

**STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION,  
AIRPORTS DIVISION  
OUTFALL INSPECTION &  
FIELD SCREENING PLAN**



Prepared For:  
**DEPARTMENT OF TRANSPORTATION, AIRPORTS DIVISION**  
400 Rodgers Boulevard, Suite 700  
Honolulu, Hawaii 96819-1880

October 2014

Version 2.0



## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b> .....	<b>1</b>
1.1	IMPLEMENTATION.....	1
<b>2.0</b>	<b>OUTFALL INVENTORY</b> .....	<b>2</b>
2.1	OUTFALL PRIORITIZATION AND INSPECTION FREQUENCY .....	2
<b>3.0</b>	<b>OUTFALL INSPECTION PREPARATION</b> .....	<b>3</b>
3.1	OUTFALL LOCATIONS .....	3
3.2	SELECT INSPECTION DATE.....	3
3.3	EQUIPMENT REQUIREMENTS.....	3
3.4	SAFETY.....	4
<b>4.0</b>	<b>CONDUCTING OUTFALL INSPECTIONS</b> .....	<b>5</b>
4.1	OUTFALL OBSERVATIONS.....	5
4.2	SOURCE IDENTIFICATION .....	5
4.3	ENFORCEMENT ACTIONS .....	6
<b>5.0</b>	<b>DOCUMENTATION</b> .....	<b>7</b>
5.1	OUTFALL INSPECTION FORM .....	7
5.1.1	<i>Section 1 - Background Data</i> .....	7
5.1.2	<i>Section 2 - Outfall Description</i> .....	7
5.1.3	<i>Section 3 – Physical Indicators for Flowing or Submerged Outfalls</i> .....	8
5.1.4	<i>Section 4 – Physical Indicators for Both Flowing and Non-Flowing Outfalls</i> .....	9
5.1.5	<i>Section 5 – Overall Outfall Characterization</i> .....	9
5.1.6	<i>Section 6 – Non-Illicit Discharge Concerns</i> .....	9
5.2	DATA ARCHIVING.....	9
<b>6.0</b>	<b>TRAINING</b> .....	<b>10</b>
6.1	PRE-INSPECTION MEETING .....	10
<b>7.0</b>	<b>REFERENCES</b> .....	<b>11</b>

## LIST OF TABLES

TABLE 1:	OUTFALL RANKING AND INSPECTION FREQUENCY.....	2
TABLE 2:	FIELD EQUIPMENT LIST .....	4
TABLE 3:	COMMON TYPES OF ILLICIT DISCHARGES.....	5

## ATTACHMENTS

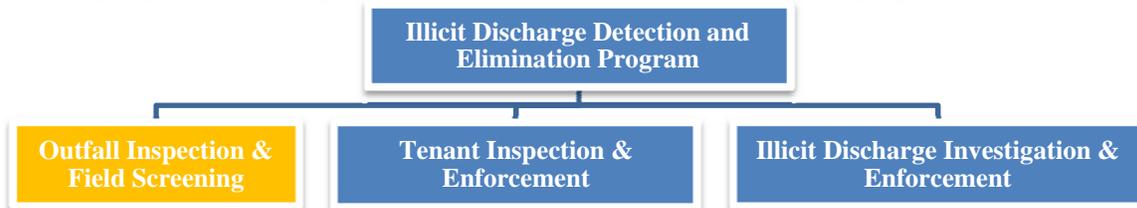
ATTACHMENT I: OUTFALL INSPECTION FORM

## LIST OF ACRONYMS

AOA	Air Operations Area
CMP	Corrugated Metal Pipe
DOH	State of Hawaii, Department of Health
DOTA	State of Hawaii, Department of Transportation, Airports Division
EHS	Environmental Health Specialist
EID	Environmental Identification Number
HDPE	High Density Polyethylene
HNL	Honolulu International Airport
MS4	Municipal Separate Storm Sewer System
NOAA	National Oceanographic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OGG	Kahului Airport
PVC	Polyvinyl Chloride
RCP	Reinforced Concrete Pipe
SWMPP	Storm Water Management Program Plan

