841-6595		
AMERICAN GUARD SERVICES, INC.	NA	Access agreement	677 ALA MOANA BLVD., SUITE 725	Honolulu, HI 96813	Carla O'Bannan	(310) 645-6200		<a href="mailto:carla@americanguardservices.com">carla@americanguardservices.com</a>
AMERICAN MARINE CORPORATION	Pier 14, Keehi	Tenant	65 North Nimitz Highway, Pier 14,	Honolulu, HI 96817	Roger Nall	808-545-5190		<a href="mailto:rusty@amsghq.com">rusty@amsghq.com</a>
AMERON INTERNATIONAL CORPORATION dba AMERON HAWAII	Pier 60	Tenant	P.O. Box 29968,	Honolulu, HI 96820	Linda F. Goldstein	(808) 266-2672		<a href="mailto:lgoldstein@ameronhawaii.com">lgoldstein@ameronhawaii.com</a>
ANCHOR CONSTRUCTION MANAGEMENT CORP.	KMR 925	Tenant	P.O. BOX 359	HAUULA, HAWAII 96717	David B. Thielem	(808) 306-0826		<a href="mailto:davidt@pixi.com">davidt@pixi.com</a>
ANUENUE REFUSE, INC.	Keehi	Tenant	P.O. Box 29114,	Honolulu, HI 96822	Naomi T. Arakaki	(808) 845-4235		<a href="mailto:anuenueinc.@hawaiiir.com">anuenueinc.@hawaiiir.com</a>
ARA CONTRACTING	KMR 920	Tenant	1433 Kewalo Street #304,	Honolulu, HI 96822	Kenneth Park	(808) 387-6108		aracon3@yahoo.com
ARITA/POULSON GENERAL CONTRACTING	Pier 41, 42	Tenant	P.O. Box 1035	Puunene, HI 96784	Steve Jorgensen	(808) 368-4764		<a href="mailto:Steve@aritapoulson.com">Steve@aritapoulson.com</a>
ATLANTIS SUBMARINE HAWAII	Pier 41	Tenant			Kekua	386-0123	754-8130	
BCP CONSTRUCTION COMPANY OF HAWAII, INC.	KMR 925	Tenant	5 Sand Island Access Road, Box 112,	Honolulu, HI 96819	Timothy S. Burke	808-841-4574 x208	864-6892	tburke@bcpconstruction.com
BROOKINS BOATWORKS, LTD.	KMR 905	Tenant	5 Sand Island Access Road, Unit 117,	Honolulu, HI 96819	Gary Brookins	841-2525		<a href="mailto:brookins.boats@hawaiiintel.net">brookins.boats@hawaiiintel.net</a>
BURLINGTON ENVIRONMENTAL, INC. c/o PSC INDUSTRIAL OUTSOURCING, INC.	KMR 929 F	Tenant	91-127 Malakole Street,	Kapolei, HI 96707	Otto Audirsch	808-845-0032	808-306-3880	<a href="mailto:oaudirsch@pscnow.com">oaudirsch@pscnow.com</a>
CB TECH SERVICES	KMR 926	Tenant	Sand Island Access Road, Box 102	Honolulu, HI 96819	fay	848-0060		
CENTRAL PACIFIC DISTRIBUTING, INC.	KMR 926 E	Tenant	5 Sand Island Access Road, Box 127,	Honolulu, HI 96819	Brian Oda	(808) 848-0787		cpd.hi@hawaiiintel.net
CERTIFIED SHEETMETAL	KMR 919	Tenant	1544 Mahiole Street,	Honolulu, HI 96819	Michael Yamauchi	(808) 372-3918		mmy@hawaii.rr.com
CHASE SALES & DISTRIBUTION, INC.	KMR 930 C	Tenant	5 Sand Island Access Road, Box 147,	Honolulu, HI 96819	Hank Hatakenaka	(808) 842-4588		hank.cs@hula.net
CHEVRON U.S.A., INC. Honolulu Transportation terminal	Pier 30 and 933 Nimitz	Tenant	933 North Nimitz Highway	Honolulu, HI 96817	Todd	925-951-7109		
CHEVRON U.S.A., INC. Honolulu Marine Terminal	Pier 30 and 933 Nimitz	Tenant	777 North Nimitz Highway	Honolulu, HI 96817	Todd	925-951-7109		
City & County of Honolulu, DEPT. OF ENVIRONMENTAL SERVICES	Pier 35	Tenant	1000 Uloohia Street, suite 308	Kapolei, HI 96707	Allen Young	(808) 223-9613		<a href="mailto:ayoung@honolulu.gov">ayoung@honolulu.gov</a>

Hawaii Department of Transportation Harbors Division  
Tenant Inventory - Honolulu Harbor

City & County of Honolulu, Honolulu FIRE DEPARTMENT (PIER 15)	Pier 15	Tenant	111 North Nimitz Highway, Pier 15	Honolulu, HI 96817	Captain Lance Orillo or Mr. Mark Saizon	808-523-4957		<a href="mailto:msaizon@honolulu.gov">msaizon@honolulu.gov</a>
City and County of Honolulu HNL Police Dept. Attn: Juvenile Services, P.A.L.	KMR	Tenant	801 South Beretania St.	Honolulu, HI 96813	Lieutenant J. Averell Peddro	(808) 529-3881		<a href="mailto:jpdro@honolulu.gov">jpdro@honolulu.gov</a>
CLASSIC TILE CORPORATION	KMR 930	Tenant	P.O. Box 30568,	Honolulu, HI 96820	Casey	808-216-3801	808-217-5781	<a href="mailto:Kamalul1@msn.com">Kamalul1@msn.com</a>
CLEAN ISLANDS COUNCIL	Pier 35	Tenant	179 Sand Island Access Road,	Honolulu, HI 96819	Tim Sawyer	536-5814		
CONCRETE CORING COMPANY OF HAWAII, INC.	KMR Near HTC	Tenant	99-1026 Iwaena Street,	Aiea, HI 96701	John Neff / Nathan Sabey	(808) 488-8222		<a href="mailto:jneff@concretecoringhawaii.com">jneff@concretecoringhawaii.com</a> or <a href="mailto:nates@concretecoring.com">nates@concretecoring.com</a>
CONTAINER STORAGE COMPANY OF HAWAII	KMR	Tenant	2276 Pahouniu Drive,	Honolulu, HI 96819	Frank White	841-5555		<a href="mailto:fpwhite@aloha.com">fpwhite@aloha.com</a>
CONTROL TECH, LLC	KMR 929 A	Tenant	P.O. Box 30992,	Honolulu, HI 96820	Melvin Tsue	(808) 847-7490		<a href="mailto:ctechllc@hawaiiantel.net">ctechllc@hawaiiantel.net</a>
CONVENTION SET BUILDERS, INC.	KMR 925	Tenant	1040 13th Avenue,	Honolulu, HI 96816-3638	Eric Van der Voert	808-216-1507		<a href="mailto:csbinc@hawaii-rr.com">csbinc@hawaii-rr.com</a>
CUSTOM BILT METALS	KMR 928	Tenant	5 sand island access road. Building 928	Honolulu, HI 96819	Steve	808-479-1451	808-845-1806	<a href="mailto:tom.frame@custombiltmetals.com">tom.frame@custombiltmetals.com</a>
D & K PETROLEUM, INC.		Access agreement	P.O. BOX 5499	Kaneohe, HI 96744				
DAVENPORT HAWAII PARTNERS, LP	887 N Nimitz Highway	Sublessor	1400 QUAIL ST., STE. 195	Newport Beach, CA 92660-2769	Angela Brand	949-640-5100		<a href="mailto:abrand@davenportpartners.com">abrand@davenportpartners.com</a>
DAVID D. CHANG AND EUN IK CHANG	KMR 928	Tenant	P. O. BOX 30054	Honolulu, HI 96820	DAVID CHANG	218-2121		
DD-M LEASING, INC.	Pier 14	Tenant	65 North Nimitz Highway, Pier 14,	Honolulu, HI 96817	Tiare Ohelo	(808) 791-0067		<a href="mailto:theohelos@gmail.com">theohelos@gmail.com</a>
DEDRICK, DEWAIN A. dba Bella Pietra	Pier 23	Tenant	701 North Nimitz Highway,	Honolulu, HI 96817	Dewain Andrew Dedrick	(808) 587-7779		<a href="mailto:andrew@bellapietra.com">andrew@bellapietra.com</a>
DEPENDABLE HAWAIIAN EXPRESS, INC.	Pier 21	Tenant	703 North Nimitz Highway,	Honolulu, HI 96817	Ron Richardson	(808) 841-7311 x1701		<a href="mailto:r Richardson@dhx.com">r Richardson@dhx.com</a>
DIVISION 8, INC.	KMR 927	Tenant	5 Sand Island Access Road, Box 126,	Honolulu, HI 96819	Brad Granger	808-845-8999		<a href="mailto:division8@808glass.com">division8@808glass.com</a>
DONAHUE, SHANNON dba PARADISE EQUIPMENT	KMR between 931 and 928	Tenant	P.O. Box 356,	Kihei, HI 96753	Shannon Donahue	808-330-1370		<a href="mailto:shandon@aloha.net">shandon@aloha.net</a>
DON'S MAKIKI	Pier 42	Tenant	1406 South Beretania Street,	Honolulu, HI 96814	Holly Chu	301-775-7692		<a href="mailto:donsmakiki@yahoo.com">donsmakiki@yahoo.com</a>
DRAFTSTONE COMPANY, INC.	?	Tenant	P.O. Box 161117	Honolulu, HI 96816	Waldemar Rojek	396-8461, 927-5201		<a href="mailto:draftstone@gmail.com">draftstone@gmail.com</a>
EAST WEST MARKETING, INC.	KMR 926 C	Tenant	95-1101 Wikao Street,	Mililani, HI 96789	Melody G. Calisay	808-753-7964		<a href="mailto:mcalisay@aol.com">mcalisay@aol.com</a>
EQUILON ENTERPRISES, LLC/Shell Oil Products US Honolulu Terminal	Pier 34	Tenant	789 N. Nimitz Hwy	Honolulu, HI 96817	Joe Lovan	673-4296		
ERIK BUILDERS, INC.	Keehi	Tenant	50-CC Sand Island Access Road,	Honolulu, HI 96819	Jimmy Sakata	845-7736		<a href="mailto:ebihi@hawaiiantel.net">ebihi@hawaiiantel.net</a>
FIVE "C" CORP dba WESTERN OVERHEAD DOORS		Tenant	80 Sand Island Access Road, #226,	Honolulu, HI 96819	Eric Carlborn	832-0555		<a href="mailto:ericc@lava.net">ericc@lava.net</a>
FRANK P. WHITE JR. PROPERTIES dba CONTAINER STORAGE CO.	KMR fenceline	Tenant	2276 Pahounui Drive,	Honolulu, HI 96819	Frank White	(808) 841-5555		<a href="mailto:fpwhite@aloha.com">fpwhite@aloha.com</a>
Fresh Island Fish, LLC	Pier 38	Tenant	1135 North Nimitz Highway	Honolulu, HI 96817	Derek Higa	808-831-4911		<a href="mailto:derek@freshislandfish.com">derek@freshislandfish.com</a>
FRIENDS OF FALLS OF CLYDE	Pier 7	Tenant	P.O. BOX 25008	Honolulu, HI 96825	Chris	263-4227	543-9357	
FRIENDS OF HOKULE'A & HAWAII'LOA	Keehi	Tenant	P.O. Box 696,	Kailua, HI 96734	Jay Dowsett	261-1841	808-256-1841	<a href="mailto:dowsett001@hawaii.rr.com">dowsett001@hawaii.rr.com</a>
FUKUNAGA, PAUL N. dba P.F. MARINE	Keehi	Tenant	1391 Haloa Drive	Honolulu, HI 96818	Paul N Fukunaga	842-1330	220-9425	
GILLIS, EUGENE dba EXCAVATION SERVICES	Keehi	Tenant	5928 Kalaniana'ole Highway,	Honolulu, HI 96821	Eugene Gillis	808-383-1959		<a href="mailto:kgillis@hawaii.rr.com">kgillis@hawaii.rr.com</a>
GLOBAL SPECIALITY CONTRACTORS, INC.	KMR 920	Tenant	5 Sand Island Access Road, Box 159,	Honolulu, HI 96819	Marvin G. Krael	808-368-3993	843-8881	<a href="mailto:globalspecialty@hawaiiantel.net">globalspecialty@hawaiiantel.net</a>
GREAT PACIFIC WHOLESALE CO., LLC	KMR 926	Tenant	P.O. Box 31062,	Honolulu, HI 96820	Todd Patterson	(808) 395-8048	375-9259	<a href="mailto:gpwc@att.net">gpwc@att.net</a>

Hawaii Department of Transportation Harbors Division  
Tenant Inventory - Honolulu Harbor

HAJALEE INC, dba KALIHI QUEEN'S SUPERMARKET	KMR 910	Tenant	1010 Kaili Street	Honolulu, HI 96819	Jason Yang, Kevin Lee	(808) 841-8699		
HARDY CONSTRUCTION CO., INC.	KMR 931 B	Tenant	2410 A Makiki Heights Drive,	Honolulu, HI 96822	Melvin R. Hardy	(808) 845-0267	226-5343	
HAWAII EXPLOSIVES & PYROTECHINICS, INC.	KMR	Tenant	P.O. Box 1244,	Keaau, HI 96749	Charlene Pascual	836-1300		<a href="mailto:hepinc@hipyro.com">hepinc@hipyro.com</a>
HAWAII MARITIME CENTER	Pier 7	Tenant	1525 Bernice Street	Honolulu, HI 96817	Donald	523-6151		<a href="mailto:karla@bishopmuseum.org">karla@bishopmuseum.org</a>
HAWAII PACIFIC PLUMBING SUPPLY	KMR 930 B	Tenant	1930 B Auiki Street,	Honolulu, HI 96819	Greg	808-842-5600	808-216-2207	<a href="mailto:mike@hppshawaii.com">mike@hppshawaii.com</a>
HAWAII PAINTING & WALLCOVERING		Tenant	P.O. Box 17038,	Honolulu, HI 96817-0038	Dean & Brian Negatoshi	(808) 479-6825		HPW-Consulting@hawaii.rr.com
HAWAII STEVEDORES, INC.	Piers 1 and 35	Tenant	P.O. Box 2160,	Honolulu, HI 96805-2160	Ron	808-306-7476	527-3414	<a href="mailto:jbrennan@hawaiistevedores.com">jbrennan@hawaiistevedores.com</a>
HAWAII TOYS & GIFTS	KMR 914	Tenant	1547 Kokea Street,	Honolulu, HI 96817	danny ung	292-2023		
HAWAII TRANSFER COMPANY, LTD.	KMR	Tenant	P.O. Box 665,	Pearl City, HI 96782	Joseph Aguon	677-3111 x134		<a href="mailto:josephaguon@hawaii-transfer.biz">josephaguon@hawaii-transfer.biz</a>
HAWAIIAN AQUA PRODUCTS		Tenant	1130 Wilder Avenue, Suite 102,	Honolulu, HI 96822	Evelyn Lim	(808) 521-5468		<a href="mailto:evylim2@aol.com">evylim2@aol.com</a>
HAWAIIAN CRUISES, LTD.	Pier 6	Tenant	1600 KAPIOLANI BLVD., STE #1630	Honolulu, HI 96814	Kekua	386-0123	754-8130	
HAWAIIAN ELECTRIC COMPANY, INC.		Access agreement	P.O. BOX 2750	Honolulu, HI 96840		543-4735		
HEUMANN, JAMES dba WIND & SEA CHARTERS	Pier 34	Tenant	P.O. Box 8672,	Honolulu, HI 96830	Jim Heumann	523-6151	808-220-7675	<a href="mailto:jmh@lava.net">jmh@lava.net</a>
HIROSE ELECTRIC	KMR 926	Tenant	P.O. Box 30448,	Honolulu, HI 96820	Gena or Kevin	(808) 848-8830		<a href="mailto:hiroseelectric@aol.com">hiroseelectric@aol.com</a>
HI-TEC ROOFING, INC.	KMR 927	Tenant	5 Sand Island Access Road, Box 157,	Honolulu, HI 96819	Ken	808-479-4229		<a href="mailto:aahitec@pixi.com">aahitec@pixi.com</a>
HONOLULU COMMUNITY ACTION PROGRAM, INC. aka OAHU HEAD START	KMR 921	Tenant	33 South King Street, Suite 300	Honolulu, HI 96813	John Park (Facilities Manager)	(808) 843-4333		<a href="mailto:johnp@hcapweb.org">johnp@hcapweb.org</a>
HONOLULU MARATHON ASSOCIATION	Pier 1, gated area on right at	Tenant	1635 Citron Lane	Honolulu, HI 96826	Ronald Chun	808-255-2602		<a href="mailto:rchun@honolulumarathon.org">rchun@honolulumarathon.org</a>
HONOLULU RECOVERY, INC.	Pier 60	Tenant	1391 MIKOLE STREET	Honolulu, HI 96818	Craig Matsuo	841-3179		
HOO K UP TOWING, INC.	KMR 916	Tenant	1843 Liliha Street, Apt. B,	Honolulu, HI 96817-2368	Randy	486-4665		<a href="mailto:hookuptowing@aol.com">hookuptowing@aol.com</a>
HORIZON LINES, LLC	1601 Sand Island Parkway	Tenant	1601 Sand Island Parkway	Honolulu, HI 96819	Frank Roznerski	808-842-5389		<a href="mailto:froznerski@horizonlines.com">froznerski@horizonlines.com</a>
HPBS, INC.	Pier 19	Tenant	P.O. Box 721,	Honolulu, HI 96808	Fay Leong	532-7233		<a href="mailto:officeadmin@hawaiiipilots.net">officeadmin@hawaiiipilots.net</a>
HPC FOODS, LTD.	KMR ?	Tenant	288 Libby Street,	Honolulu, HI 96819	Ron Yamauchi	848-2431		<a href="mailto:bernie@hpcfoods.com">bernie@hpcfoods.com</a>
IAN J. LANSDOWN, dba HAWAII'S SAILING CENTER	Keahi	Tenant	665 IANA Street,	Kailua, HI 96734	Jeff Lansdown	263-2383	230-0940	
INCHCAPE SHIPPING SERVICES		Sublessor	521 ALA MOANA BLVD., STE. 256	Honolulu, HI 96813				
INDUSTRIAL CHEMICAL & LUBRICANTS, INC.	KMR 930 B	Tenant	P.O. Box 30173,	Honolulu, HI 96820	Patricia Shinsato	842-4112	842-416	<a href="mailto:icl@clearwire.net">icl@clearwire.net</a>
INTERNATIONAL EXPRESS, INC.	KMR 915	Tenant	P.O. Box 797,	Honolulu, HI 96808	David Hinchey / Kalani	(808) 841-6005	Kalani: 478-2650	<a href="mailto:davidh@interexp.com">davidh@interexp.com</a>
ISHIKAWA, NORMAN & DOLORES dba NORMAN'S TRACTOR SERVICE	Keahi	Tenant	P.O. Box 2280,	Ewa Beach, HI 96706	Billy	808-778-1084		<a href="mailto:nts96819@hotmail.com">nts96819@hotmail.com</a>
ISLAND MOVERS	Pier 42	Tenant	P.O. Box 17865,	Honolulu, HI 96817	Ryan K. Fukunaga	(808) 832-4813		<a href="mailto:ryanf@hawktree.net">ryanf@hawktree.net</a>
JAPAN FOOD (HAWAII), INC.	Pier 34	Tenant	P.O. Box 4404,	Honolulu, HI 96812	Toshiaki Wada	(808) 537-9528		
JAS. W. GLOVER, LTD	248 Sand Island Rd.	Tenant	P.O. Box 579	Honolulu, HI 96809	Keola	(808) 591-8977		<a href="mailto:johnr@gloverltd.com">johnr@gloverltd.com</a>
JET PRO, INC.	KMR	Tenant	486 Cabot Road,	San Francisco, CA 94080	Margaret Guerrero, Executive	845-8826		<a href="mailto:margarita@jetproinc.com">margarita@jetproinc.com</a>

