

**STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION,  
AIRPORTS DIVISION**



**ILLICIT DISCHARGE DETECTION AND  
ELIMINATION INVESTIGATION AND  
ENFORCEMENT PROGRAM**



Prepared For:  
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**RECORD OF REVISION**

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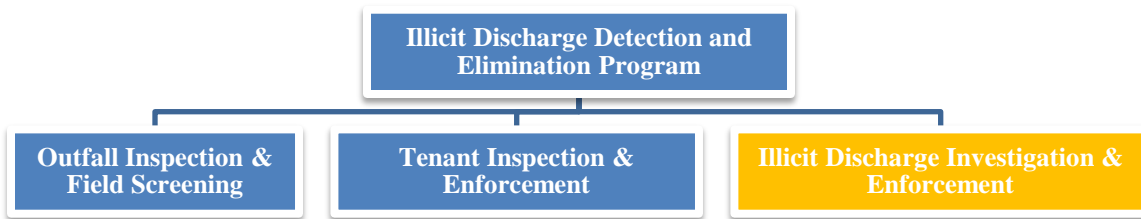
- ATTACHMENT I: OUTFALL INSPECTION AND FIELD SCREENING PLAN
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- ATTACHMENT III: TENANT DISCHARGE PERMIT

## 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
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

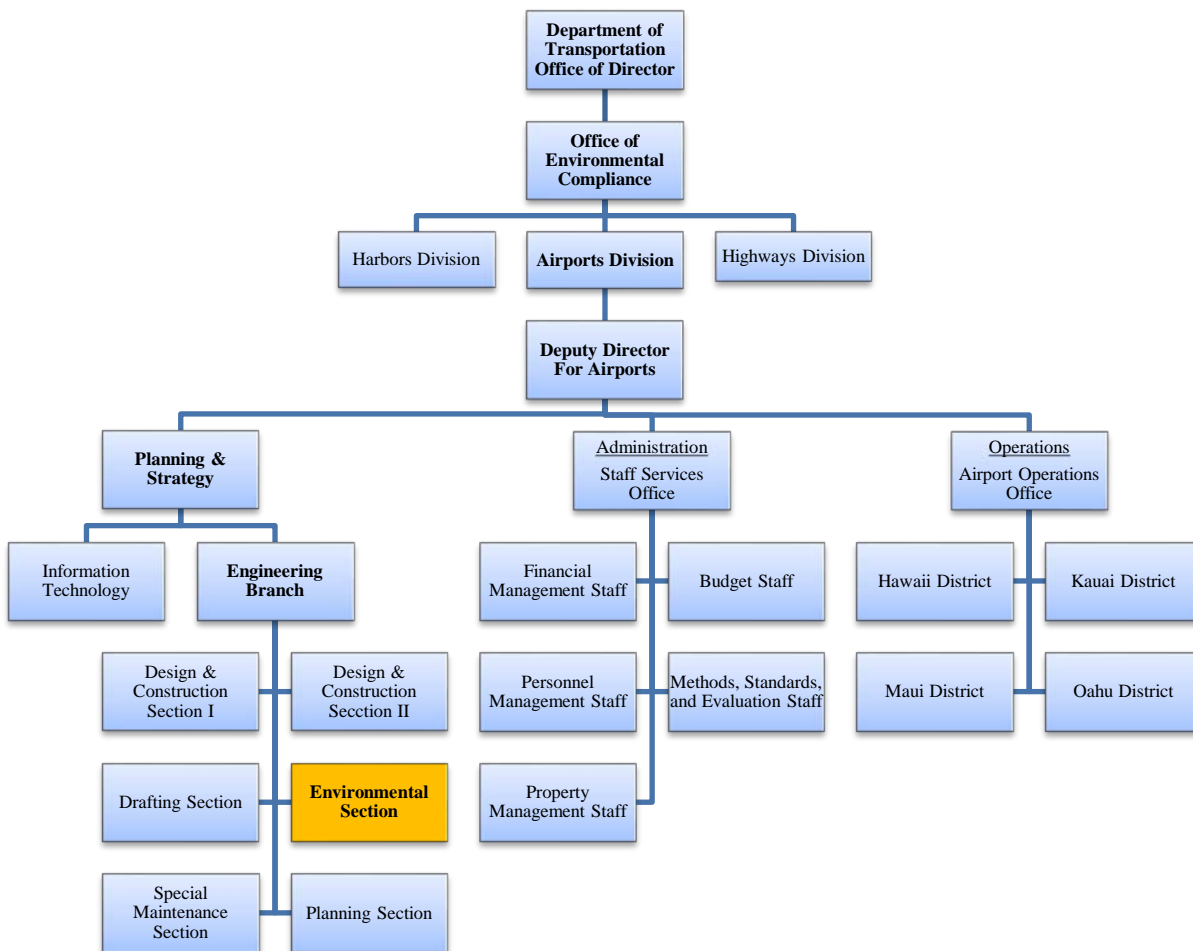
## 1.0 INTRODUCTION

The State of Hawaii, Department of Transportation, Airports Division (DOTA) is responsible for preventing, detecting, and removing illicit discharges and illegal connections into its small municipal separate storm sewer system (Small MS4) at the Kahului Airport (OGG) in accordance with applicable National Pollutant Discharge Elimination System (NPDES) permit. Illicit discharge investigation and enforcement is part of the illicit discharge detection and elimination (IDDE) program. This plan will serve as a guidance manual for DOTA personnel and their contractors and consultants that have the responsibilities associated with reducing the occurrences of illicit discharges and illegal connections to the OGG Small MS4.