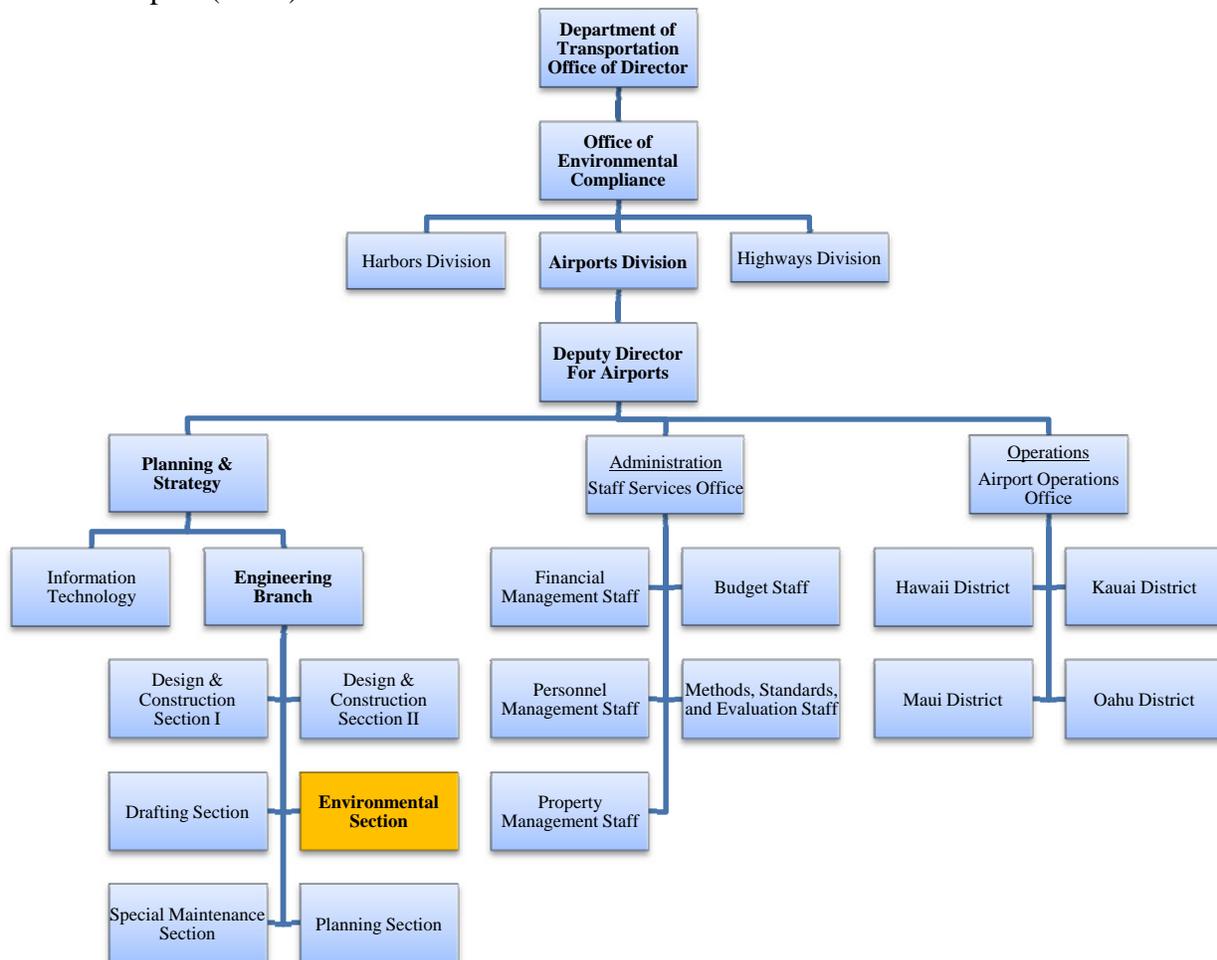
## 1.0 INTRODUCTION

The Outfall Inspection and Field Screening Plan is an element of the Hawaii Department of Transportation, Airports Division (DOTA) Illicit Discharge Detection and Elimination (IDDE) Program. The purpose of the plan is to protect water quality by identifying unintentional or intentional illicit discharges and eliminating them at the source at airports with Small Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NDPES) permits. An illicit discharge is considered any non-storm water discharge that poses a risk to the receiving water. The plan includes maintaining an outfall inventory and conducting dry weather inspections at DOTA's storm water discharge points.