Hawaii Department of Transportation Harbors Division  
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KAGAMI, INC.	Pier 19	Tenant	P.O. Box 745,	Aiea, HI 96701	Wayne M. Kagami	(808) 523-5700		peeks2096@aol.com
KEALOHALANIEQUIPMENT & RENTAL, INC.	NA	Access agreement	47-497 HUI AEKO PLACE	Kaneohe, HI 96744				
KERR PACIFIC CORP, dba HFM Foodservice	NA	Sublessor	P.O. Box 855,	Honolulu, HI 96808	Tim Buyam	527-3272		
KIRKWOOD CLARKE dba HAWAIIAN CATAMARAN MULTIHULL DESIGN	Keehi	Tenant	50-C Sand Island Access Road,	Honolulu, HI 96819	Matt Buckman	(808) 306-6012		
KNIGHT UNLIMITED, dba KNIGHT TRANSPORT	NA	Access agreement	99-818 MEAALA STREET	Aiea, HI 96701		271-3265		
KONG ENTERPRISES, INC.	?	Tenant	P.O. BOX 5187	Kaneohe, HI 96744	Richard Kong	487-3582	239-3974	<a href="mailto:rkingkong@aol.com">rkingkong@aol.com</a>
K-Sea Transportation, Hawaii Division (formerly UAUKEWAI DIVING, SALVAGE & FISHING, INC.)	Pier 21	Tenant	Pier 21,	Honolulu, HI 96817	Bill Boland	522-1000 x108		<a href="mailto:wboland@K-Sea.com">wboland@K-Sea.com</a>
KUMU CORP.	Keehi	Tenant	50 K Sand Island Access Road,	Honolulu, HI 96819	Dan Kahler	808-232-2577		
MARINE PETROLEUM CORPORATION	KMR	Tenant	P.O. Box 29249,	Honolulu, HI 96820	Michael P. Rossman	841-0169		<a href="mailto:marine.fuel@hawaiiantel.net">marine.fuel@hawaiiantel.net</a>
MARINE SPILL RESPONSE CORPORATION	Pier 35	Tenant	179 Sand Island Access Road,	Honolulu, HI 96819	John	847-8144	425-308-0178	<a href="mailto:larson@msrc.org">larson@msrc.org</a>
MARITIME LICENSE CENTER	Pier 24	Tenant	1311 Kapiolani Blvd, Suite 407,	Honolulu, HI 96814	Charles Howard	589-0123		<a href="mailto:trng@marictr.com">trng@marictr.com</a>
MASUDA, RICHARD dba RICHARD K. MASUDA MASONRY	?	Tenant	833 Ekoa Place,	Honolulu, HI 96821				
MATSON NAVIGATION COMPANY, INC.	Pier 51-B Sand Island Access	Tenant	P.O. Box 899,	Honolulu, HI 96821	Keahi Birch	848-1252		
MAUGA-OLIVE SAMOAN ASSEMBLY OF GOD	KMR 920	Tenant	P.O. Box 4114	Honolulu, HI 96813	Setu Tiafane	(808) 778-0127		<a href="mailto:setu.tiafane@hickam.af.mil">setu.tiafane@hickam.af.mil</a>
McCABE, HAMILTON & RENNY	Piers 1, 23	Tenant	P.O. Box 210,	Honolulu, HI 96810	Andrew Souza	808-479-0356		<a href="mailto:andrewsouza16@msn.com">andrewsouza16@msn.com</a>
MILITARY HQ	KMR 914	Tenant	P.O. Box 30647,	Honolulu, HI 96820- 0647	Sandii Kamaunu	843-0189		<a href="mailto:milhq@aloha.com">milhq@aloha.com</a>
MILLER INDUSTRIES	KMR 919	Tenant	5 Sand Island Access Road, Box 105,	Honolulu, HI 96819	Bill Miller	848-0855		<a href="mailto:millerindustries@cs.com">millerindustries@cs.com</a>
MLC INT'L LLC, dba PERFORMANCE LANDSCAPE	KMR 930	Tenant	P.O. Box 10459	Honolulu, HI 96816	Matty Lyum	808-282-5496		<a href="mailto:performanceLS@hotmail.com">performanceLS@hotmail.com</a>
MOANA PA'A KAI, INC. (Subsidiary of Young Brothers)	Pier 21	Tenant	P.O. Box 3288,	Honolulu, HI 96801	Nathan Kapule	(808) 543-9398		<a href="mailto:nkapule@htbyb.com">nkapule@htbyb.com</a>
MYSUNG SOO HAN dba HAN'S ELECTRIC	KMR	Tenant	1617 Keeaumoku Street, #501,	Honolulu, HI 96822	Myun Soo Han	808-841-6688		
NAKAMURA, RODNEY S. WELDING	KMR 919	Tenant	2433 Rooke Avenue,	Honolulu, HI 96817	Rodney S. Nakamura	(808) 228-2551		
NANAKULI NEIGHBORHOOD HOUSING SERVICES	Keehi	Tenant	P.O. Box 17489,	Honolulu, HI 96817- 0489	Marlene/ Uncle Burt	(808) 842-0770	520-2607	<a href="mailto:alohakap@gmail.com">alohakap@gmail.com</a>
NCL AMERICA, INC. (1 ship in service- Pride of America)	Pier 2	Tenant	745 Fort Street, Suite 1600	Honolulu, HI 96813	Grant Karamatsu	808-527-3857		<a href="mailto:gkaramatsu@ncl.com">gkaramatsu@ncl.com</a>
NORKO MARINE AGENCY, INC.	Pier 33	Tenant	791 North Nimitz Highway,	Honolulu, HI 96817	Norman Cheu	808-216-4790		<a href="mailto:ncheu@norkomarine.com">ncheu@norkomarine.com</a>
Oceanic Libra Corp	Pier 18	Tenant	PO Box 37038	Honolulu, HI 96820	Nepi Ohai	531-2524		<a href="mailto:nepi@hawaiiantel.net">nepi@hawaiiantel.net</a>
OCEANTRONICS, INC.	Pier 24	Tenant	711 North Nimitz Highway,	Honolulu, HI 96817	Sharon	(808) 522-5600		<a href="mailto:amtsberg@msn.com">amtsberg@msn.com</a>
P & R WATER TAXI, LTD.	Pier 36	Tenant	P.O. Box 2851,	Honolulu, HI 96803	Ralph	554-3436		<a href="mailto:s.pires@pnrwatertaxi.com">s.pires@pnrwatertaxi.com</a>
PACIFIC COMMERCIAL SERVICES, LLC	KMR 931	Tenant	P.O. Box 235117,	Honolulu, HI 96813	Jingo Chang	808-545-4599		<a href="mailto:jingbochang@aol.com">jingbochang@aol.com</a>
PACIFIC DIVERS EQUIPMENT SUPPLY, INC.	KMR 929	Tenant	5 SAND ISLAND ACCESS ROAD, BOX 140	Honolulu, HI 96819	Thomas Coyne	847-4455		
PACIFIC ENVIRONMENTAL CORPORATION	Pier 14, Keehi	Tenant	65 North Nimitz Highway, Pier 14,	Honolulu, HI 96817	Teal Cross / Jeremy Sirkin	(808) 545-5195		<a href="mailto:jeremy@penco.org">jeremy@penco.org</a> <a href="mailto:teal@penco.org">teal@penco.org</a>
PACIFIC FISHING AND SUPPLY, INC.	Pier 17	Tenant	P.O. Box 27378,	Honolulu, HI 96827	Roger Dang	533-1195		<a href="mailto:pacificfishing@gmail.com">pacificfishing@gmail.com</a>

Hawaii Department of Transportation Harbors Division  
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PACIFIC OCEAN PRODUCERS, INC.	Pier 38	Tenant	1133 North Nimitz Highway,	Honolulu, HI 96817	Arlen Walsten	537-2905 x105		<a href="mailto:arlen@pop-hawaii.com">arlen@pop-hawaii.com</a>
Pacific Shipyards International, LLC	Pier 41	Tenant	P.O. Box 30989,	Honolulu, HI 96820	Tom Atkinson	387-8925		<a href="mailto:mebbert@pacificshipyards.com">mebbert@pacificshipyards.com</a>
PANG, SANDRA dba SP LUNCH WAGON	Pier 51	Tenant	139 Mokauea Street,	Honolulu, HI 96819	Sandra Pang	(808) 848-0040		
PARADISE CRUISE, LTD.	KMR	Tenant	5 Sand Island Access Road, Box 121,	Honolulu, HI 96819	Marc Rubenstein	808-479-7427		<a href="mailto:mrubenstein@royalstarhawaii.com">mrubenstein@royalstarhawaii.com</a>
PARADISE INN HAWAII, LLC dba Tsukiji Fish Market	Lot 6	Tenant	P. O. BOX 25367	Honolulu, HI 96825				<a href="mailto:tome@hawaii.rr.com">tome@hawaii.rr.com</a>
PBC WHOLESALERS, INC.	KMR 926 A	Tenant	5 Sand Island Access Road, Box 116,	Honolulu, HI 96819	Alan Nozawa	(808) 842-6565		<a href="mailto:pbchawaii@aol.com">pbchawaii@aol.com</a>
PENDLETON FLOUR MILLS, LLC dba HAWAIIAN FLOUR MILLS	Pier 23	Tenant	P.O. Box 1238,	Honolulu, HI 96807-1238	Tim Byam	(808) 527-3272	368-1868	<a href="mailto:tbyam@pfmills.com">tbyam@pfmills.com</a>
PETROSPECT, INC.	Pier 21	Tenant	499 North Nimitz Highway	Honolulu, HI 96817	David Harrington	(808) 536-6626		<a href="mailto:dharrington@petrospect.net">dharrington@petrospect.net</a>
PIONEER MACHINERY, INC.	Keehi	Tenant	P.O. Box 22265,	Honolulu, HI 96823-2265	Rodney Yee	(808) 371-4892		<a href="mailto:allstaryee@yahoo.com">allstaryee@yahoo.com</a>
PRIME BUILDERS	KMR 920	Tenant	411 Hobron Lane, #912,	Honolulu, HI 96815	Damian Ronceovich	(808) 371-5086		<a href="mailto:primebuild@aol.com">primebuild@aol.com</a>
PROJECTS ENTERPRISES, INC.	KMR 920	Tenant	5 Sand Island Access Road, Box 150,	Honolulu, HI 96819	Todd Lawi	(808) 848-1900		<a href="mailto:tlawi@projects808.com">tlawi@projects808.com</a>
PROPARK, INC.	Aloha Tower	Tenant	445 SEASIDE AVENUE, SUITE 602	Honolulu, HI 96815	Richard D. Leong	971-7755		
PROTECH ROOFING, LLC	KMR 905	Tenant	P.O. Box 31226,	Honolulu, HI 96820	Charles E. Spicgel	808-845-1300		<a href="mailto:chassp@aol.com">chassp@aol.com</a>
PRYNE, TY dba H.B.N.	?	Tenant	742 Queen Street, Suite 301,	Honolulu, HI 96813	Ty Pryne	(808) 597-8120		<a href="mailto:tyhbn@concentric.net">tyhbn@concentric.net</a>
QUICK MOVE, INC.	KMR	Tenant	155 Sand Island Access Road	Honolulu, HI 96819	Eugene Fontanilla	808-486-7223	422-9999	<a href="mailto:quickmove1@hotmail.com">quickmove1@hotmail.com</a>
RDH TRANSPORTATION & LEASING	KMR	Tenant	5 Sand Island Access Road, Box 121,	Honolulu, HI 96819	Marc Rubenstein	808-832-6261		<a href="mailto:mrubenstein@royalstarhawaii.com">mrubenstein@royalstarhawaii.com</a>
REBECCA'S FINE COLLECTION dba R.F.C. GROUP	Keehi	Tenant	1585 Kapiolani Blvd., #812	Honolulu, HI 96814	Rebecca	478-6688		
REEF DEVELOPMENT OF HAWAII, INC.	KMR 926? F	Tenant	P.O. Box 1055	Aiea, HI 96701	Frank A. Machado. Mechanic: Islander	808-488-1228 x114		<a href="mailto:freank@reefdevelopment.com">freank@reefdevelopment.com</a>
ROBERT MARCOS, INC.	KMR 927 A	Tenant	5 Sand Island Access Road, Box 143,	Honolulu, HI 96819	Deborah Marcos	(808) 841-1123		<a href="mailto:rmiinc@msn.com">rmiinc@msn.com</a>
ROBERTO'S, INC.	KMR 927	Tenant	5 Sand Island Access Road, Box 145,	Honolulu, HI 96819	Mr. Peter Siu	808-845-6634		<a href="mailto:robertosinc@hotmail.com">robertosinc@hotmail.com</a>
RON'S CONCRETE SPECIALISTS, LTD.	Keehi	Tenant	P.O. Box 17370	Honolulu, HI 96817	James	845-0467		<a href="mailto:ronsconcretespecialist@yahoo.com">ronsconcretespecialist@yahoo.com</a>
ROYAL HAWAIIAN CRUISES		Tenant	PO BOX 29816	Honolulu, HI 96820	DARREN HORI	531-7001 X24		
SAITO, LINCOLN TIMOTHY dba KOKUA RECYCLE	Keehi	Tenant	1058 12th Avenue, Unit B	Honolulu, HI 96816	Timothy Saito	808-284-0420		<a href="mailto:TimothySaito@yahoo.com">TimothySaito@yahoo.com</a>
SALASSA, FRED dba Triple F	KMR 904	Tenant	1845 Auiki Street,	Honolulu, HI 96819	Fred Salassa	(808) 842-9133 ext 102		<a href="mailto:fred@FFHawaii.com">fred@FFHawaii.com</a>
SAUSE BROS., INC.	HNL Piers 27, 28	Tenant	705 North Nimitz Highway,	Honolulu, HI 96817	Wayne Stachel for HNL, Mike for	HNL: (808)306-2177	KAL: 690-3412	<a href="mailto:Waynes@sause.com">Waynes@sause.com</a>
SCHOFIELD FEDERAL CREDIT UNION	KMR 922	Tenant	P.O. Box 860669,	Wahiawa, HI 96786	Susan Tamashiro	(808) 624-9884	845-9070	<a href="mailto:main@schofieldfcu.org">main@schofieldfcu.org</a>
SEA ENGINEERING, INC.	Pier 35, 32	Tenant	Pier 21,	Honolulu, HI 96817	Ray Duran	(808) 536-3603	554-5028	<a href="mailto:rduran@lavanet.com">rduran@lavanet.com</a> ; <a href="mailto:duranray@gmail.com">duranray@gmail.com</a>
SHIN WOO CORPORATION	KMR	Tenant	P.O. Box 30054,	Honolulu, HI 96820	David Chang	(808) 853-1122		<a href="mailto:todayidchang@yahoo.com">todayidchang@yahoo.com</a>
SIU, WAI LUN	Pier 21	Tenant	2336A Kahauiki Street,	Honolulu, HI 96819	Raymond Siu	808-256-2907		<a href="mailto:siucancook@aol.com">siucancook@aol.com</a>
SOUTHERN FOODS GROUP dba MEADOW GOLD	1 Sand Island Access Rd.	Tenant	925 Cedar Street,	Honolulu, HI 96814	Jason Fujimoto	(808) 630-7401		<a href="mailto:jayson_fujimoto@deanfoods.com">jayson_fujimoto@deanfoods.com</a>
STATE OF HAWAII, DOAG/CRIMINAL JUSTICE	Pier 20 Warehouse 8	Tenant	425 Queen Street,	Honolulu, HI 96813	Kern Nishioka	(808) 586-1383		<a href="mailto:kern.k.nishioka@hawaii.gov">kern.k.nishioka@hawaii.gov</a>

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STEINKE BROTHERS, INC.	Keehi, across La Mariana	Tenant	98-889 Kaahele Street,	Aiea, HI 96701	Robert Steinke	(808) 488-9668		
SUBMARINES HAWAII, L.P. (Subsidiary of Robert's Hawaii)	Pier 41	Tenant	680 Iwilei Road, Suite 700,	Honolulu, HI 96817	Laki Sagiao	(808) 831-1564		laki.sagiao@robertshawaii.com
SUN CHONG COMPANY, LTD.	KMR 927 D	Tenant	5 Sand Island Access Road, Box 148,	Honolulu, HI 96819	Kevin Lam	(808) 381-2495		
TAI POLYTHENE OF HAWAII, INC.	KMR 930 D	Tenant	60 Laimi Road,	Honolulu, HI 96817	Tai Lee	(808) 848-5591		
TBC, LLC	KMR 931	Tenant	1172 Lunaai street	Kailua, HI 96734	patrick Casey	292-7468		<a href="mailto:pcasey@hawaii.rr.com">pcasey@hawaii.rr.com</a>
TESORO HAWAII CORPORATION- SAND ISLAND TERMINAL	NA	Access agreement	431 Kuwili Street,	Honolulu, HI 96817	Wade K. Nakashima	(808) 547-3830		wnakashima@tsocorp.com
THE CUSTOM CO., INC	KMR 905, 910	Tenant	205 Kalihi Street,	Honolulu, HI 96819	Caroline	808-843-2805		<a href="mailto:milton@thesustomcompanyhawaii.com">milton@thesustomcompanyhawaii.com</a>
THE GAS COMPANY, LLC	Pier 38	Tenant	P.O. Box 3000,	Honolulu, HI 96802-3000	Zoe Williams	388-3721	594-5637	
THE PASHA GROUP, dba PASHA HAWAII	Piers 31-34	Tenant	677 Ala Moana Blvd., Suite 700	Honolulu, HI 96813	Darren Lee	(808) 590-3617		<a href="mailto:Darren.Lee@Pashanet.com">Darren.Lee@Pashanet.com</a>
THE SHACK WAIKIKI, LLC	?	Tenant	2255 KUHIO AVENUE, SUITE 110	Honolulu, HI 96815	General Manager	921-2255		
THE SUSSEX CO., INC.	KMR 914	Tenant	2270 Makiki Heights Drive,	Honolulu, HI 96822	Tony Sussex	(808) 537-3001		tonysussex@hawaii-rr.com
THE WEBE CORPORATION, LTD. (Subsidiary of Robert's Hawaii)	Pier 5	Tenant	680 Iwilei Road, Suite 700,	Honolulu, HI 96817	Laki Sagiao	(808) 831-1564		laki.sagiao@robertshawaii.com
THEOPHYLLUS, INC. dba KANO TRUCKING	KMR 906	Tenant	224 Mokauea Street,	Honolulu, HI 96819	Lane Kano	(808) 848-8844		kanotrucking@hawaii.rr.com
TROPICAL J'S, INC.	KMR 929	Tenant	5 Sand Island Access Road, Box 122,	Honolulu, HI 96819	Chris	848-0888		gary@tropicaljs.com
TROPICAL RAIN GUTTER AND ROOFING, INC.	KMR 926	Tenant	5 Sand Island Access Road, Box 141,	Honolulu, HI 96819	Kim Beattie	(808) 847-0030	783-0662	<a href="mailto:info@tropicalroofandgutter.com">info@tropicalroofandgutter.com</a>
TROUBLE FREE CORP.	?	Tenant	P.O. Box 8260,	Honolulu, HI 96830	Chris Boyles	(808) 864-8864		<a href="mailto:BOYLES@Commerce/glass.info">BOYLES@Commerce/glass.info</a>
U.S. BUREAU OF CUSTOMS AND BORDER PROTECTION, DEPARTMENT OF HOMELAND SECURITY	Pier 1	Tenant	300 Ala Moana Boulevard, Room 2-267	Honolulu, HI 96813	Nancy Grahm	808-522-8001 X223		
U.S. COAST GUARD	NA	Access agreement	USCG, MLCPAC RONALD V. DELLUMS FEDERAL BUILDING	Oakland, CA 94612	LCDR JACK POLING	(510) 637-5507		
U.S. DEPARTMENT OF COMMERCE NOAA, NATIONAL MARINE FISHERIES SERVICE	NA	Access agreement	2570 Dole Street, (Site address: 1125B Ala Moana Blvd., Honolulu, HI 96814)	Honolulu, HI 96822-2396	Robert Dollar	(808) 983-3702		robert.dollar@noaa.gov
UNIROC MARBLE & Granite	KMR 914	Tenant	5 Sand Island Access Road, Box 101,	Honolulu, HI 96819	Jonathan N. Ing	(808) 983-3702		<a href="mailto:uniroc@yahoo.com">uniroc@yahoo.com</a>
UNITED FISHING AGENCY, LTD.	Pier 38	Tenant	1131 North Nimitz Highway,	Honolulu, HI 96817	Daniel Otani	(808) 536-2148		ufa-hi@pixi.com
UNITEK TECHNICAL SERVICES, INC.	KMR 931	Tenant	P.O. Box 29177,	Honolulu, HI 96820	Frank Schumann / Tony	447-2619	478-6914	frank@unitekhawaii.com
UNIVERSAL WHOLESALE ASSOCIATION, INC.	KMR 926 B	Tenant	P.O. Box 160927,	Honolulu, HI 96816	Patrick Chan	(808) 842-7427		pat@uw808.com
URS CORPORATION		Access agreement	615 Piikoi Street, 9th Floor,	Honolulu, HI 96814-3141	Ray Takagawa	593-1116	593-1116	
VAN, KEVIN dba HI-SEA HAWAII FISHING SUPPLY	Pier 20 Warehouse 6	Tenant	Pier 20, Warehouse #6,	Honolulu, HI 96817	Kevin Van	(808) 282-1452		hiseafishing@hawaiiintel.net
VIKING V., INC.	KMR 910	Tenant	309 Iliha Street,	Kailua, HI 96734-1856	John Myking	(808) 254-6228		mykingj001@hawaii.rr.com
WALDRON NORTON LILLY INTERNATIONAL, LLC	NA	Access agreement	521 ALA MOANA BLVD, STE 255	Honolulu, HI 96813	SANDY APANA	540-5111		
WELSH, JR., DARRELL G., AIA	4th floor of aloha tower	Tenant	One Aloha Drive, Box 63	Honolulu, HI 96813	Darrell G. Welch Jr., AIA	(808) 585-8522		<a href="mailto:welchandweekds@hawaii.rr.com">welchandweekds@hawaii.rr.com</a>
WIKOLIANA EDUCATIONAL EXCURSIONS, LLC	Pier 7	Tenant	665 IANA STREET	Kailua, HI 96734	N JEFFREY LANSDOV	230-0940		

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**APPENDIX D**

**EXAMPLE TENANT MAILING**

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LINDA LINGLE  
GOVERNOR



MICHAEL D. FORMBY  
INTERIM DIRECTOR

Deputy Directors  
FRANCIS PAUL KEENO  
JIRO A. SUMADA

10 OCT 15 AIO 103

HARBORS DIVISION


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

IN REPLY REFER TO:

HAR-EE  
8967.11

September 27, 2010

TO: HARBORS DIVISION TENANTS

FROM: DAVIS K. YOGI   
HARBORS ADMINISTRATOR

SUBJECT: TENANT SELF-INSPECTION FORM, STORM WATER COMPLIANCE  
AWARENESS TRAINING, STORM WATER COMPLIANCE INSPECTION  
NOTIFICATION

Your assistance is requested to provide essential information about your operational activities and storm water management practices that will aid the Department of Transportation Harbors Division to comply with federally 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.

The regulations are defined in Title 40, Code of Federal Regulations (40 CFR), Parts 122 and 123, and in the State of Hawaii Administrative Rules, Chapter 11-55. The regulations establish a framework that governs the discharge of storm 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. We require your careful review and timely return of the attached Tenant Self-Inspection Form (Attachment 1), which is designed to help you and allow us to assess compliance with state and federal regulations as well as our discharge permit. This form needs to be completely filled out and returned, postmarked by **October 29, 2010**. Please send the completed form to the Harbors Division, Attention: Mr. Richard Min, Environmental Health Specialist, 79 South Nimitz Highway, Honolulu, Hawaii 96813. You may also deliver the form in person at one of the mandatory tenant training sessions detailed below. A Storm Water Best Management Practices handout (Attachment 2) is also included and must be furnished to all of your employees.

Should you fail to return a completed form, you may be subject to civil and/or criminal penalties.

This is also a notification of upcoming required awareness training pursuant to requirements established under the Honolulu Harbor and Kalaeloa Barbers Point Harbor Small Municipal Separate Storm Sewer System (MS4) Permits.

Mandatory awareness training will be provided for tenants of the Harbors Division, environmental managers and/or their representatives at the Honolulu Harbor Pier 2 Passenger Terminal on **November 3 and 4, 2010**. Please send at least one representative from your company to either of the two training sessions. Training sessions check-in starts at **8:30 am** and the presentation will be from **9:00 am to 11:30 am**. The training and parking are provided by the Harbors Division at no charge.

This is also a notification of an upcoming inspection of your facilities pursuant to requirements established under the Honolulu Harbor and Kalaeloa Barbers Point Harbor Small Municipal Separate Storm Sewer System (MS4) Permits.

We will be contacting you directly to schedule the inspection. Inspection activities are anticipated to commence on or about November 8, 2010 and will be conducted on Mondays through Fridays between 0730 and 1730 hours. Key points of interest during the inspection are detailed in the attached inspection checklist. Inspections will be managed by the Harbors Division's Environmental Health Specialist Mr. Min, and Weston Solutions, Inc. (Mr. Mark Ambler, 387-6167).

If you have any questions, please contact Mr. Min, Harbors Environmental Health Specialist, at 587-1976 or Mr. Randal Leong, Harbors Environmental Engineer at 587-1962.

**Attachment:**

Tenant Self-Inspection Form  
Storm Water Best Management Practices Handout  
Tenant Inspection Checklist

# 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 contribute toxic hydrocarbons, heavy metals, suspended solids, oils and greases, and other contaminants to stormwater run-off.

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: Utilize a commercial facility designed for NPDES compliance and permitted for discharge to the sanitary sewer system.

#### Secondary Option

On-Site Washing: Requires designated area designed to collect wash water for treatment/disposal and prevent stormwater run-on/off.

- Approval of Harbors Engineering Branch required
- Area should be paved, bermed, and covered
- Wash water either treated and discharged to sanitary sewer (permit required) or collected for off-site disposal
- No vehicle maintenance allowed in washing areas
- Use automatic shut off hose nozzles and biodegradable soaps where appropriate
- Train employees (document) on proper cleaning, maintenance, and wash water disposal procedures



*The State Department of Transportation, Harbors Division, 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: 587-1962*

*Website:  
<http://hawaii.gov/dot/harbors/library/storm-management-plan>*

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

# STORMWATER BEST MANAGEMENT PRACTICES



## Vehicle and Equipment Fueling

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

### BMP Implementation

- Utilize off-site commercial fueling facilities as the primary option for vehicle and equipment fueling
- Designate specific areas on-site for vehicle and equipment fueling when required
  - Avoid positioning upstream or adjacent to stormwater drainage features
  - Utilize impervious surfaces and containment designed to prevent stormwater run-on/off
  - Ensure spill kits are available (immediately clean up and properly dispose of used absorbent materials)
  - Equip dispensing nozzles with automatic shut-off controls
- Utilize drip pans if remote or mobile fueling is required
- Provide secondary containment for aboveground storage tanks
  - Containment required to be 110% of largest tank capacity
  - Containment required to have locking drain valve
  - Record containment inspections and uncontaminated rain water discharges
  - Develop Spill Prevention, Control, and Countermeasures (SPCC) Plan if required per Federal/State regulations
- Perform periodic inspections (document) of petroleum handling equipment and structural controls
- Train employees (document) on proper fueling and spill response responsibilities
- Report all spills exceeding 5 gallons and/or spills that impact surface water and document response procedures



*The State Department of Transportation, Harbors Division, 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: 587-1962*

*Website:  
<http://hawaii.gov/dot/harbors/library/storm-management-plan>*



## Tenant Stormwater Compliance Self Inspection Form

LINE ITEM	FORM FIELD		
Company Information			
Business Name			
Street Address 1			
Street Address 2			
City, State			
Zip Code			
Business Owner / Operator			
Telephone Number			
Email Address			
Fax Number			
Tenant Since (month/year)			
Alternate Contact Name			
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
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 Permit (NPDES) 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
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

LINE ITEM	FORM FIELD			
<b>Pollution Prevention Info (Continued)</b>				
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)?				<div>YES</div> <div>NO</div>
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				<div>YES</div> <div>NO</div>
Do you have to submit SARA III reporting?				<div>YES</div> <div>NO</div>
Please provide a copy of your facility plans/drawing.				
Attach copies of any storm water studies conducted at your facility.				

LINE ITEM	FORM FIELD	
<p>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.</p> <p>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.</p>		
<b>Pollution Prevention Info (Continued)</b>		
<p>Are you aware of any non-storm water discharges or unauthorized connections to storm drains or groundwater surfaces at your facility?</p> <p>If yes, please describe location and nature of discharge.</p> <hr/>	YES	NO
<p>Are floor drains or deck drains located in the areas of chemical storage or chemical use, present at your facility?</p> <p>If yes, where is the discharge point?</p> <p>Sanitary sewer      Ground surface      Unknown</p>	YES	NO
<b>Points of Contact for Water Pollution Reporting</b>		
<p>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:</p>		
<b>Point of Contact</b>	<b>Telephone Number</b>	
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	
<b>Feedback</b>		
<p>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.</p>		
Did you find the information in this mailing useful?	YES	NO
<p>Comments:</p>    		

## Hawaii Department of Transportation Harbors Division Compliance, BMP and P2 Inspection Checklist

Harbor.	<u>Honolulu Harbor Pier:</u>	Date/Time:	<u>a.m.</u>
Tenant/User*/Business Name:		Phone Number:	
Tenant Address:		Risk Ranking:	<u>LOW</u>
Tenant Representative(s):		Basin or PMID:	
Vessel/Permittee		SIC or NAICS:	
Representative(s) Signature		Weather Conditions	
Inspector(s)**:			

STORM WATER		Compliance YES NO N/A	Comments
1	The user performs vehicle/vessel/equipment maintenance, washing, and/or stores industrial equipment.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If yes, NPDES Permit No.: _____ Permit expiration date: _____
2	If required, a Discharge and/or Connection Permit application has been filed with the DOT Harbors Division.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Date of Submittal.      Date of Approval. _____                      _____
3	If required, the facility has a Storm Water Management Plan (SWMP) and /or Storm Water Pollution Control Plan (SWPCP). Applicable plans are available at the facility.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
4	Records have been kept of spills and releases in SWPCP or SPCC Spill and Discharge Log.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
5	If an NPDES Individual Permit or NGPC covers the facility, reporting requirements under the permit have been completed and are up to date.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6	The facility has submitted its annual Discharge Monitoring Report (DMR) for storm water discharges to the HDOH.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Date of Submittal. _____
7	The facility maintains accurate records of the monitoring data for a minimum of five (5) years.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
8	The facility's total aboveground storage capacity (containers 55 gallons or larger) of petroleum products is less than 1,320 gallons. If no, the facility has a Spill Prevention Control and Countermeasure (SPCC) Plan signed by a professional engineer and has been updated within the last 5 years.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Date of SPCC Plan: _____
9	All changes to the personnel responsibilities, facility layout and potential pollutants source and activities have been updated in the SWPCP and/or SPCC.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
10	Personnel have received annual storm water Best Management Practices (BMPs) awareness training, and training records are maintained at the facility.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Date of Last Training: _____

\* User: Land or water user of Department of Transportation Harbors Division facilities.

\*\* Inspector(s): Inspector must check and verify all reports and documentation.