### 1.1 Implementation

This plan will be implemented for outfalls at the Honolulu International Airport (HNL) and the Kahului Airport (OGG) under the direction of the DOTA Environmental Section.



## 2.0 OUTFALL INVENTORY

An inventory of outfalls at HNL and OGG is kept in the DOTA Enviance database. For each outfall, the database will list the identification number, basin, prioritization, inspection data, and other pertinent characteristics. Updates to the Enviance database will be conducted or overseen by the DOTA Environmental Health Specialist (EHS).

### 2.1 Outfall Prioritization and Inspection Frequency

The Outfall Inspection Form (Attachment I) includes common indicators of illicit discharges in Section 4 and 5 and Section 6 identifies the outfall characterization based on those indicators. A characterization of “Potential” is selected with the presence of two or more indicators. A characterization of “Suspect” is selected with one or more indicators with a severity of 3. An “Obvious” characterization is selected when an illicit discharge is determined to exist. These characterizations are used to prioritize each outfall. The prioritization given to each outfall will be used to determine the frequency of the inspections for that site.

**TABLE 1: OUTFALL RANKING AND INSPECTION FREQUENCY**

Priority Ranking	Ranking Criteria	Inspection Frequency
Low	<ul style="list-style-type: none"><li>• No indicators of illicit discharge.</li></ul>	Once per NPDES permit term.
Medium	<ul style="list-style-type: none"><li>• Potential or Suspect signs of illicit discharge.</li><li>• Ranked high in the previous inspection.</li></ul>	Every two years.
High	<ul style="list-style-type: none"><li>• Obvious signs of illicit discharge.</li></ul>	Re-inspect within one month. <ul style="list-style-type: none"><li>• If there are no indicators of illicit discharge, no further actions are required.</li><li>• If illicit discharge continues, continue enforcement / corrective actions until illicit discharge has ceased. This may include further inspections.</li></ul>

## **3.0    OUTFALL INSPECTION PREPARATION**

---

Outfall inspectors will prepare for the outfall inspections by gathering location information about the outfalls and appropriate permissions.

### **3.1    Outfall Locations**

The most updated list of outfalls is available on the Enviance database; the DOTA EHS will run the report and provide it to the inspector. The locations of these outfalls can be identified through the narrative description provided, GPS coordinates, and/or basin location information. The outfall list will then be compared to airport drainage maps, which are available on the DOTA website: <http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/>.

If an outfall is located within the Air Operations Area (AOA), the inspectors must wear their AOA identification badges at all times, obtain the ramp license to drive in the non-movement area of the AOA, and notify the respective Airport Duty Manager of their intended movements (HNL: 808-836-6434; OGG: 808-872-3830). If an outfall is located within the AOA movement area, inspectors will have attended the airport movement class and will comply with all applicable requirements or be provided with an escort to the outfall. Additionally, if an outfall lies within the operational area of a tenant, all efforts will be made to notify the tenant of the inspection activities and to schedule around their business operations.

### **3.2    Select Inspection Date**

Inspectors will conduct inspections on dates and times that meet the following criteria:

1. Dry weather: Less than 0.1" of rainfall in the past 72 hours.
2. Low tide: Determined using the National Oceanographic and Atmospheric (NOAA) tide prediction charts.

By conducting inspections during dry weather, inspectors will be able to quickly identify any flows from the outfalls as potential illicit discharges. However, this may not be possible at many of the outfalls at HNL and OGG which are tidally influenced and continually remain at least partially submerged. Therefore, the inspector will attempt inspections during low tide in order to make better observations about potential flows. However, if the outfall remains at least partially submerged, the inspector will move inland along the drain line to other storm drain structures in order to detect dry weather flows. As applicable, the inspector will observe two storm drain structures upstream from the outfall. If tidal waters are present in the upstream structures as well, then it will be noted on the Outfall Inspection Form that dry weather discharges could not be observed. However, the discharge of pollutants in submerged outfalls may be noted in the form of sheen, odor, color, debris, and water clarity.