Inspector Name:

Date:

Hawaii DOT, Harbors Division



11	Areas of the facility exposed to storm water aren't wet during dry weather and are free of stains. If no, take photos.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
12	Discharge points to storm drainage system do not exhibit unusual characteristics such as color, odor, sheen, foam, or floatables.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
13	Storm water drainage systems are cleaned regularly and are labeled with "No Dumping" placards to educate personnel that non-storm water is not to be discharged into the storm drainage system.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
14	Discharge pathway of all floor and facility drains is acceptable.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
15	Discharges to the sanitary sewer is authorized by an Industrial Wastewater Discharge Permit (IWDP), if required, and permit documents are on file at the facility. If not, describe where wastewater is processed and disposed.		IWDP Number: _____ Expiration Date _____

MAINTENANCE AND REPAIR		YES NO N/A	Comments
16	Maintenance is performed in an authorized area and clean up activities do not impact storm water.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
17	Greasy or leaky equipment is stored under cover or with drip pans.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
18	Fluids and batteries are removed from salvage equipment before storage.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
19	Hazardous material substitutions have been explored. If so, list or give examples.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
20	Maintenance logs are available for inspection.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
21	Maintenance employees have received awareness training on storm water BMPs.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Date of Last Training: _____
22	Existing products and materials are used before purchasing or using additional ones of the same kind.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

FUELING		YES NO N/A	Comments
23	Fueling area engineering controls and BMPs are effective in preventing storm water run on/runoff.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
24	Secondary containment devices for fixed and mobile fueling areas are adequate to contain spills.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
25	Structural controls, such as sumps, oil/water separators, and containment areas are being maintained properly.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
26	Fueling areas are free of unattended stains and spill cleanup practices/materials (Spill Kits) are adequate.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
27	Visible piping, tanks, and hoses do not exhibit signs of leakage, wear, or malfunction. Inspection log available for inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
28	Fuel-handling employees are trained on fueling BMPs, spill cleanup practices, and the content of the SPCC plan.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Date of training: _____

Inspector Name:  
Hawaii DOT, Harbors Division

Date:

VEHICLE, VESSEL, AND EQUIPMENT WASHING		YES NO N/A	Comments
29	Washing takes place in a designated area and is designed to prevent storm water run on/runoff.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
30	Discharges from washing activities are authorized by permits if required, and permit documents are on file with DOT Harbors Division. Vessel has a EPA Vessel General Permit.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	If yes, Permit No.: _____ Permit expiration date: _____
31	Wash water treatment system, such as sumps, oil/water separators, and reclamation systems are maintained and operational.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
32	Cleaning agents and equipment are stored properly. Environmentally preferred products are used where possible. List product used.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
33	Solid wastes from washing activities are disposed of properly.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

OUTDOOR MATERIAL HANDLING		YES NO N/A	Comments
34	Loading areas are designed and located to minimize impacts to storm water drainage system.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
35	Loading areas are free of unattended stains or pavement degradation indicating poor material handling practices. If no, take photos.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
36	Adequate plans and spill cleanup materials are on hand to address spills and leaks due to material transfers.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
37	Material handling employees and/or forklift operators have been trained on material handling BMP's.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Date of training: _____

CONTAINER STORAGE		YES NO N/A	Comments
38	Facility has aboveground storage tanks (AST's) or underground storage tanks (UST's) including hydraulic lift tanks, emergency generator day tanks, fuel storage, and used oil storage tanks. Proper maintenance, training, leak tests, notifications, and inspections are up to date. For tanks greater than 1,100 gallons, inventory is monitored daily.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
39	Facility had notified the HDOH UST program office of all UST's located in-site. HDOH has issued a "No Further Action" statement for the closure of any UST at the facility.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
40	AST meets or exceeds the National Fire Protection Association (NFPA) requirements.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
41	Storage area has adequate secondary containment and integrity protection.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
42	Containers are compatible with materials stored, free of damage, and labeled correctly, and not stored past allowable hold times. Lids are kept closed and secured when not in use.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
43	Bulk product storage containers are equipped with overflow protection alarms or automatic shutdown pumps.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

Inspector Name:  
Hawaii DOT, Harbors Division

Date:

MATERIAL AND WASTE HANDLING AND DISPOSAL		YES NO N/A	Comments
44	Waste are disposed properly, Records are kept and hazardous waste generator status is known. Facility has an Environmental Protection Agency (EPA) hazardous waste generator identification number and follow appropriate regulations/requirements (CESQG, SQG, LWG). Submit copy of EPA's letter.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Waste Generator ID Number: _____
45	Hazardous waste and used oil storage areas have adequate secondary containment and integrity protection.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
46	Personnel who handle hazardous waste and/or universal waste or come into contact with hazardous waste/universal waste are trained and training records are documented, and past training logs are available at the facility.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Date of Last Training: _____
47	Containers are compatible with materials, free of damage, labeled correctly.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
48	Storm water accumulation in secondary containment areas is minimized, managed, disposed of correctly, and logged.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
49	Waste storage areas are free of unattended spills or degradations indicating poor waste handling practices.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
50	Materials such as grease, oil, antifreeze, brake fluid, cleaning agents, hydraulic and transmission fluid, solvents, paints, batteries and filters are recycled or disposed of properly.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
51	Out-of-service, spent lead acid batteries are protected from contact with stormwater runoff, and placed in secondary containment.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
52	Dumpsters and recycle bins are kept closed when not in use.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
53	Potential pollutants are stored under covered areas.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
54	Waste reduction opportunities have been explored and implemented.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

PIERS, BUILDINGS, AND GROUNDS HOUSEKEEPING		YES NO N/A	Comments
55	Spills are cleaned thoroughly. Petroleum spills are cleaned until water added to spill area does not produce sheen.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
56	Good housekeeping controls are implemented to contain debris and pollutants generated by building maintenance activities.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
57	All work areas and storage areas are neat and clean.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
58	Paved surfaces are swept vs. washed down and sweepings are disposed of properly.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
59	There is no dirt/debris accumulation/buildup in parking areas.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
60	Fertilizers, pesticides, and herbicides are applied according to manufacturer's instructions and not applied before or during a rain event.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
61	Storm water drainage system is maintained regularly.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
62	Excessive watering of landscaped areas is avoided.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

Inspector Name:  
Hawaii DOT, Harbors Division

Date:

OIL/WATER SEPARATORS MAINTENANCE		YES NO N/A	Comments
63	Operation and maintenance of oil/water separator is adequate and wastes are disposed of properly. Maintenance log/disposal manifest available for inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

RUNOFF RETENTION BASINS		YES NO N/A	Comments
64	Catch basins are clean and free of debris and stains.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
65	Sediment build up in the basin is monitored, removed when necessary, and disposed of properly.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

EMERGENCY SPILL CLEANUP PLANS		YES NO N/A	Comments
66	Tenant SPCC/Emergency Spill Cleanup Plan is adequate and being implemented effectively.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
67	Spill kits are in high-risk areas and are appropriately stocked.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
68	Spill kits are inspected and replenished monthly or after kits are utilized.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
69	Employees have been trained in spill prevention and response and spill and training records are maintained on site.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Date of training: _____
70	The National Response Center (NRC) Phone Number is available on-site for immediate reporting of spills. NRC (800) 424-8802	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

CONSTRUCTION		YES NO N/A	Comments
71	Construction activities have occurred at the facility since the last inspection	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
72	Construction plans have been submitted and reviewed by the Department of Transportation Harbors Division. Refer to form to be used by the construction inspectors.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

EPCRA		YES NO N/A	Comments
73	Facility is required to report chemical inventory (Tier II) and/or Toxic Release Inventory (TRI) Report. If yes, supply a copy of the report(s).	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

Inspector Name:  
Hawaii DOT, Harbors Division

Date:

ADDITIONAL COMMENTS	
No.	Alleged Violation or Corrective Action

INSPECTION PHOTOGRAPHS	
No.	Photo Description

Inspector Name:  
Hawaii DOT, Harbors Division

Date:



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**APPENDIX E**

**TENANT SELF INSPECTION DATABASE**

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Hawaii Department of Transportation Harbors Division  
Tenant Self Inspection - Honolulu Harbor

Tenant	Activity	Lease Number	Permit Number	SIC Code	NPDES Permits	SARA III	Other Federal Permits
1726, INC. dba MARK GLEN AUCTIONS	Auction		H-00-204			no	NA
AALA Produce, INC. dba AALA SHIP SERVICE	Ship Chandler	H-98-2				No	N/A
AIRCRAFT SERVICE INTERNATIONAL GROUP / HAWAII FUELING FACILITIES CORPORATION	Relieve, Test, Store, Distribute Jet Fuel		H-81-953	424710		Yes	No
AKANA TRUCKING, INC.	Equipment hauling		DOT-94-64			No	N/A
ALOHA AGRICULTURAL CONSULTANTS, INC. dba NIU NURSERY	Wholesale Garden Supplies		H-00-2233 H-97-1985			No	N/A
ALOHA CARGO AGENCY, INC.	Deck Barge Discharge and Loading		H-02-2321 H-93-1822	483111		No	PHMSA Haz Mat Cert. Of Registration #050306 60
ALOHA CONTAINER SALES & RENTAL, INC.	Sale and Rental of Ocean Cargo Containers		H-02-2344	4222		No	No
ALOHA LIQUEURS, INC	Distilled Spirits		DOT-94-90			No	
ALOHA TOOL & RENTAL, INC. dba Honolulu RECOVERY SYSTEMS CO.	Recycling- Cardboard, Newsprint, containers, e	H-97-1992	H-97-1999 H-97-1998, H-07-2591		HI R60C056	No	No
Aloha Tower Markerplace							
ALUMINIUM SHAKE ROOFING, INC.	Metal Work		DOT-94-86			No	No
AMAZON CONSTRUCTION COMPANY, INC.	Specialty Contractor		H-98-2104 DOT-96-136			No	No
AMERICAN DIVERS, INC.	Commercial Diving Operations		H-89-1596			No	No
AMERICAN GUARD SERVICES, INC.	Security Guard Services					No	No
AMERICAN MARINE CORPORATION	Marine Construction Operations		H-01-2277 H-01-2256 H-86-1384 H-86-1386			No	No
AMERON INTERNATIONAL CORPORATION dba AMERON HAWAII	Produce ready mix concrete		H-97-1978 H-87-1453	3273	Sand Island HI0021075, P	No	No
ANCHOR CONSTRUCTION MANAGEMENT CORP.	Contractor		H-99-184			No	No
ANUENUE REFUSE, INC.	Refuse Hauling		H-98-2093		DOH File # R60C056	No	No
ARA CONTRACTING	Storage		DOT-96-144			No	No
ARITA/POULSON GENERAL CONTRACTING	General Contracting		H-98-2101			N/A	N/A
ATLANTIS SUBMARINE HAWAII							
BCP CONSTRUCTION COMPANY OF HAWAII, INC.	Construction		H-02-214			No	N/A
BROOKINS BOATWORKS, LTD.			H-03-2396			No	No
BURLINGTON ENVIRONMENTAL, INC. c/o PSC INDUSTRIAL OUTSOURCING, INC.	10-Day Hazardous Waste Transfer Facility		DOT-94-77			No	DOT PHMSA
CB TECH SERVICES			DOT-95-108				
CENTRAL PACIFIC DISTRIBUTING, INC.	Flooring Distributor		DOT-95-107			No	No
CERTIFIED SHEETMETAL	Sub Contractor for Sheet Metal		H-99-187			No	No
CHASE SALES & DISTRIBUTION, INC.	Wholesaler		DOT-97-150			No	No
CHEVRON U.S.A., INC. Honolulu Transportation terminal			H-00-2230 H-93-1812 H-92-1769 H-92-1765	5171		No	No
CHEVRON U.S.A., INC. Honolulu Marine Terminal			H-00-2230 H-93-1812 H-92-1769 H-92-1765	5171		No	No
City & County of Honolulu, DEPT. OF ENVIRONMENTAL SERVICES	Wastewater Pumping Station		H-69-7: Non-Exclusive Easement for the Ala Moana Force Main Sew		HI R90A411	No	No
City & County of Honolulu, Honolulu FIRE DEPARTMENT (PIER 15)	Fireboat Operations		H-91-22			No	No
City and County of Honolulu HNL Police Dept. Attn: Juvenile Services, P.A.L.	Storage	H-203				No	No
CLASSIC TILE CORPORATION	Construction Warehouse		DOT-93-13			No	No
CLEAN ISLANDS COUNCIL	Emergency Oil Spill Response		H-93-1815 H-90-1689 H-94-1842			Yes	None

Hawaii Department of Transportation Harbors Division  
Tenant Self Inspection - Honolulu Harbor

CONCRETE CORING COMPANY OF HAWAII, INC.	Contractor Yard Space		H-02-2355 / H-00-2235			No	No
CONTAINER STORAGE COMPANY OF HAWAII	Store Ocean Containers		H-01-211			No	No
CONTROL TECH, LLC	Electrical Subcontractor		H-00-196			No	No
CONVENTION SET BUILDERS, INC.	Convention Set Builders		DOT-98-177			No	No
CUSTOM BILT METALS	Metal Roof and Gutter Distributer					No	No
D & K PETROLEUM, INC.							
DAVENPORT HAWAII PARTNERS, LP	Office and Warehouse	H-85-1				No	No
DAVID D. CHANG AND EUN IK CHANG							
DD-M LEASING, INC.	Office Space Only	H-300138	H-04-2467			No	
DEDRICK, DEWAIN A. dba Bella Pietra	Distribution Natural Stone Tile no manufacturing	H-06-2552	H-02-2383			No	None
DEPENDABLE HAWAIIAN EXPRESS, INC.	Freight Forwarding		H-01-2285			No	N/A
DIVISION 8, INC.	Glass Contracting		DOT-96-142			No	No
DONAHUE, SHANNON dba PARADISE EQUIPMENT	Storage					No	No
DON'S MAKIKI	Parking of Tractors and trailers		H-98-170	812930		No	No
DRAFTSTONE COMPANY, INC.			H-01-2274			No	No
EAST WEST MARKETING, INC.	Marketing					No	No
EQUILON ENTERPRISES, LLC/Shell Oil Products US Honolulu Terminal	Petroleum Fuel Terminal		H-98-2068 H-98-2067 H-98-2066 H-98-2065	H-5171	HIR80B250; HI02FB319;	Yes	None
ERIK BUILDERS, INC.			H-98-2092 H-97-1984				No
FIVE "C" CORP dba WESTERN OVERHEAD DOORS	dential and Commercial Door Installation & Repair		H-97-158			No	No
FIVE STAR ROOFING, LLC	Roofing		H-00-193 H-08-2630			No	No
FRANK P. WHITE JR. PROPERTIES dba CONTAINER STORAGE CO.	Storage of Ocean Containers Empty		H-01-211 H-97-1986			No	No
Fresh Island Fish, LLC	Fresh fish Wholesaler	H-05-24				No	No
FRIENDS OF FALLS OF CLYDE							
FRIENDS OF HOKULE'A & HAWAII'LOA	Canoe Building/Repair		H-98-2074	3732		No	N/A
FUKUNAGA, PAUL N. dba P.F. MARINE	Fiberglass boat repair		H-02-2339			No	No
GILLIS, EUGENE dba EXCAVATION SERVICES	Storage		H-02-2366			No	No
GLOBAL SPECIALITY CONTRACTORS, INC.			H-98-173			No	No
GMB VINYL, INC. dba GMB VINYL FENCING	Vinyl Siding		H-98-163			No	No
GREAT PACIFIC WHOLESALE CO., LLC	Wholesale Footwear		H-03-2399			No	No
HAJALEE INC, dba KALIHI QUEEN'S SUPERMARKET	Storage		H-07-2592			No	No
HARDY CONSTRUCTION CO., INC.	Contracting- General Building		H-02-216			No	No
HAWAII EXPLOSIVES & PYROTECHNICS, INC.	Storage of floating platform on trailer		H-02-2385	7389		No	N/A
HAWAII MARITIME CENTER	Museum and Falls of Clyde	H-87-30		712110		N/A	N/A
HAWAII PACIFIC PLUMBING SUPPLY	Wholesale plumbing supply distribution		H-03-2414			No	N/A
HAWAII PAINTING & WALLCOVERING	Storage		H-99-2153			No	N/A
HAWAII STEVEDORES, INC.	Marine Cargo Handling	H-90-4	H-98-2038 H-96-1912 H-92-1794 H-90-1682 H-92-1753 H-84-111	R80A305		No	No

Hawaii Department of Transportation Harbors Division  
Tenant Self Inspection - Honolulu Harbor

HAWAII TOYS & GIFTS			DOT-96-133				
HAWAII TRANSFER COMPANY, LTD.	Trucking and Warehousing	H-98-9	H-02-2375		NGPC File No. HIR80B403	No	No
HAWAIIAN AQUA PRODUCTS	Fiberglass Fabrication, Boat Building		H-97-2002		HI R20A 196	no	N/A
HAWAIIAN CRUISES, LTD.							
HAWAIIAN ELECTRIC COMPANY, INC.		H-03-11 H-91-1					
HEUMANN, JAMES dba WIND & SEA CHARTERS	Woodworking - Boat repair		H-99-2128			No	No
HIROSE ELECTRIC	Electrical Contractor		DOT-96-132			No	No
HI-TEC ROOFING, INC.	Office/Warehouse and Sheetmetal Shop		DOT-94-59	238160		No	No
HONOLULU COMMUNITY ACTION PROGRAM, INC. aka OAHU HEAD START	Office/Warehouse		DOT-93-9	624410		No	No
HONOLULU MARATHON ASSOCIATION	Produce Long Distance Running Events		H-06-2544			No	No
HONOLULU RECOVERY, INC.							
HOOK UP TOWING, INC.	Towing		H-03-2398			No	No
HORIZON LINES, LLC	Ocean Cargo Terminal Facility	H-90-4		483111	HI R808909	No	No
HPBS, INC.	Harbor Pilots		H-99-2159 H-93-1819			No	N/A
HPC FOODS, LTD.	Electrical Marine Work		H-02-2318			N/A	N/A
IAN J. LANSDOWN, dba HAWAII'S SAILING CENTER							
INCHCAPE SHIPPING SERVICES							
INDUSTRIAL CHEMICAL & LUBRICANTS, INC.	Chemical distributor		DOT-93-12 H-06-2542	2842		Yes	
INTERNATIONAL EXPRESS, INC.	trucking- unloading of containers	H-99-7	H-02-2370 H-98-171			No	N/A
ISHIKAWA, NORMAN & DOLORES dba NORMAN'S TRACTOR SERVICE	Demolishing, Grading & Hauling		H-97-1988			No	None
ISLAND MOVERS	Warehousing		H-00-2197 H-90-1642	4225	HI R80A506	No	No
JAPAN FOOD (HAWAII), INC.	Japanese Food		H-02-2330			No	No
JAS. W. GLOVER, LTD	Aggregate & RAP Stockpiling		H-06-2553		HI R70C472	No	No
JET PRO, INC.	Sales Office		H-00-202			No	No
KAGAMI, INC.	al Investigation of Subsurface Area, Remediation Activities Piers 18-38		H-02-2343			No	No
KEALOHALANIEQUIPMENT & RENTAL, INC.							
KERR PACIFIC CORP, dba HFM Foodservice		H-86-1 H-79-1					
KIRKWOOD CLARKE dba HAWAIIAN CATAMARAN MULTIHULL DESIGN	Boat repair and fabrication- some welding		H-97-2000			No	No
KNIGHT UNLIMITED, dba KNIGHT TRANSPORT							
KONG ENTERPRISES, INC.	Dry good storage					No	No
K-Sea Transportation, Hawaii Division (formerly UAUKEWAI DIVING, SALVAGE & FISHING, INC.)	Operating towboats		H-01-2273 H-01-2249 H-93-1816 H-93-1804			No	No
KUMU CORP.	Transmission Parts		H-97-1995			N/A	N/A
MARINE PETROLEUM CORPORATION	Distribution		H-98-2082	5172		No	No
MARINE SPILL RESPONSE CORPORATION	Oil Spill Response		H-94-1845	4959 NAICS-562910		No	No
MARITIME LICENSE CENTER	Life Boat Training		H-02-2364 H-01-2298			No	No
MASUDA, RICHARD dba RICHARD K. MASUDA MASONRY			H-97-1987				