### **3.3    Equipment Requirements**

As part of the planning for the field inspection, the proper equipment must be on hand to ensure proper collection of data and ability to complete the task. Table 2 lists the required as well as optional equipment that may be used during outfall inspections.

**TABLE 2: FIELD EQUIPMENT LIST**

<b>REQUIRED</b>	<b>OPTIONAL</b>
Outfall Inspection Form	GPS unit
Airport map	Inspect repellent
Pens/pencils & clipboard	Distance measuring wheel
Level D work uniform (steel toed boots, safety vest, AOA badge)	Equipment to clear debris (e.g. shovel)
Traffic cones	Hammer, chisel
Digital camera, back-up batteries	Personal cleaning materials
Flashlight, back-up batteries	Supplemental field attire
Min. 20 ft. length measuring tape	
Knife	
Manhole puller	
Cell phone / Radio (movement area)	
First-aid kit	
Sample container	
Thermometer / Temperature Gauge	

### **3.4 Safety**

Safety precautions should always be used while locating and inspecting outfalls. Inspectors should plan for and be aware of vehicular and aircraft traffic during field investigations. The equipment listed in Table 2 highlights the items required to alert local traffic of the inspector's presence and allow for safe inspection of the outfalls. Field personnel must wear safety vests and AOA badges at all times during the field investigations. Safety cones will be used to alert oncoming traffic of a stopped inspection vehicle. Outfall inspectors will work in minimum teams of two personnel to ensure the worker's safety. Additionally, inspectors are prohibited from entering the water to inspect submerged or partially submerged outfalls.

## 4.0 CONDUCTING OUTFALL INSPECTIONS

The following procedures will be implemented when conducting outfall inspections.

### 4.1 Outfall Observations

Once an inspector has located an outfall, they will begin to document observations either on the Outfall Inspection Form or within their field notebook. First, the EID for the outfall should be written down and a photo taken of the number so that the inspector will be able to identify which photos correspond to each outfall when back in the office. Then, the inspector will begin to take photos of the outfall and surrounding area.

The inspector will make observations about the condition of the outfall, such as size, shape, and structural damage in order to ensure that the DOTA inventory and maps are correct and also that they are observing the correct outfall.

Then, the inspector will observe any obvious flows from the outfall. Note: if the outfall is submerged, the inspector will verify that the water is tidally related and observe the water for any odors, discoloration, or stressed vegetation, which are possible signs of illicit discharge. The inspector will document all observations and note a flow rate for non-submerged outfalls. The inspector may also consider obtaining a sample, if necessary. Then, the inspector will commence a search for the source.

### 4.2 Source Identification

Once a possible illicit discharge has been identified at an outfall, the inspectors will proceed upstream along the storm drain line. They will observe the surrounding area and each subsequent storm drain structure (e.g. manhole, inlet) until the source may be identified. Common types of illicit discharges are identified in the table below.

**TABLE 3: COMMON TYPES OF ILLICIT DISCHARGES**

Observations	Potential Pollutant	Potential Sources
<ul style="list-style-type: none"> <li>Brown, gray, or reddish color.</li> <li>Turbid.</li> <li>Soil accumulation.</li> </ul>	Sediment	<ul style="list-style-type: none"> <li>Construction activities.</li> <li>Aggregate stockpile storage.</li> </ul>
<ul style="list-style-type: none"> <li>Gray color.</li> <li>Basic pH (i.e. 11+).</li> <li>Dead / stressed vegetation and aquatic wildlife.</li> </ul>	Concrete waste	<ul style="list-style-type: none"> <li>Construction activities.</li> </ul>
<ul style="list-style-type: none"> <li>Rainbow sheen on the top of the water.</li> <li>Petroleum odor.</li> </ul>	Petroleum Products	<ul style="list-style-type: none"> <li>Fueling operations.</li> <li>Leaking vehicles.</li> <li>Maintenance operations.</li> <li>Broken or overflowing oil water separator.</li> </ul>
<ul style="list-style-type: none"> <li>Rainbow sheen on the top of the water.</li> <li>Rancid odor.</li> </ul>	Grease	<ul style="list-style-type: none"> <li>Broken grease trap.</li> <li>Improper disposal from restaurant activities.</li> </ul>

Observations	Potential Pollutant	Potential Sources
<ul style="list-style-type: none"> <li>Bubbles or soapy appearance.</li> </ul>	Detergents	<ul style="list-style-type: none"> <li>Aircraft, vehicle, and equipment washing.</li> <li>Broken or overflowing oil water separator.</li> <li>Improper disposal of facility washwater.</li> <li>Uncontained hand or laundry washwater.</li> </ul>
<ul style="list-style-type: none"> <li>Excessive vegetation growth.</li> <li>Algae.</li> </ul>	Nutrients	<ul style="list-style-type: none"> <li>Construction activities.</li> <li>Fertilizer use.</li> </ul>
<ul style="list-style-type: none"> <li>Brown or black color.</li> <li>Foul odor.</li> <li>Floatables such as toilet paper or rubber gloves.</li> <li>Excessive vegetation growth.</li> </ul>	Sewage	<ul style="list-style-type: none"> <li>Improper sewage disposal.</li> <li>Broken or overflowing triturator.</li> <li>Leaking lavatory truck.</li> </ul>

In the event that the inspectors are preventing from entering a tenant's operation area, that information should be noted on the Outfall Inspection Form and also relayed to the DOTA EHS. The EHS may then complete an illicit discharge investigation in accordance with the *Illicit Discharge Investigation and Enforcement Manual*.

There are some types of permitted discharges as identified in the MS4 NPDES permits. In these cases, the discharge will not be classified as illicit discharges.

### 4.3 Enforcement Actions

Once the source of an illicit discharge has been identified, efforts must be made to stop and/or prevent the discharge from recurring. Enforcement actions will be conducted by the DOTA EHS or appropriate State or Federal agency. The DOTA EHS will determine the responsible party for the discharge, which may be a DOTA operation, tenant, or construction project.

If an illicit discharge is observed due DOTA operation, then a work order will be placed with the appropriate maintenance or engineering section to correct the problem.

Tenant enforcement will follow the procedures and guidelines as detailed in the *DOTA Inspection and Enforcement Manual*.

If the source of an illicit discharge is from a construction site, DOTA conduct enforcement actions as described in the *Construction Site Runoff Control Program*.

## 5.0 DOCUMENTATION

---

All outfall inspections will be properly documented on the Outfall Inspection Form (Attachment I) either in the field or upon return to the office using field notes. Inspection photographs will also be included with the final version of the Outfall Inspection Forms. This information will be used to identify areas of the airport that have a higher risk of illicit discharge for increased inspections and education. Additionally, the data will be communicated in the annual report to the Department of Health and used to update the Enviance database.

### 5.1 Outfall Inspection Form

The Outfall Inspection Form (Attachment I) is divided into six sections to provide information on background data, outfall description, physical indicators for flowing or submerged outfalls, physical indicators for both flowing and non-flowing outfalls, overall outfall characterization, and non-illicit discharge concerns.

#### 5.1.1 Section 1 - Background Data

Section 1 of the form includes fields to fill in the names of the field inspectors, the date, and the time of the inspection. The outfall EID field should be filled in according to the DOTA assigned identification number from the Enviance management system. The basin in which the outfall is located can be found on the DOTA maps of the drainage system. The receiving water field should include the name of the body of water in which the outfall is discharging (e.g. Kaloaloe Canal, Keehi Lagoon, Kanaha Beach). The temperature at the time of inspection should be noted as well as the general weather conditions and tide level. Additionally, the rainfall amounts for the past 24 and 48 hours should be noted to allow differentiation between storm water flows and illicit discharge.