Hawaii Department of Transportation Harbors Division  
Tenant Self Inspection - Honolulu Harbor

MATSON NAVIGATION COMPANY, INC.			H-84-1237				
MAUGA-OLIVE SAMOAN ASSEMBLY OF GOD	Church		DOT-97-152			No	No
MILITARY HQ	Retail Storage		DOT-95-101			No	No
MILLER INDUSTRIES	Automotive Repair Equipment		DOT-94-87			No	No
MLC INT'L LLC, dba PERFORMANCE LANDSCAPE	Landscaping		H-06-2541			No	No
MOANA PA'A KAI, INC. (Subsidiary of Young Brothers)	Towing and Tugboat Services		H-99-2175	483211	HI R80B059	No	No
MYSUNG SOO HAN dba HAN'S ELECTRIC	Office and Storge					No	None
NAKAMURA, RODNEY S. WELDING	Welding, Fabrication and Repairs	H-99-188	Acct# 500053			No	None
NANAKULI NEIGHBORHOOD HOUSING SERVICES	recycling Construction Materials, Homeownership Training		H-01-2248			No	None
NCL AMERICA, INC. (1 ship in service- Pride of America)	Storage		H-05-2480			No	No
NORKO MARINE AGENCY, INC.	General Office		H-01-2314			No	No
Oceanic Libra Corp	Fishermen	H-99-3					
OCEANTRONICS, INC.	Marine & Landmolile Sales, Service & Repair		H-98-2102			No	No
P & R WATER TAXI, LTD.	Provide Water Taxi Service to Barber's Point		H-05-2504 H-91-1714	4489	HI R80A153	No	None
PACIFIC COMMERCIAL SERVICES, LLC	Environmental Services	H-02-223	H-06-2529			No	No
PACIFIC DIVERS EQUIPMENT SUPPLY, INC.							
PACIFIC ENVIRONMENTAL CORPORATION	Full Service Environmental Company		H-98-2055 H-96-1898 H-93-1817	NACICS- 562910		N/A	No
PACIFIC FISHING AND SUPPLY, INC.	Commercial Fishing Supplies		H-97-1969			No	None
PACIFIC OCEAN PRODUCERS, INC.	ales of Commercial and Sport Fishing Supplie	H-03-18	H-98-2096 H-98-2079 H-95-1865	441222, 451110		No	None
PACIFIC RIM TRADING GROUP, LTD.	Wholesale distribution	500156	H-07-2576			No	No
Pacific Shipyards International, LLC	Ship Building and Repairing		H-98-2123 H-84-1229	3731	HI0020753	No	No
PANG, SANDRA dba SP LUNCH WAGON	Lunch Wagon		H-91-1735			No	No
PARADISE CRUISE, LTD.		H-98-11 (Pier 8 Mooring p	H-99-2137 Terminated 10-06, H-98-2121, H-94-1843 Terminated 1-99, H-89-1585 Terminated			No	No
PARADISE INN HAWAII, LLC dba Tsukiji Fish Market							
PBC WHOLESALERS, INC.	Wholesale School & Office Supplies		DOT-94-76			No	No
PENDLETON FLOUR MILLS, LLC dba HAWAIIAN FLOUR MILLS	Flour Milling		H-01-2283	2041		No	No
PETROSPECT, INC.	Petroleum Inspection		H-88-1517 H-87-1411			No	No
PIONEER MACHINERY, INC.	Casting Concrete Slabs		H-90-1678	327390		No	N/A
PRIME BUILDERS	Construction Contractor		DOT-96-146			No	No
PROJECTS ENTERPRISES, INC.	General Contractor		H-03-2410			No	N/A
PROPARK, INC.	Customer Parking for Hawaii Superferry					No	No
PROTECH ROOFING, LLC	Roofing Contractor/Storage		H-03-2407			No	No
PRYNE, TY dba H.B.N.	Boat Storage		H-01-2271			No	No
QUICK MOVE, INC.	Storage		H-98-162			No	No
RDH TRANSPORTATION & LEASING	Transportation-Passanger			4141-Local Bus Service		No	No
REBECCA'S FINE COLLECTION dba R.F.C. GROUP							

Hawaii Department of Transportation Harbors Division  
Tenant Self Inspection - Honolulu Harbor

REEF DEVELOPMENT OF HAWAII, INC.	Storage - tools and equipment		DOT-94-69			No	No
ROBERT MARCOS, INC.	General Contractor		DOT-96-141			No	No
ROBERTO'S, INC.	Wholesale Distributor		DOT-96-131			No	No
RON'S CONCRETE SPECIALISTS, LTD.	Concrete Subcontractor		H-98-2115			No	
ROYAL HAWAIIAN CRUISES			H-91-1703				
SAITO, LINCOLN TIMOTHY dba KOKUA RECYCLE	Sort and Store Glass Beverage Bottles		H-97-1991			No	None
SALASSA, FRED dba Triple F	Paper Wholesaler	H-99-6				No	No
SCHOFIELD FEDERAL CREDIT UNION	Credit Union		DOT-93-3			No	No
SEA ENGINEERING, INC.	Equipment and Supply Storage, Maintenance Area.		H-07-2594 H-93-1814 H-01-2289	237990		No	No
SHIN WOO CORPORATION	Wholesale Juice		H-02-219			No	FDA 11584645864
SIU, WAI LUN	Food Service		H-98-2114 H-00-2199			No	No
SOUTHERN FOODS GROUP dba MEADOW GOLD						No	
STATE OF HAWAII, DOAG/CRIMINAL JUSTICE	Criminal Justice		H-99-2155			No	N/A
STEINKE BROTHERS, INC.	Construction Material Storage		H-97-1981			No	N/A
SUBMARINES HAWAII, L.P. (Subsidiary of Robert's Hawaii)	Mooring and Support Facility		H-99-2168 H-97-1951 H-94-1849			No	No
SUN CHONG COMPANY, LTD.	None		DOT-94-71			No	No
TAI POLYTHENE OF HAWAII, INC.			DOT-97-148			No	No
TBC, LLC	Storage		H-02-2345			No	N/A
TESORO HAWAII CORPORATION- SAND ISLAND TERMINAL	Fuel Supply and Distribution	H-80-3		5171	NGPC No. R80A725	Yes	No
THE CUSTOM CO., INC	T-shirt processing and Storage warehouse					N/A	N/A
THE GAS COMPANY, LLC	LPG Storage and Propane Air Unit	H-03-2424	H-93-4 H-80-9 H-72-15 H-69-4			Yes	No
THE PASHA GROUP, dba PASHA HAWAII	Loading/Unloading Household Crates		H-06-2565			No	N/A
THE SHACK WAIKIKI, LLC							
THE SUSSEX CO., INC.	Storage		DOT-96-128			No	No
THE WEBE CORPORATION, LTD. (Subsidiary of Robert's Hawaii)	Mooring of Alii Kai and Conduct Cruise Boat Operations	H-84-11	H-05-5208			No	N/A
THEOPHYLLUS, INC. dba KANO TRUCKING	Storage		H-02-218	484110		No	No
TRANSMARINE NAVIGATION CORPORATION							
TROPICAL J'S, INC.	Manufacturing		DOT-94-80			No	No
TROPICAL RAIN GUTTER AND ROOFING, INC.	Roofing and Raingutter Sales/Installation	H-02-217	H-02-217			No	No
TROUBLE FREE CORP.	Boat Building		H-03-2422			No	No
U.S. BUREAU OF CUSTOMS AND BORDER PROTECTION, DEPARTMENT OF HOMELAND SECURITY	Immigration Processing, Enforcement, Detention/Removal		H-03-2419 H-97-1934			No	No
U.S. COAST GUARD							
U.S. DEPARTMENT OF COMMERCE NOAA, NATIONAL MARINE FISHERIES SERVICE	Non Commercial Scientific Research		H-81-946			No	No
UNIROC MARBLE & Granite	Wholesaler of Oriental Goods		DOT-95-118			No	No
UNITED EXCAVATION EQUIPMENT CORPORATION	Excavating Contractor		H-00-2209			No	No
UNITED FISHING AGENCY, LTD.	Fish Auction	H-03-17	H-98-2037	422460		No	No

Hawaii Department of Transportation Harbors Division  
 Tenant Self Inspection - Honolulu Harbor

UNITEK TECHNICAL SERVICES, INC.	Insulation Storage		H-99-182			No	No
UNIVERSAL WHOLESALER ASSOCIATION, INC.	Wholesaler / Distributer		H-03-2400			No	No
URS CORPORATION							
VAN, KEVIN dba HI-SEA HAWAII FISHING SUPPLY	Selling Gears, Bait		H-97-1936			No	No
VIKING V., INC.	Storing Fishing Gear (Lobster Traps)		H-97-1971, H-05-2515			N/A	N/A
WALDRON NORTON LILLY INTERNATIONAL, LLC							
WELSH, JR., DARRELL G., AIA	Architecture		H-99-2134			No	
WIKOLIANA EDUCATIONAL EXCURSIONS, LLC							

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**APPENDIX F**

**HARBORS TENANT TRAINING RECORDS**

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# Weston Solutions, Inc

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

## HDOT HARBORS STORMWATER MANAGEMENT TENANT TRAINING November 3, 2010



### SIGN-IN SHEET

COMPANY	PRINT NAME	SIGNATURE	EMAIL	VOLUNTEER FOR CLEAN-UP?
Robert's Hawaii	Andrew Lind	<i>[Signature]</i>	andrew.lind@robertshawaii.com	
HARDY CONST CO	MELVIN HARDY	<i>[Signature]</i>	HARDY001@hawaii.net	
HONOLULU MARATHON ASSN	RONALD CHEN	<i>[Signature]</i>	jchen@hawaii.net	
ARITA POUTSON BEN CONN	STEVE JONASSEN	<i>[Signature]</i>	STEVE@ARITAPOUTSON	
NATHAN SUTHER	NATHAN SUTHER	<i>[Signature]</i>	Nsuther@hawaii.com	
Concrete Caribing	KEOLA GOO	<i>[Signature]</i>	keolag@gloverhd.com	
JAS. W. GLOVER LTD.	Irene Yang	<i>[Signature]</i>		
Queen's Supermarket	Clint Kagami	<i>[Signature]</i>	Clintkagami@hotmail.com	
Kagami Inc	RON RICHARDSON	<i>[Signature]</i>	ron.richardson@dhx.com	
DHX	MICHAEL CHANG	<i>[Signature]</i>	mchang@petrospect.net	
PETROSPECT, INC.	J PEDRO	<i>[Signature]</i>	jpedro@hawaii.gov	
HPD - PAL	Tim Sawyer	<i>[Signature]</i>	tsrv@cleanislands.org	
Clean Islands Council	Chris Hillman	<i>[Signature]</i>	chris@tropicaljs.com	
Tropical J's Inc	Daniel Otani	<i>[Signature]</i>	dtotani@gmail.com	
United Fishing Regs	LAYNE KANE	<i>[Signature]</i>	kanotrucking@hawaii.com	
I.T. KANO TRUCKING	NATHAN KAPULE	<i>[Signature]</i>	nkapule@hawaii.com	OK
Hawaii Engineering	DANIEL DILLON	<i>[Signature]</i>	daniel@hawaii.net	
OCEDAL DILLON				

11/3/10

VOLUNTEER FOR  
CLEAN-UP?

COMPANY

PRINT NAME

SIGNATURE

EMAIL

REBECCA FINE COLLECTION BA REC REBECCA FAR

R.S. NAKAMURA WELONG RODNEY S NAKAMURA

MILLER INDUSTRIES RODNEY S NAKAMURA

ALUMINUM SHARE BOOF RODNEY S NAKAMURA

HAWAIIAN CEMENT DAVE WURLTZEN

PAINTING OCEAN FRONTIER ARLEN WALSTON

GLP Asphalt Sara Thomas

ERIK BUILDERS INC. DIANNE AMBROSE

FLAVORFUL AGUA FRONTIS YAL LIN

AALA SHIP SVC. REANEY TANAMORE

ATHLETIC GENERAL KEN NISHIKITA

UNITED FISHING AGENCY NELSON ABECILLA

ISLAND MOVERS BRIAN TUKUHAHA

WRECKTIME LLC CENTRE CARLYLE DEVIE

STEINKE PROS. INC. ROBERT STEINKE

TROPICAL J'S INC. CHRIS HILLMAN

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*[Signature]*

ARLENE POP. HANAI, COM

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cell 478-9777-488-9668

Hillman.cc15@gmail.com

*[Handwritten note: risk turned in ranting TSI preambles]*

*[Handwritten note: Follow up if it sticks]*

# Weston Solutions, Inc

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

## HDOT HARBORS STORMWATER MANAGEMENT TENANT TRAINING November 5, 2010



### SIGN-IN SHEET

COMPANY	PRINT NAME	SIGNATURE	EMAIL	VOLUNTEER FOR CLEAN-UP?
Hi-Tel Roofing	Guthrie Jeffers		gabitec@pixi.com	
Pacific Shipyard	THOMAS ATKINSON		tatkinson@pacificshipyards.com	
American Guard Svc	Mic hae I Burgan		scm200@yahoo.com	
Arita Paulsen Gen Con	Gary Wallen		gary@arita-paulsen.com	
Unitex Maritime	TOMT REEST		Toni@unitex.com	
Custom Built Metals	STEVE GUYNES		Steve@CustomBuiltMetals.com	
PIL Water Taxi	Aukunihno Uauia		IPA	
ED Yanashiro	Haron Yamud		2477870	ok
JFC International, Inc	Rae Miyasaki		rmiyasaki@jfc.com	
Norman's Transfer Service	Maresa Hoosiba		nts96819@hotmail.com	
Projects Enterprises, Inc	Kaun Tina Lee		klee@projects.com	
ISS/NHK	Jenida Kikaula		jenida.kikaula@iss-shipping.com	
ISS/NHK	Sandy Kusumoto		Sandy.Kusumoto@iss-shipping.com	
ProPank	Todd Santos		tsantos@propank.org	
PM Realty/ATM	Madene Dale		mdaley@p.maq.com	Yes
ALOHA COBRAINER	Richard Pierson			Yes
CONTROL TOWER LLC	MELWIN TSUE		ctech@lava.net	
AES TRAINING	SAMANTHA AND		SAMANTHA.GUINIZ@AES.COM	Yes
KANAKA				







## State of Hawaii Water Pollution Rules and Regulations: Industrial Storm Water Pollution Prevention at DOT Harbors

**November 3 and 4, 2010**

By: Matthew Kurano,  
Department of Health  
Clean Water Branch



## Industrial Storm Water Pollution Prevention: DOH's Role

### DOH-Clean Water Branch

- The Clean Water Branch (CWB) protects the public health of residents and tourists who enjoy playing in and around Hawaii's coastal and inland water resources. The CWB also protects and restores inland and coastal waters for marine life and wildlife. This is accomplished through statewide coastal water surveillance and watershed-based environmental management through a combination of permit issuance, monitoring, enforcement, sponsorship of polluted runoff control projects, and public education.



State waters off of Lanai

## Industrial Storm Water Pollution Prevention: DOH's Role

### DOH-Clean Water Branch

#### Issues NPDES permits for:

- Construction Sites (1 acre or more)
- Industrial Facilities
- Municipal Sewage Treatment Plants
- Storm Sewer System Owners
- Misc. Facilities that discharge to State waters



Discharge from State waters

## Industrial Storm Water Pollution Prevention: Unlawful Discharges

### Hawaii Revised Statutes (HRS) § 342D-50(a):

- No person, including any public body, shall discharge any water pollutant into State waters, or cause or allow any water pollutant to enter state waters, except as in compliance with the provisions of this chapter, rules adopted pursuant to this chapter, or a permit or variance issued by the Director.



Discharge from a Pier to State waters

## Industrial Storm Water Pollution Prevention: Regulations

### Hawaii Revised Statutes (HRS) § 342D-30(a):

- Any person who violates this chapter, any rule, or any term or condition of a permit of variance issued pursuant to this chapter shall be fined not more than **\$25,000 for each separate offense**. Each day of each violation shall constitute a separate offense.