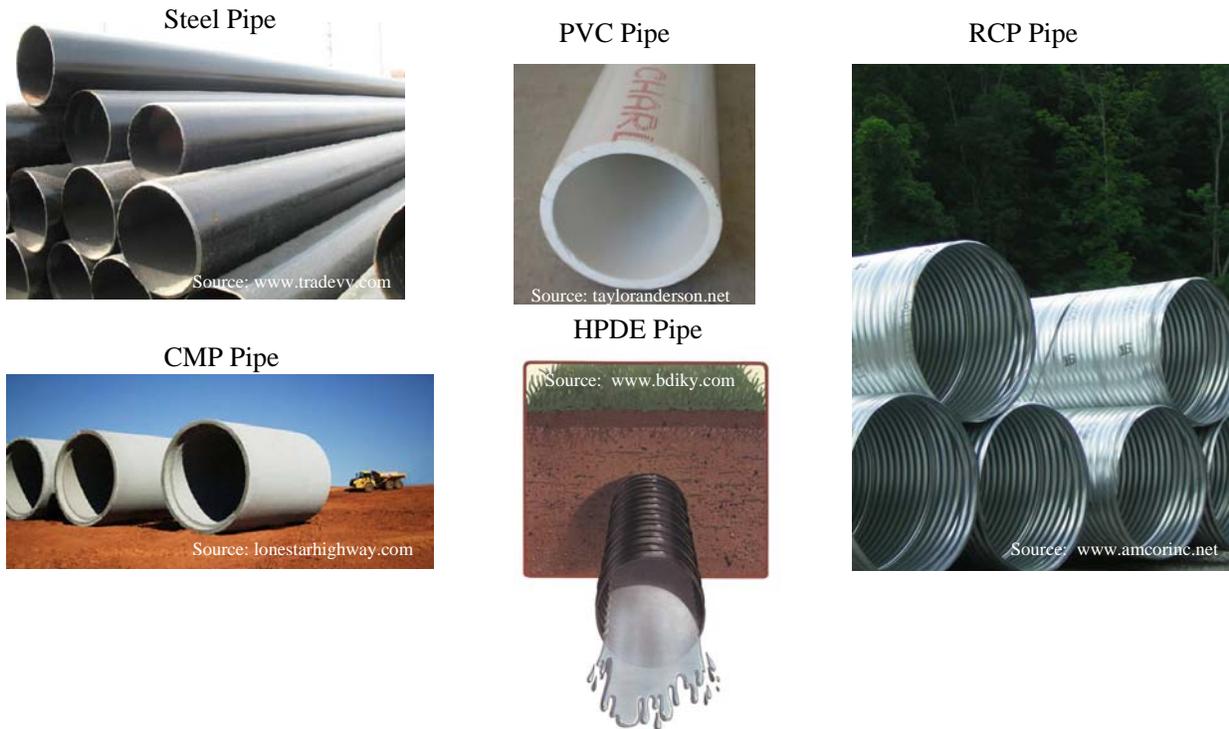
Photographs should be taken to demonstrate the condition of the outfall and archived with the inspection form. The land use should be documented in the area draining through the outfall. Significant industrial activities should be noted as well as specific tenants, if known.

In the notes portion of this section, the inspector should identify all upstream drain EIDs that were inspected associated with the particular outfall and any observations for each of those drainage structures.

#### 5.1.2 Section 2 - Outfall Description

The basic characteristics of the outfall will be noted in Section 2 of the inspection form. The inspector must first determine whether the outfall is a closed pipe or an open drainage structure. Then the material of the pipe must be documented. Reinforced concrete pipe (RCP), polyvinyl chloride pipe (PVC), corrugated metal pipe (CMP), high density polyethylene pipe (HDPE), and steel are common pipe materials (Figure 1). These pipes may come in differing shapes including circular, elliptical, and box. Additionally, several outfalls may be found in the same outfall location; two pipes are considered a double and three pipes are considered a triple outfall. The dimensions of the pipe should be noted in inches on the form; the diameter of round and elliptical pipes should be noted and the length and width of box drain openings should be noted. Additionally, the inspector should identify whether the outfall is submerged with water or sediment. If a flow is present from the outfall, describe the flow rate.