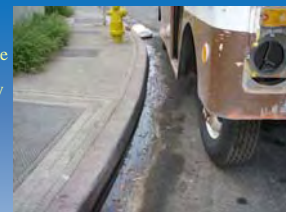


Storm Water Pollutant Source at an Industrial Facility

## Industrial Storm Water Pollution Prevention: Regulations

### Hawaii Revised Statutes (HRS) § 342D-33: Knowing Violations

- Any person who knowingly violates this chapter or any rule adopted by the department pursuant to this chapter, or any condition in a permit issued under this chapter or any requirement imposed in a pretreatment program... **shall be punished by a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or by both**



Discharge of a pollutant from an industrial activity to State waters



## Industrial Storm Water Pollution Prevention: Harbors Specific

DOT-Harbors has an NPDES Permit which requires:

- Public Education
- Public Involvement
- Illicit Discharge Elimination
- A Construction Storm Water Control Program
- A Post Construction Storm Water Management Program
- A Pollution Prevention Program



Discharge of a pollutant from a Harbor Facility to State waters

## Industrial Storm Water Pollution Prevention: Harbors Specific

Harbors is required to :

- Have a rigorous enforcement system
- Find and eliminate any illicit discharges
- Insure no polluted discharges occur from the DOT MS4
- Implement a construction monitoring program
- Utilize Post Construction BMPs



Discharge of a pollutant from a Harbor facility to State waters

## Industrial Storm Water Pollution Prevention: Harbors Specific

However :

- DOT-Harbors MS4 permit is not a shield
- Individual Responsible Persons (e.g. Tenants) can be subject to enforcement actions by the EPA, DOH, DOT-Harbors, and INDEPENDENT CITIZENS



DOT-Harbors: Accumulated Sediment at Kalaheo Harbor

## Industrial Storm Water Pollution Prevention: Harbors Specific

EPA Has Issued an Administrative Order against DOT-Harbors:

- DOT-Harbors MS4 Program was audited by the EPA on December 8, 2008
- EPA issued an Administrative Order on June 18, 2009



DOT-Harbors: Sediment Tracking

**DOT-Harbors MS4 Program MUST Improve**

## Industrial Storm Water Pollution Prevention: Penalties

In the last two years...

The DOH-CWB has issued penalties of:

- \$500.00 to 1.73M
- For discharges of polluted storm water
- For failing to comply w/ permit conditions
- For sewer cross connections
- For construction related discharges



Illicit Discharge at a Harbor Facility

## Industrial Storm Water Pollution Prevention: Your Responsibility

You Will Be Held Responsible

1. Do Not Discharge Pollutants to State waters
2. Comply with all NPDES permit conditions
3. Follow DOT-Harbors Environmental Rules



Harbor facility during inspection



Industrial Storm Water Pollution  
Prevention: The CWB

Department of Health

Clean Water Branch

919 Ala Moana Blvd.



Room #301

Honolulu, HI 96814

Ph: (808) 586-4309





**2010 TENANT STORM WATER  
POLLUTION PREVENTION  
AWARENESS TRAINING**

Hawaii Department of Transportation – Harbors Division

## Introduction

- Hawaii Department of Transportation – Harbors Division
  - Mr. Carter Luke PE – Engineering Program Manager
  - Mr. Randal Leong PE – Environmental Engineer
  - Mr. Richard Min – Environmental Health Specialist
- Weston Solutions, Inc.
  - Mr. Mark Ambler PE, PMP
  - Mr. Joe Weidenbach
- Hawaii Department of Health
  - Mr. Matthew Kurano

## Upcoming Award

### 2011 Environmental Manager of the Year

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

## 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

## Recent Program History

- HDOT Harbors General Permit – May 19, 2003
- EPA Audit – December 2008
- Finding of Violation – June 18, 2009
- Tenant Inspections – November 2009
- Stormwater Management Plan Revision – Dec 2009

## Federal Regulatory Background

- Clean Water Act (40 CFR 100-149)
  - 1972 Clean Water Act– Swimmable, Fishable
  - 1987 Amendments – 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 Municipality 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 11 Chapter 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



## General Permit Requirements

### Minimum Control Measures

#### Each Minimum 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.*

- Source (leaking container, building material, spill)
- Vehicle / Carrier (irrigation water, wash water, rainfall, A/C condensate, ground water, etc)
- Route (direct dumping, swale, storm drain)

## Storm Water Best Management Practices

### What Are They?

Administrative and structural controls are utilized to

- remove,
- contain, or
- treat pollutants

through

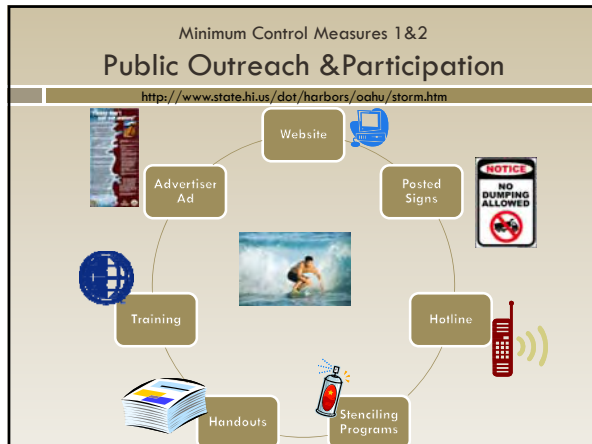
- Source removal,
- Preventative containment, and
- Capture/treatment methods.

- 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 Measure 3 Illicit Discharge Detection & Elimination (IDDE) Program

**Common sources of illicit discharges include -**

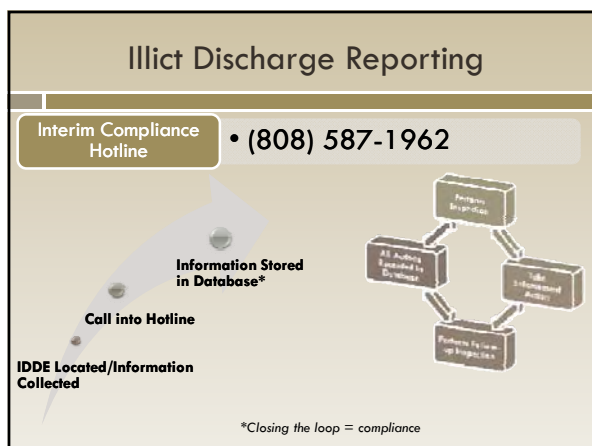
- Sewage inflows from leaking sewage collection and transmission lines
- Commercial carwash and laundry wastewater
- Floor washing to shop drains
- Commercial Vehicle and Equipment washwater
- Potable line flushing that runs across hardscapes
- Pumping of vaults or trenches
- Construction activities
- 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**



### 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


## 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.




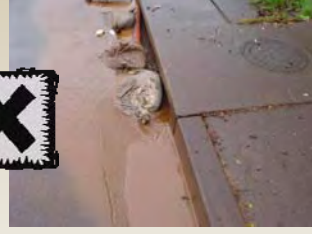
## Silt Fencing



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

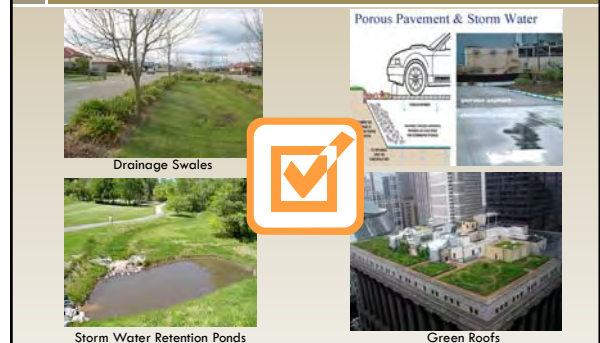
Considering water quality impacts early in the design process can provide long-term water quality benefits and lower administrative environmental management costs.

- **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  
 Downspout Disconnects  
 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

## Minimum Control Measure 5 Post-Construction Structural Controls



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 compatibility





### 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

### Vehicle and Equipment Washing (Source Control)

- Allowed only at designated facilities
  - Water must be contained
  - Facility should be covered
  - Oil/Water Separator
  - Connected to Sanitary Sewer
- Wash water is NOT allowed outside/uncontained
  - Includes discharge of mop water
  - Includes rinsing or cleaning of waste bins
  - Always seek approval for discharge to sanitary sewer

See the BMP flier attached to TSI Mailing

### 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 detergents and overspray

### Vehicle and Equipment Washing

ZERO RUNOFF SOLUTION



DRY cleaning methods uses "dry ice" to clean without water



Dry ice cleaning more effective, won't damage non-stainless fasteners, safe for electrical equipment, non-conductive.

## 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



Illicit 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 contaminants present

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

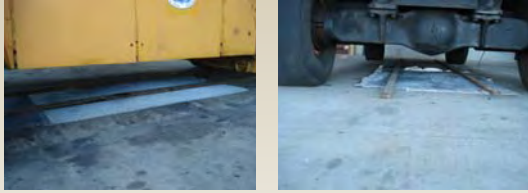
## Spill Prevention and Response



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




## Best Management Practices – Vehicle Pans/Pads



## Tenant Facility Inspections

- Site Inspections will be conducted for all tenants before the end of the year (2010)
  - 1 week notification
  - Starting with 50 high priority tenants
  - Inspection Checklist Provided
  - Inspection Report and Findings to be provided following Site Visits
  - Follow-up Inspections will be scheduled if required
  - Serious Violations will require 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

## Site Inspections



## 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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- [http://www.mwcog.org/environment/stormwaterworkshop/images/Stormwater\\_Retention\\_Pond1.jpg](http://www.mwcog.org/environment/stormwaterworkshop/images/Stormwater_Retention_Pond1.jpg)
- <http://www.cifl.org/nom2004/images/rouge3.jpg>
- [http://images.google.com/imgres?imgurl=http://www.courier-journal.com/blogs/bruggers/uploaded\\_images/DAY\\_0610SHUTDOWN\\_06\\_MS-728783.jpg&imgrefurl=http://www.courier-journal.com/blogs/bruggers/2007\\_06\\_01\\_archive.html&usq=\\_D\\_yw9RoUZFDa9Lm89C6c9nRfil=&h=1067&w=1600&sz=377&hl=en&start=1&um=1&tbnid=EDW9F95v8j29M.&tbnh=100&tbnw=150&prev=/images%3Fq%3Dconstruction%2Bpollution%26imgsz%3D1%26imgtbn%3Dz%26h%3Den%26um%3D1](http://images.google.com/imgres?imgurl=http://www.courier-journal.com/blogs/bruggers/uploaded_images/DAY_0610SHUTDOWN_06_MS-728783.jpg&imgrefurl=http://www.courier-journal.com/blogs/bruggers/2007_06_01_archive.html&usq=_D_yw9RoUZFDa9Lm89C6c9nRfil=&h=1067&w=1600&sz=377&hl=en&start=1&um=1&tbnid=EDW9F95v8j29M.&tbnh=100&tbnw=150&prev=/images%3Fq%3Dconstruction%2Bpollution%26imgsz%3D1%26imgtbn%3Dz%26h%3Den%26um%3D1)



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**APPENDIX G**

**HAR-EE SPILL DOCUMENTATION FORMS**

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**Oahu District**  
**HAR-EE Spill Documentation Form**

Regardless of amount of spill, all spills of oils, hazardous materials, or unknown chemicals must be immediately recorded on this form.

**A. Spill Information (to be provided by HAR-OCT Staff)**

Recorded 11/9 m Time/Date Environmental Section Notified 3:34 p 11/9/10

Person reporting Clarence Phone 587 2076

Location of Spill Lowe's Site, above Nimitz Time of Spill 3 pm ± Date of Spill 11/9/10

Substance spilled Oil/gumwater entered storm system Amount Spilled 1 gal Duration of Spill unknown

Media into which the release/spill occurred:

☐ Air ☐ Ground ☐ Concrete/Asphalt ☐ Stream ☐ Ocean Other: Storm water system

Responsible Party Lowe's Contractor

Cause of spill \_\_\_\_\_

Description of clean-up actions Boom drainage used

Notifications Made: USCG, Harbor office

Additional information \_\_\_\_\_

**B. Environmental Section Information**

>CERCLA RQ (40CFR 117, 302) ☐ (Y/N)

HEERO Notification (808) 586-4249/after hrs 247-2191

Notified at ☐: ☐ on ☐/ ☐/ ☐

Written Notification to be submitted: ☐ (Y/N) by ☐/ ☐/ ☐

LEPC Notification (808) 523-4121 (Honolulu)/Fax 524-3439

Notified at ☐: ☐ on ☐/ ☐/ ☐

NRC Notification (800-424-8802)

Notified at ☐: ☐ on ☐/ ☐/ ☐

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

FYI...no IDPP response needed.

Thanks,  
Carol Mitsuyasu  
IDPP Project Coordinator  
Phone: (808) 593-1116  
Fax: (808) 593-1198  
Email: IDPP@urscorp.com

This e-mail and any attachments contain URS Corporation confidential information that may be proprietary or privileged. If you receive this message disclose or use any of this information and you should destroy the e-mail and any attachments or copies.

"Robert Luco"  
<RLuco@esciencei.com>  
11/09/2010  
02:56 PM

To <IDPP@urscorp.com>, <Carol\_Mitsuyasu@URSCorp.com>, <terence.corpus@DOH.Hawaii.gov>, "Solomon, Rich" <Rich.Solomon@conocophillips.com>, "Elias, Anthony - Anthony" <anthony.elias-1@lowes.com>, "Casey, Liz - Elizabeth C" <Liz.C.Casey@lowes.com>, "James Manion (Jim.R.Manion@Lowes.com)" <Jim.R.Manion@lowes.com>, "Chris Robinson" <CRobinson@robcon.com>  
cc "Howard West" <HWest@esciencei.com>, "Lauren Cruz" <LCruz@esciencei.com>  
Sub Release Notification  
ject

Today at 1:30pm, approximately 1-gallon of petroleum-contaminated groundwater was released into a storm drain on Iwilei Road during construction dewatering.

A utility corridor was being excavated in Iwilei Road by Robinson Construction in order to relocate a gas line for The Gas Company. The work was being conducted in association with the construction of the Lowe's HIW Iwilei retail store. Groundwater was being pumped out of the excavation and infiltrated into an adjacent excavation. Gutter buddies were installed at the storm drain inlets along Iwilei Road prior to the start of the excavation work. Free product was observed floating on the groundwater in the excavation at approximately 3.5 feet below the ground surface. Free product was prevented from entering the dewatering pump by using petroleum-absorbent booms and pads and keeping the suction line submerged. During the dewatering process, a dump truck operated by Robinson Construction drove over the 2-inch diameter dewatering discharge hose and caused the hose to rupture. Petroleum-contaminated groundwater was released onto Iwilei Road for approximately 10 seconds before the pump was turned off. All but approximately 1-gallon of petroleum-contaminated groundwater was diverted back into the excavation. Approximately 1-gallon of petroleum-contaminated groundwater was released into a storm drain inlet on Iwilei Road. The storm drain was located on the south side of Iwilei Road near the Iwilei Road exit from the 356 Pacific Street property (Latitude: 21°18'56.53"N Longitude: 157°52'17.02"W). Free product or a petroleum-hydrocarbon sheen were not observed on the water released onto the street.

The DOH-HEER Branch (Terry Corpus), USCG (Petty Officer Lemos), and the NRC (online notification) were notified

within 30 minutes of the release occurring.

At approximately 2:15pm, the USCG arrived at the site to conduct an investigation.

I will follow this written report up with photos tomorrow morning.

From this point forward, we will ensure that the dewatering pump hoses are routed away from traffic and protected using protective hose covers. We will also completely seal nearby downgradient storm drain inlets before dewatering by using waterproof silicone mats and curbs. The waterproof silicone mats and curbs will be removed once dewatering is complete each day.

Please let me know if you have any questions or concerns regarding this incident.

Thanks, Rob.

Robert A. Luco

Senior Project Manager

**Environmental Science International, Inc.**

354 Uluniu Street, Suite 304, Kailua, Hawaii 96734

Cellular (808) 630-5744 / Office (808) 261-0740 / Fax (808) 261-0749

**Oahu District**  
**HAR-EE Spill Documentation Form**

Regardless of amount of spill, all spills of oils, hazardous materials, or unknown chemicals must be immediately recorded on this form.

**A. Spill Information (to be provided by HAR-OCT Staff)**

Recorded 11/9 ku Time/Date Environmental Section Notified 1:51 P, 11/7/10  
Person reporting Nikku Phone 587 2072  
Location of Spill P 17/18 Time of Spill 1:17 Date of Spill 11/7/10  
Substance spilled Grindings Amount Spilled unk. Duration of Spill unknown

Media into which the release/spill occurred:

☐ Air ☐ Ground ☐ Concrete/Asphalt ☐ Stream ☒ Ocean Other: \_\_\_\_\_

Responsible Party Vessel Edward G.

Cause of spill Grinding vessel point into ocean

Description of clean-up actions \_\_\_\_\_

Notifications Made: USCG, Doh Chem water

Additional information \_\_\_\_\_

**B. Environmental Section Information**

>CERCLA RQ (40CFR 117, 302) ☐ (Y/N)

HEERO Notification (808) 586-4249/after hrs 247-2191

Notified at \_\_\_\_: \_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

Written Notification to be submitted: ☐ (Y/N) by \_\_\_\_/\_\_\_\_/\_\_\_\_

LEPC Notification (808) 523-4121 (Honolulu)/Fax 524-3439

Notified at \_\_\_\_: \_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

NRC Notification (800-424-8802)

Notified at \_\_\_\_: \_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

**Oahu District**  
**HAR-EE Spill Documentation Form**

Regardless of amount of spill, all spills of oils, hazardous materials, or unknown chemicals must be immediately recorded on this form.

**A. Spill Information (to be provided by HAR-OCT Staff)**

Recorded 7/7/10 / hr Time/Date Environmental Section Notified 7/7/10, 8:47

Person reporting Clarence Kumar Phone 72076

Location of Spill P41/42 Time of Spill 8:30 Date of Spill 7/7/10

Substance spilled Oil Amount Spilled \_\_\_\_\_ Duration of Spill \_\_\_\_\_

Media into which the release/spill occurred:

☐ Air ☐ Ground ☐ Concrete/Asphalt ☐ Stream ☒ Ocean Other: light sheen

Responsible Party Due to rainfall

Cause of spill " "

Description of clean-up actions \_\_\_\_\_

Notifications Made: \_\_\_\_\_

Additional information \_\_\_\_\_

**B. Environmental Section Information**

>CERCLA RQ (40CFR 117, 302) ☐ (Y/N)

HEERO Notification (808) 586-4249/after hrs 247-2191

Notified at \_\_\_\_:\_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

Written Notification to be submitted: ☐ (Y/N) by \_\_\_\_/\_\_\_\_/\_\_\_\_

LEPC Notification (808) 523-4121 (Honolulu)/Fax 524-3439

Notified at \_\_\_\_:\_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

NRC Notification (800-424-8802)

Notified at \_\_\_\_:\_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

**Oahu District**  
**HAR-EE Spill Documentation Form**

Regardless of amount of spill, all spills of oils, hazardous materials, or unknown chemicals must be immediately recorded on this form.

**A. Spill Information (to be provided by HAR-OCT Staff)**

Recorded 6/25/10 W Time/Date Environmental Section Notified 6/25, 11:13 >  
Person reporting Berry Kim Phone 72076  
Location of Spill KBPH, P-5 Time of Spill 11:20 Date of Spill 6/25/10  
Substance spilled Black oil Amount Spilled unknown Duration of Spill \_\_\_\_\_

Media into which the release/spill occurred:

☐ Air ☐ Ground ☐ Concrete/Asphalt ☐ Stream ☒ Ocean Other: \_\_\_\_\_

Responsible Party Vessel Atlantic Olive

Cause of spill \_\_\_\_\_

Description of clean-up actions \_\_\_\_\_

Notifications Made: USCG, DOT

Additional information \_\_\_\_\_

**B. Environmental Section Information**

>CERCLA RQ (40CFR 117, 302) ☐ (Y/N)

HEERO Notification (808) 586-4249/after hrs 247-2191

Notified at \_\_\_\_:\_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

Written Notification to be submitted: ☐ (Y/N) by \_\_\_\_/\_\_\_\_/\_\_\_\_

LEPC Notification (808) 523-4121 (Honolulu)/Fax 524-3439

Notified at \_\_\_\_:\_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

NRC Notification (800-424-8802)

Notified at \_\_\_\_:\_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

**Oahu District**  
**HAR-EE Spill Documentation Form**

Regardless of amount of spill, all spills of oils, hazardous materials, or unknown chemicals must be immediately recorded on this form.

**A. Spill Information (to be provided by HAR-OCT Staff)**

Recorded RL Time/Date Environmental Section Notified 6/22/10 4:00 pm  
Person reporting John Phone 72076  
Location of Spill Pan 2 Time of Spill 3:30 Date of Spill 6/22/10  
Substance spilled oil Amount Spilled Shen 100 x 1 yds Duration of Spill \_\_\_\_\_  
Media into which the release/spill occurred:  
☐ Air ☐ Ground ☐ Concrete/Asphalt ☐ Stream ☒ Ocean Other: \_\_\_\_\_  
Responsible Party Berge Antares  
Cause of spill unknown

Description of clean-up actions USCG

Notifications Made: USCG

Additional information \_\_\_\_\_

**B. Environmental Section Information**

>CERCLA RQ (40CFR 117, 302)    (Y/N)

HEERO Notification (808) 586-4249/after hrs 247-2191

Notified at   :   on   /  /  

Written Notification to be submitted:    (Y/N) by   /  /  

LEPC Notification (808) 523-4121 (Honolulu)/Fax 524-3439

Notified at   :   on   /  /  

NRC Notification (800-424-8802)

Notified at   :   on   /  /  

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

**Oahu District**  
**HAR-EE Spill Documentation Form**

Regardless of amount of spill, all spills of oils, hazardous materials, or unknown chemicals must be immediately recorded on this form.

**A. Spill Information (to be provided by HAR-OCT Staff)**

Recorded OCT Time/Date Environmental Section Notified 8:53 am; 5/19/10  
Person reporting ~~Pia W. Waters~~ Phone 72076  
Location of Spill Pia W. Waters Time of Spill \_\_\_\_\_ Date of Spill 5/19/10  
Substance spilled Black for sheen Amount Spilled 2' x 30' Duration of Spill \_\_\_\_\_  
Media into which the release/spill occurred:  
☐ Air ☐ Ground ☐ Concrete/Asphalt ☐ Stream ☒ Ocean Other: \_\_\_\_\_  
Responsible Party unknown  
Cause of spill "

Description of clean-up actions USCG, D+H notified

Notifications Made: " " "

Additional information \_\_\_\_\_

**B. Environmental Section Information**

>CERCLA RQ (40CFR 117, 302)    (Y/N)

HEERO Notification (808) 586-4249/after hrs 247-2191

Notified at   :   on   /  /  

Written Notification to be submitted:    (Y/N) by   /  /  

LEPC Notification (808) 523-4121 (Honolulu)/Fax 524-3439

Notified at   :   on   /  /  

NRC Notification (800-424-8802)

Notified at   :   on   /  /  

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_



## HAR-EE Spill Documentation Form

**A. Spill Information** *(to be provided by HAR-OCT Staff)*

Report number \_\_\_\_\_

## Oahu District

# HAR-EE Spill Documentation Form

Regardless of amount of spill, all spills of oils, hazardous materials, or unknown chemicals must be immediately recorded on this form.

**A. Spill Information** *(to be provided by HAR-OCT Staff)*

Recorded 3/8/10 Time/Date Environmental Section Notified 11:30m  
 Person reporting Nickie (USCG P.O. Ford) Phone 72076  
 Location of Spill P6 (Falls on Clyde) Time of Spill 7:39 Date of Spill 2/28/10  
 Substance spilled Petro Product Amount Spilled Shem Duration of Spill —

Media into which the release/spill occurred:

☐ Air ☐ Ground ☐ Concrete/Asphalt ☐ Stream ☒ Ocean Other: \_\_\_\_\_

Responsible Party Unknown - suspected Runoff from Vin

Cause of spill \_\_\_\_\_

Description of clean-up actions \_\_\_\_\_

Notifications Made: USCG (reported)

### Additional information

## B. Environmental Section Information

>CERCLA RQ (40CFR 117, 302) \_\_ (Y/N)

**HEERO Notification (808) 586-4249/after hrs 247-2191**

Notified at \_\_\_\_\_ : \_\_\_\_\_ on \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Written Notification to be submitted:      (Y/N) by      /      /     

LEPC Notification (808) 523-4121 (Honolulu)/Fax 524-3439

Notified at \_\_\_\_\_:\_\_\_\_\_ on \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

**NRC Notification (800-424-8802)**

Notified at \_\_\_\_\_:\_\_\_\_\_ on \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff

Person notified

HAR-EE staff

Report number \_\_\_\_\_

**Oahu District**  
**HAR-EE Spill Documentation Form**

Regardless of amount of spill, all spills of oils, hazardous materials, or unknown chemicals must be immediately recorded on this form.

**A. Spill Information (to be provided by HAR-OCT Staff)**

Recorded 1/30/10 Time/Date Environmental Section Notified 12:09 pm  
Person reporting Nilki Phone 72076  
Location of Spill Pier 6 Time of Spill \_\_\_\_\_ Date of Spill 1/30/10  
Substance spilled Petroleum Amount Spilled NA Duration of Spill NA

Media into which the release/spill occurred:

☐ Air ☐ Ground ☐ Concrete/Asphalt ☐ Stream ☒ Ocean Other: \_\_\_\_\_

Responsible Party unknown

Cause of spill from storm drain

Description of clean-up actions CIC called to clean up

Notifications Made: \_\_\_\_\_

Additional information \_\_\_\_\_

**B. Environmental Section Information**

>CERCLA RQ (40CFR 117, 302) ☐ (Y/N)

HEERO Notification (808) 586-4249/after hrs 247-2191

Notified at \_\_\_\_:\_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

Written Notification to be submitted: ☐ (Y/N) by \_\_\_\_/\_\_\_\_/\_\_\_\_

LEPC Notification (808) 523-4121 (Honolulu)/Fax 524-3439

Notified at \_\_\_\_:\_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

NRC Notification (800-424-8802)

Notified at \_\_\_\_:\_\_\_\_ on \_\_\_\_/\_\_\_\_/\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Person notified \_\_\_\_\_

HAR-EE staff \_\_\_\_\_

Report number \_\_\_\_\_



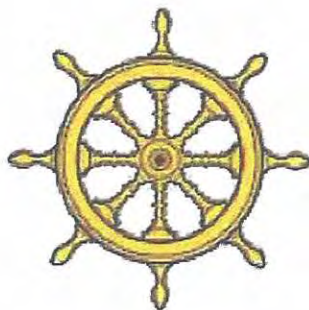
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**APPENDIX H**

**VOLUNTEER ACTIVITY FLIER AND ATTENDANCE RECORD**

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# Get The Drift & Bag It!

Also Celebrating the 25<sup>th</sup> Annual International  
Coastal Cleanup

**September 25, 2010**

**WIKOLIANA EDUCATIONAL EXCURSIONS**  
*(Site Coordinator-Honolulu Harbor)*

**What:** Get The Drift & Bag It and also the 25<sup>th</sup> Anniversary of the International Coastal Cleanup

**When:** Saturday, September 25, 2010

**Where:** Honolulu Harbor, Pier 7  
Wikoliana Educational Excursions

**Contact:** Captain Jeff Lansdown  
(808)230-0940

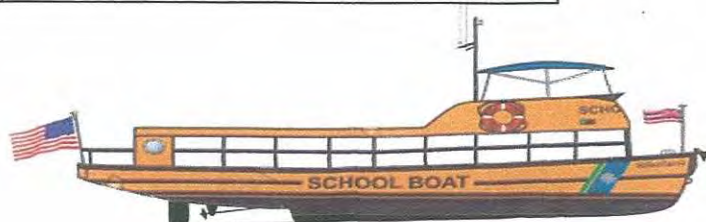
**Site Coordinator:** Wikoliana  
Educational Excursions (808)230-0940

**Online:** [www.wikoliana.com](http://www.wikoliana.com)  
[www.getthedriftandbagit.com](http://www.getthedriftandbagit.com)  
[www.coastalcleanup.org](http://www.coastalcleanup.org)

## **The Mission of the Wikoliana Harbor Stewardship Program:**

To remove debris from Honolulu harbors, expand public awareness and education of the value of Honolulu's marine and maritime environment, and generate enthusiasm for future endeavors with schools and community organizations

To volunteer or receive information about the **Wikoliana Harbor Stewardship** or the **Wikoliana Education Excursions Programs**, please call **(808) 230-0940**, or email: **wikoliana@gmail.com**



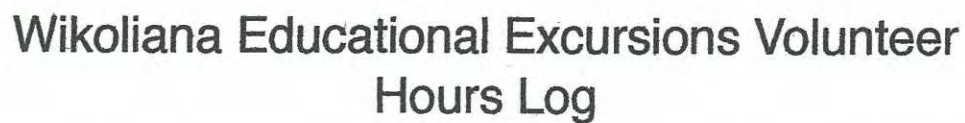




# Wikoliana Educational Excursions Volunteer Hours Log

Name	Date	Activity Where are you from? (ethnicity or visiting from...)	HOURS
Waukevs Ellen	9/25/10	Belgium	
TAINNI LADYDIANE	9/25/10	Cameroon	
TATIANA ZASHEVA	9/25/10	Russia	
Shchedrov Igor	9/25/10	Russia	
Galukhina Diana	9/25/10	Russia	
Kurbanov, Bartyr	9/25/10	Turkmenistan	
Saali, Eetu	9/25/10	Finland	
Strayan, Naysra	9/25/10	LEBANON	
Chandra Braeger	9/25/10	Colorado U.S.A.	
Yahya Gilany	9/25/10	Egypt	
Helmi Merkhi	9/25/10	Tunisia	
Siyuan Shen	9/25/10	China	
Sheikh Rahman	9/25/10	Bangladesh	
sadman Mondalib	9/25/10	BANGLADESH	



[illegible]



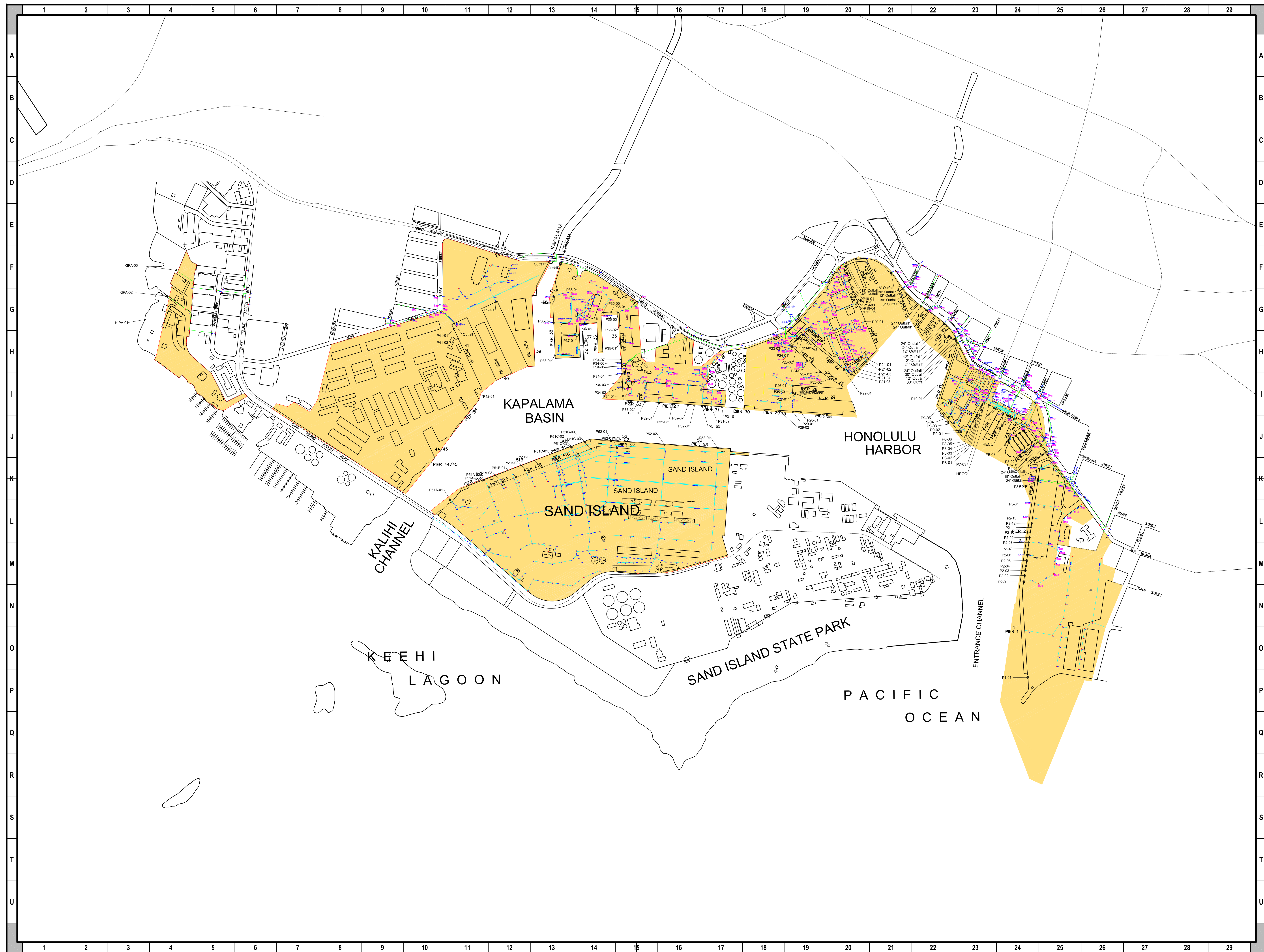
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**APPENDIX I**  
**OUTFALL MAP**

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ENGINEER/ARCHITECT STAMP

# Honolulu Harbor Storm Water Drainage and Outfalls

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

[illegible]

4-2



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**APPENDIX J**

**OUTFALL RECONNAISSANCE INVENTORY REPORTS**

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# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P1-01</u>	
Today's date:		Time (Military): <u>8:00</u>	
Investigators:		Form completed by: <u>RICHARD M.W.</u>	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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.			
<u>AMA CRABS, LOCAL</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input checked="" type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>20"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <b>P4-04 - HELD</b>	
Today's date:		Time (Military):	
Investigators: <b>Richard Min</b>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon- <b>303</b>	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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. <b>DAMA CLABS</b>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: <b>CONCRETE</b>	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input checked="" type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <b>10' x 5' ?</b>  In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i> <b>CAN NOT TELL, SUBMERGED</b>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<b>0' "</b>	Ft, In	
	Measured length	<b>0' "</b>	Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

# Outfall Reconnaissance Inventory Form

## Section 5: 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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Other: <u>Allyl Thiocyanate</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: P4-023 HELD	
Today's date: 6-10-10		Time (Military):	
Investigators: R. L. M. M. M.		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: <u>CONCRETE</u>	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input checked="" type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8' x 6'</u> In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

### Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> 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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Other:		<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Suds <input type="checkbox"/> Floatables <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>BP5-01</u>	
Today's date: <u>6-10-10</u>		Time (Military):	
Investigators: <u>R. L. H. M. W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitude: <u>23°58'37.854" N</u>	Longitude: <u>157°51'19" W</u>	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>PARKING LOT</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>10"</u> <u>?</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
-Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