Figure 1 – Pipe Materials



### 5.1.3 Section 3 – Physical Indicators for Flowing or Submerged Outfalls

This section of the outfall inspection form records data about four sensory indicators associated with flowing or submerged outfalls, including odor, color, turbidity, and floatables. Sensory receptors employed by the inspector include sight and smell and are useful in detecting obvious discharges. The inspector must rate the indicator on a scale of 1 to 3 to determine the severity. This information can be helpful in determining the source of the discharge (Table 3).

When detecting an odor, the inspector should make an effort to ensure that the observed smell is from the outfall and not surrounding activities. The inspectors should be familiar with the odor of common illicit discharges such as sewage and petroleum products prior to conducting the inspection. An odor is ranked with a severity of 1 if the smell is faint or the crew cannot agree on its presence or origin. A score of two indicates a moderate odor within the pipe. An odor is ranked with a severity of 3 if the odor is observed a considerable distance from the outfall.

The color of the discharge should be assessed visually; this is best accomplished by filling a clear sample bottle with the discharge and observing it in the light. The inspectors should also look downstream of the plume of color associated with the outfall. This method should also be used to evaluate the turbidity of the water; which is defined as the measure of how easily light can penetrate through the sample bottle.

The last sensory indicator is the presence of any floatable materials in the discharge or surrounding waters. Common examples of floatables include sewage, sheen, and suds; trash and

debris are not considered illicit discharges, but should be noted. If sewage is noted as a floatable, it should automatically be assigned a severity score of three. Petroleum sheens may be caused by both synthetic and natural processes; therefore, it is important to note that synthetic sheens are generally thick or have a swirl formation. Suds are rated based on their foaminess and staying power. A severity score of three is designated for thick foam that ravel many feet before breaking up. Suds that break up quickly reflect water turbulence or wave action and are not considered an illicit discharge.

#### ***5.1.4 Section 4 – Physical Indicators for Both Flowing and Non-Flowing Outfalls***

Section 4 of the Outfall Inspection Form examines physical indicators found at both flowing and non-flowing outfalls that can reveal the impact of past discharges. These physical indicators include outfall damage, outfall deposits or stains, abnormal vegetation growth, poor pool or surrounding water quality, and benthic growth on pipe surfaces. These physical indicators are not ranked according to their severity because they are often subtle, difficult to interpret, and could be caused by other sources. However, these physical indicators provide information about the history of discharges from the outfall and may be beneficial when determining the outfall's priority.

#### ***5.1.5 Section 5 – Overall Outfall Characterization***

This section of the inspection form allows the inspector to draw conclusions about the observations they have made at the outfall. The first conclusion must be made to determine whether there is an illicit discharge present at the outfall. There are four categories the inspector can use to respond to this question. The first category is “unlikely,” and is marked when the physical indicators point toward natural disturbance in the water such as a suds from wave action. The second category is “potential,” and is marked when the inspector identifies two or more physical indicators of illicit discharge. The third category is “suspect,” and is marked when the inspector identified one or more indicators with a severity of 3. The final category is “obvious,” and is marked when the inspector is certain that there is an illicit discharge and that it is not a permitted discharge as listed in the MS4 NPDES permit. The information gathered to this point will allow the inspector to determine the outfall priority.

#### ***5.1.6 Section 6 – Non-Illicit Discharge Concerns***

Section 6 of the Outfall Inspection Form is used to note any unusual conditions near the outfall such as dumping, pipe failure, bank erosion or maintenance needs. While these conditions are not directly related to illicit discharge detection, the information will be beneficial to ensure that the drainage system remains operational.

### **5.2 Data Archiving**

Recordkeeping of the inspection information is vital to ensuring that pollutants are minimized in the receiving waters and that outfalls are structurally sound. Completed forms will be archived by the DOTA EHS and pertinent information entered into the Enviance database.

## **6.0 TRAINING**

---

Inspector training is required to ensure that all personnel responsible for conducting outfall inspections are aware of the process and safety precautions required during the inspections.