## Section 6: Overall Outfall Characterization

<input checked="" type="checkbox"/> Unlikely	<input type="checkbox"/> Potential (presence of two or more indicators)	<input type="checkbox"/> Suspect (one or more indicators with a severity of 3)	<input type="checkbox"/> Obvious
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## 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: <u>P5-02</u>	
Today's date: <u>6-10-10</u>		Time (Military): <u>830</u>	
Investigators: <u>RICHARD MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitude: <u>235837.854</u> <u>21-18-4</u>	Longitude: <u>157-51-52</u>	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>PARKING LOT</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>10" ?</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P5-03</u>	
Today's date: <u>6-10-10</u>		Time (Military): <u>4:30</u>	
Investigators: <u>RICHARD MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: <u>22-58-37.854</u> <u>21-18-7</u>	Longitude: <u>187-51-53</u>	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: <u>PARKING LOT</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>14"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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

16-03

Subwatershed:		Outfall ID: <u>FIELD 3RD OUTFALL IS A2744</u>	
Today's date: <u>6-10-10</u>		Time (Military):	
Investigators: <u>RICHARD MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon- <u>317</u>	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ROADWAY</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>22"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

## Section 6: Overall Outfall Characterization

<input checked="" type="checkbox"/> Unlikely <input type="checkbox"/> Potential (presence of two or more indicators) <input type="checkbox"/> Suspect (one or more indicators with a severity of 3) <input type="checkbox"/> 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: <u>P7-03</u>	
Today's date: <u>6-10-10</u>		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known): large crabs, Mirrnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>22</u>	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Suds <input type="checkbox"/> Floatables <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P8-01</u>	
Today's date:		Time (Military):	
Investigators: <u>Richard Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: <u>ALOHA TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P8-02</u>	
Today's date:		Time (Military):	
Investigators: <u>R. CHAND N. N.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: <u>ALPHA TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P8-03</u>	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: <u>ALOHA TOWER</u>	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Suds <input type="checkbox"/> Floatables <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P8-04</u>	
Today's date: <u>6-10-10</u>		Time (Military):	
Investigators: <u>Richard M. W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: <u>  </u> Known Industries: <u>ALPHA Tower</u>	
Notes (e.g., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.  <u>4 PIPES IN ONE</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: <u>  </u>	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input checked="" type="checkbox"/> Other: <u>4</u>	Diameter/Dimensions: <u>24"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: <u>  </u>	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: <u>  </u>	Depth: <u>  </u> Top Width: <u>  </u> Bottom Width: <u>  </u>	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P8-05</u>	
Today's date: <u>6-10-10</u>		Time (Military):	
Investigators: <u>R. L. HART M.W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>COWL</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>09-01</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>Richard Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.):	Last 24 hours: 0	Last 48 hours: 0
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>Alcoa Plant</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P9-02</u>	
Today's date: <u>8-14-10</u>		Time (Military):	
Investigators: <u>Richard Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>Acetylene Tower</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>concrete</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>RA-03</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. GARDNER M. N.</u>		Form completed by:	
Temperature (°F):		Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0	
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24" - 30"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>PA-04</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. M. N.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply): <input type="checkbox"/> Industrial <span style="margin-left: 200px;"><input type="checkbox"/> Open Space</span> <input type="checkbox"/> Ultra-Urban Residential <span style="margin-left: 150px;"><input type="checkbox"/> Institutional</span> <input type="checkbox"/> Suburban Residential <span style="margin-left: 150px;">Other: _____</span> <input type="checkbox"/> Commercial <span style="margin-left: 150px;">Known Industries: <u>Acosta Road</u></span>			
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>Conc</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <span style="margin-left: 20px;">If No, Skip to Section 5</span>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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? ☐ No ☒ Yes (If No, Skip to Section 5)

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## Section 6: Overall Outfall Characterization

<input checked="" type="checkbox"/> Unlikely	<input type="checkbox"/> Potential (presence of two or more indicators)	<input type="checkbox"/> Suspect (one or more indicators with a severity of 3)	<input type="checkbox"/> Obvious
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## 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: <u>P-10-a</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALOHA TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input checked="" type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____  <u>LOOKS LIKE 30" BUT MOST BLOCKED OFF</u>	Diameter/Dimensions: <u>16"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P10-02</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>RICHARD MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALCOA POWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P10-02</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. L. HARRIS, M. J. HARRIS</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALOHA TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u>	In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P 10-03</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>Richard Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 235837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALPHA DUB</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>10</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P10-04</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. L. HARRIS M. W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALONG TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight, origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P10-05</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>Rickards Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALONG TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 10-06</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>RICHARD MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: <u>ALCOHOL TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>4"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P-10</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>RICHARD MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALPHA TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P10-</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>Richard Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>PLANT TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 10</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>Aloha Tower</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 10</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>Alco HA tower</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	Ft, In	
	Time of travel		Sec	
Temperature			°F	
pH			pH Units	Test strip/Probe
Ammonia			ppm	Test strip

*CAMERA BATTERY Empty*

# 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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 10-</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. M. N.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALOKA Tower</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>BBP 11-1</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. M. W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: <u>Alouha Tower</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P11-02</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R.M.N.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALOMA TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P11-</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R M W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: <u>ALOHA TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 11</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: <u>Alcohol Ferment</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:		<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P. 1</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALOHA TOURS</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P11</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R M, N</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALCOHOL TOWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 11</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALOHA TOWN</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u>  Depth: _____ Top Width: _____ Bottom Width: _____
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____		
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P11</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R M.V.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 235837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>ALPHA POWER</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 12-01</u>	
Today's date: <u>6-14-16</u>		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>PARKING LOT - ASPHALT</u>	
Notes (e.g., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic <u>POURED ON TOP BLOCKING DRAINS</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)				
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial				

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>Point Bow GLAND</u>	
Notes (e.g., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic. <div style="text-align: right; font-size: 1.2em;">VESSEL WCQ 4711 NO CONTAMINANT</div>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____  In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> 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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Paint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P19-01</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONV</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 19-02</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known): large crabs, Mirnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>COWL</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>  In Water: <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P019</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CORC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight, origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>819</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight, origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>119</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 19</u>	
Today's date: <u>6-14-00</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 19</u>	
Today's date: <u>6-14-00</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>14</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 235837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>10"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P14</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>R M.W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>10"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 19</u>	
Today's date: <u>R MTH 6-14-10</u>		Time (Military):	
Investigators: <u>R MTH</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>10"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> 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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 19</u>	
Today's date: <u>6-14-10</u>		Time (Military):	
Investigators: <u>LMW</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CORR</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>B 19</u>	
Today's date:		Time (Military): <u>B 19</u>	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CORR</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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

STATION  
200  
MARKER  
P. 20

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 20</u>	
Today's date: <u>7-12-10</u>		Time (Military): <u>8:00</u>	
Investigators: <u>R M.W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s: <u>0051</u>		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>Superferry</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8" x 8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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)?

NEEDS TO BE CLEANED



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P20</u>	
Today's date: <u>7-12-10</u>		Time (Military): <u>8:10</u>	
Investigators: <u>R Min</u>		Form completed by: <u>R Min</u>	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #: <u>0053</u>		
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>SUPER FERRY</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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)?

NEEDS TO BE CLEANED

# OUTFALL RECONNAISSANCE INVENTORY FORM

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Outfall ID: <u>P 21-01</u>	
Time (Military): <u>8:19</u>	
Form completed by: <u>MIN</u>	
Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0	
Longitude:	GPS Unit: GPS LMK #: Photo #s: <u>0054</u>

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

- ☒ Industrial
 ☐ Open Space  
☐ Ultra-Urban Residential
 ☐ Institutional  
☐ Suburban Residential
 Other: \_\_\_\_\_  
☒ Commercial
 Known Industries: TUG BOATS.

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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>14"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No                             If No, Skip to Section 5			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 21-02</u>	
Today's date: <u>7-12-10</u>		Time (Military): <u>8:20</u>	
Investigators: <u>R MCV</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: <u>Tub Boat</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>22"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 24 - 03</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s: <u>6056</u>		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: <u>Tub Boats</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 24-0004</u>	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input checked="" type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>4' x 3'</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input checked="" type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:		<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>D-21</u>	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Latitude: 2358837.854	Longitude:	GPS Unit:	Photo #s:
Camera: Nikon-			
Land Use in Drainage Area (Check all that apply): <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Industrial  <input type="checkbox"/> Ultra-Urban Residential  <input type="checkbox"/> Suburban Residential  <input type="checkbox"/> Commercial         </div> <div> <input type="checkbox"/> Open Space  <input type="checkbox"/> Institutional            Other: _____            Known Industries: _____         </div> </div>			
Notes (e.g., origin of outfall, if known): large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.			

SEWER  
 CONTINUED  
 OUT FROM  
 BATHROOMS  
 ON END.

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____  In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 21-</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R. Minn</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>LOW</u>	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input checked="" type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input checked="" type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 21</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R MIN</u>		Form completed by: <u>R</u>	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>22"</u>  In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 22-01</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R M, IN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: <u>RUG Bontz</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0' "</u>	Ft, In	
	Measured length	<u>0' "</u>	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 23-01</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R. Miller</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s: <u>0062</u>		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known): large crabs, Minnows, vegetation along canal, paper and plastic.			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>30"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight, origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P-23-02</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R M, W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>LOWE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P-23-B</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R M.W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: _____ Known Industries: <u>Root Drain</u>	
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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Suds <input type="checkbox"/> Floatables <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P-23</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R M W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #: <u>0064</u>		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input checked="" type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input checked="" type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>30"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>1-24</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 235837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>124</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>RMR</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>4"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Suds <input type="checkbox"/> Floatables <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P-24</u>	
Today's date: <u>7-12-16</u>		Time (Military):	
Investigators: <u>R. M. W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONV</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Suds <input type="checkbox"/> Floatables <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 24</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R M.N</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: <u>0064</u>	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R M N</u>		Form completed by: <u>J</u>	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s: <u>0069</u>		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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:	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R.M.W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: <u>0069</u>	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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:	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R M</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s: <u>0090</u>		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## Section 6: Overall Outfall Characterization

<input checked="" type="checkbox"/> Unlikely	<input type="checkbox"/> Potential (presence of two or more indicators)	<input type="checkbox"/> Suspect (one or more indicators with a severity of 3)	<input type="checkbox"/> Obvious
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## Section 7: Any Non-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 24</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R M, V</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>14"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>26</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: <u>0072</u>	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CORR</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>30"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>27-01</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 235837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	<input type="checkbox"/> Peeling Paint
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	<input type="checkbox"/> Other: sediment and algae
Abnormal Vegetation	<input type="checkbox"/>		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae	<input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green	<input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 27</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R MW</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>36"</u>  In Water: <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply): <input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: <u>WATER</u> 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
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12" x 12"</u> In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> 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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:		<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 28-01</u>	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Triangular <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____  In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 24-01</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>R M.W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 235837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>concrete</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>36"</u>  In Water: <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P31-01</u>	
Today's date: <u>7-12-10</u>		Time (Military):	
Investigators: <u>RLM</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s: <u>0076</u>		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:			
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 31-02</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R M. N</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P31-03</u>	
Today's date: <u>7-13-00</u>		Time (Military):	
Investigators: <u>R M W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.):	Last 24 hours: 0	Last 48 hours: 0
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>36"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P3104</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R M, W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 31</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:			
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 31</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R M, N</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16</u>  In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Only <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 31</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input checked="" type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 31</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input checked="" type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>131</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #: <u>0086</u>		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>36"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Green	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Gray <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity		<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen)	<input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	<input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line	<input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Suds	<input type="checkbox"/> Colors <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange	<input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 34-01</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R M. N.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 235837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: <u>0087</u>	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input checked="" type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 34</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18" x 24"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R M</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>LDPE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P35</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24" 16</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P35</u>	
Today's date: <u>7-13-18</u>		Time (Military):	
Investigators: <u>R M W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s: <u>0092</u>	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>LOWE</u>	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input checked="" type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P35</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Green	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Gray <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity		<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen)	<input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	<input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive	<input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Suds	<input type="checkbox"/> Colors <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange	<input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?**

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>10"</u>  In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P35</u>	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R M W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s: <u>96</u>		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input checked="" type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: sediment and algae	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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:	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s: <u>96</u>		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>LOW</u>	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date: <u>7-15-10</u>		Time (Military):	
Investigators: <u>R. M. W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>8"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>Q'</u> "	Ft, In	
	Measured length	<u>Q'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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:	
Today's date: <u>7-13-10</u>		Time (Military):	
Investigators: <u>R M W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input checked="" type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u>  In Water: <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (if present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does/Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P35-03</u>	
Today's date: <u>8-9-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONCRETE</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P35-05</u>	
Today's date: <u>8-9-10</u>		Time (Military):	
Investigators: <u>R min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input checked="" type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Paint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Paint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables --Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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)?

RAMPAL CHECKING ON SOURCE OF FLOW.  
 POTENTIALLY FROM ICE PLANT

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: <u>36</u> Known Industries: <u>35 corner</u>	
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
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input checked="" type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____  In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS			
PARAMETER	RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume	Liter	
	Time to fill	Sec	
<input type="checkbox"/> Flow #2	Flow depth	In	
	Flow width	Q' "	Ft, In
	Measured length	Q' "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P36-01</u>	
Today's date: <u>8-9-10</u>		Time (Military):	
Investigators: <u>RL Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 235837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input checked="" type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P37-01</u>	
Today's date: <u>8-9-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input checked="" type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 38-01</u>	
Today's date: <u>8-9-10</u>		Time (Military):	
Investigators: <u>R M.W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input checked="" type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 39-01</u>	
Today's date: <u>8-1-10</u>		Time (Military):	
Investigators: <u>R MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known): <u>large crabs, Minnows, vegetation along canal is sparse, trash on side of canal, paper and plastic.</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>16"</u> In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P41-01</u>	
Today's date: <u>8-9-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>CONC</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>	In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P 4-02</u>	
Today's date: <u>8-9-10</u>		Time (Military):	
Investigators: <u>LC M, W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>B42-01</u>	
Today's date: <u>8-9-10</u>		Time (Military):	
Investigators: <u>R M.W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>24"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)				
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>				
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <u>coming from under pipe</u>				

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P 42-05</u>	
Today's date: <u>8-9-10</u>		Time (Military):	
Investigators: <u>R M, N</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>Long</u>	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>36"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>42-03</u>	
Today's date: <u>8-9-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input checked="" type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input checked="" type="checkbox"/> Other: <u>corr</u>	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>51A-01</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R M.W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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. <u>HORIZON LINES</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>36"</u>	In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P51A-02</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>L MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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. <u>Horizon</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P51A-03</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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. <u>HORIZON</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>48"</u>  In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P51A-04</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.):	Last 24 hours: 0	Last 48 hours: 0
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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. <u>HORIZON</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS			
PARAMETER	RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume	Liter	
	Time to fill	Sec	
<input type="checkbox"/> Flow #2	Flow depth	In	
	Flow width	<u>0'</u> "	Ft, In
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P51A - 05</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>48"</u>	In Water: <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS			
PARAMETER	RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume	Liter	
	Time to fill	Sec	
<input type="checkbox"/> Flow #2	Flow depth	In	
	Flow width	<u>0'</u> "	Ft, In
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P51A-06</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-	Photo #s:		
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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. <u>Horizontal</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>Q'</u> "	Ft, In	
	Measured length	<u>Q'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input checked="" type="checkbox"/>	<input type="checkbox"/> Clear <input checked="" type="checkbox"/> Brown <input checked="" type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input checked="" type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input checked="" type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P51A-07</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R. M. W.</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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. <u>HOA ZON</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P51A-06</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):		Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0	
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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. <u>Horiz</u>			

## Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P 51A-09</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P5#?</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>Y8</u>	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input checked="" type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter		
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In		
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible studs or oil sheen)	<input type="checkbox"/> 3 - Some; origin clear (e.g., obvious oil sheen, studs, 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>P51-00</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>RL Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input checked="" type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Paint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P 51-103</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R M, N</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input checked="" type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>6"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> Institutional Other: <u>WATER</u> 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
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____  In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	SR
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P52-01</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.):	Last 24 hours: 0	Last 48 hours: 0
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input checked="" type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u> In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P52-02</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>48"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Paint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P52</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R MIN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box... <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Green <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Gray <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Suds <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion <input type="checkbox"/> Peeling Paint	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Suds <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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-Ilicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?



# OUTFALL RECONNAISSANCE INVENTORY FORM

## Section 1: Background Data

Subwatershed:		Outfall ID: <u>152</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R. Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input checked="" type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input type="checkbox"/> Single <input checked="" type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>12"</u> In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables - Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>		
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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: <u>P52</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R M W</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS			
PARAMETER	RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter
	Time to fill		Sec
<input type="checkbox"/> Flow #2	Flow depth		In
	Flow width	<u>0'</u> "	Ft, In
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P 52</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>L M I N</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Ultra-Urban Residential <input type="checkbox"/> Suburban Residential <input type="checkbox"/> Commercial		<input type="checkbox"/> Open Space <input type="checkbox"/> 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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>36"</u>	In Water: <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P52</u>	
Today's date: <u>10-5-10</u>		Time (Military):	
Investigators: <u>R Min</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> CRCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input checked="" type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>	In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other: <input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>		

## 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: <u>P52</u>	
Today's date: <u>10-5-16</u>		Time (Military):	
Investigators: <u>R MN</u>		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: 0 Last 48 hours: 0		
Latitude: 2358837.854	Longitude:	GPS Unit:	GPS LMK #:
Camera: Nikon-		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input checked="" type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		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
<input checked="" type="checkbox"/> Closed Pipe	<input checked="" type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Box <input type="checkbox"/> Other: _____	<input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____	Diameter/Dimensions: <u>18"</u>  In Water: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

## Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume		Liter	
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	
	Flow width	<u>0'</u> "	Ft, In	
	Measured length	<u>0'</u> "	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)		
			<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Yellow <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Faint colors in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 - Few/slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 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	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	sediment and algae
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> 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)?