### **6.1 Pre-Inspection Meeting**

An experienced inspector will hold a pre-inspection meeting with all parties involved in the upcoming outfall inspections. The meeting will include a review of this document, a discussion of the inspection schedule, safety procedures, outfall locations, and previous outfall inspection information where available. Inspectors must be familiar with the DOTA's definition of illicit discharge and procedures for tracking the source of an illicit discharge. Training attendance will be documented on a sign-in sheet and provided to the DOTA EHS for record in Enviance.

## 7.0 REFERENCES

---

- The Center for Watershed Protection and Robert Pitt of the University of Alabama. October 2004. *Illicit Discharge Detection and Elimination – A Guidance Manual for Program Development and Technical Assessments*.
- Maryland State Highway Administration NPDES Program. November 1007. *Draft Storm Drain Outfall Inspection Program*.
- National Oceanographic and Atmospheric Administration. August 6, 2008. *Tides & Currents – Tide Predictions, Honolulu Hawaii, Station ID: 1612340*. [http://tidesandcurrents.noaa.gov/data\\_menu.shtml?stn=1612340%20Honolulu,%20HI&type=Tide+Predictions](http://tidesandcurrents.noaa.gov/data_menu.shtml?stn=1612340%20Honolulu,%20HI&type=Tide+Predictions).
- State of Hawaii, Department of Health. December 2013. *Hawaii Administrative Rules, Chapters 11- 55 Appendix K*.
- State of Hawaii, Department of Transportation, Airports Division. May 2007. *Honolulu International Airport, Small Municipal Separate Storm Sewer System, Storm Water Management Program*.
- State of Hawaii, Department of Transportation, Airports Division. *National Pollutant Discharge Elimination System, Permit Number HI S000005*.
- U.S. Environmental Protection Agency. 27 October 2008. *Illicit Discharge Detection and Elimination*.

**Attachment I**  
**Storm Drain Outfall Inspection Form**

## Outfall Inspection Form

### Section 1: Background Data

Outfall ID:	Basin:	Receiving Water:
Date:	Time (military):	
Investigators:		Form completed by:
Temperature (F):	Rainfall (in): Last 24 hours:	Last 48 hours:
Tide: <input type="checkbox"/> Low <input type="checkbox"/> High	# of Photos:	
Land Use in Drainage Area (Check all that apply):		
<input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Open Space <input type="checkbox"/> DOTA Common Use Area (e.g. ramp or runway)		
<input type="checkbox"/> Significant Industrial Activity: _____		
<input type="checkbox"/> Known Tenants: _____ <input type="checkbox"/> Other: _____		
Notes (e.g., origin of outfall, if known):		

### 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"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <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: _____	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
Potential Illicit Discharge?		<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 4</i>		
Flow Description (If present)		<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial		

**Section 3: Physical Indicators for Flowing or Submerged Outfalls**

Are physical indicators present in the flow or tidal water?  Yes  No *If No, Skip to Section 4*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid <input type="checkbox"/> Petroleum products <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	<input type="checkbox"/> 2 - Clearly visible in sample	<input type="checkbox"/> 3 - Clearly visible in outfall
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1- Slight cloudiness	<input type="checkbox"/> 2 - Cloudy	<input type="checkbox"/> 3 - Opaque
Floatables (not including trash)	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1- Slight; origin not obvious	<input type="checkbox"/> 2 - Some; indications of origin	<input type="checkbox"/> 3 - Some; origin clear

**Section 4: Physical Indicators for Both Flowing and Non-Flowing Outfalls**

Are physical indicators present that are not related to flow?  Yes  No *If No, Skip to Section 5*

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:	
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"/> 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 5: Overall Outfall Characterization**

Illicit Discharge Present?	<input type="checkbox"/> Unlikely	<input type="checkbox"/> Potential (presence of two or more indicators)	<input type="checkbox"/> Suspect (one or more indicators with index of 3)	<input type="checkbox"/> Obvious
Outfall Prioritization	<input type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High	

**Section 6: Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?**