### 1.1 Implementation

This plan will be implemented under the direction of the DOTA Environmental Section.



## **2.0 DISCHARGES**

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An 'Illicit Discharge' is considered any non-storm water discharge that poses a risk to the receiving water. An 'Illegal Connection' is defined as a connection to the Small MS4 that is not recognized and allowed by the DOTA.

### **2.1 Allowed Non-Storm Water Discharges**

The following non-storm water discharges are permitted to be discharged to the DOTA Small MS4s:

- Water line flushing;
- Landscape irrigation;
- Diverted stream flows;
- Rising ground waters;
- Uncontaminated ground water infiltration as defined in 40 CFR §35.2005(20));
- Uncontaminated pumped ground water, not including construction related dewatering activities;
- Discharges from potable water sources and foundation drains;
- Air conditioning condensate;
- Refrigeration unit condensate from the ice machines at the Maintenance Baseyard;
- Irrigation water;
- Springs;
- Water from crawl space pumps, uncontaminated water from utility manholes or boxes, and footing drains;
- Water from charity car washes;
- Flows from riparian habitats and wetlands;
- Exterior building wash water (water only);
- Residual street wash water (water only), including wash water from sidewalks, plazas, and driveways, but excluding parking lots; and
- Discharges or flows from firefighting activities.

## 2.2 Significant Polluted Discharges

The table below is a list of common discharges that are a significant source of pollutants to the MS4 and the required control measures.

**TABLE 1: SIGNIFICANT POLLUTED DISCHARGES**

Polluted Discharge	Control Method
Helicopter, Vehicle, and Equipment Washwater	<ul style="list-style-type: none"> <li>• Prohibition of airplane washing, except in emergency situations.</li> <li>• Containment systems required for tenants conducting washing activities.</li> <li>• Washing operations best management practice (BMP) as detailed in the <i>Airport Tenant Inspection and Enforcement Manual</i>.</li> <li>• Tenant inspections by DOTA Environmental Health Specialist (EHS).</li> </ul>
Petroleum Contaminated Runoff from Fueling Operations or Leaking Vehicles	<ul style="list-style-type: none"> <li>• DOTA oil water separators (OWS) within the aircraft gate area.</li> <li>• Spill Prevention, Control, and Countermeasure (SPCC) plans for applicable fuel tanks.</li> <li>• Secondary containment structures required for mobile fuel trucks parked longer than 4 hours.</li> <li>• Use of drip pans for leaking vehicles and fuel hose connections.</li> <li>• Spill kits required on all fueling vehicles and in the ramp area.</li> <li>• Fueling and maintenance operations BMPs as detailed in the <i>Airport Tenant Inspection and Enforcement Manual</i>.</li> <li>• Tenant inspections by DOTA EHS.</li> </ul>
Sanitary Waste	<ul style="list-style-type: none"> <li>• Requirement for sanitary waste from aircraft to be deposited in the DOTA triturator, which is connected to the sanitary sewer.</li> <li>• Required DOTA training on triturator usage and applicable BMPs.</li> <li>• Regular street sweeping around the triturator to remove solid waste and to spot check for illicit discharges.</li> </ul>

## **3.0 IDDE PROCEDURES**

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The following procedures should be adhered to when attempting to detect illicit discharges and then eliminate the source. Several groups of people may be involved in this process, including the DOTA EHS, maintenance contractors involved in cleaning airport storm drains, DOTA maintenance and grounds personnel, and tenants. These groups have been trained to identify illicit discharges/connections and report it to the DOTA EHS for enforcement actions.

### **3.1 Identification of Illicit Discharge**

There are several ways that an illicit discharge may be brought to the attention of the DOTA EHS.

#### ***3.1.1 Environmental Hotline***

The DOTA has posted phone numbers on their website that are available for any entity, such as the general public, tenant, or DOTA employee to call and report a spill or illicit discharge. During working hours, notifications will be directed to the DOTA EHS and after hours calls will be taken by the Airport Duty Manager. The Duty Manager will log all calls and the DOTA EHS will conduct further investigation as necessary. These calls will also be logged in Enviance under *Airport Events* in the *Public Concerns and Inquiries* log.

#### ***3.1.2 Outfall Inspection and Field Screening***

The outfall inspections conducted per the *Outfall Inspection and Field Screening Plan* (Attachment I) may identify an illicit discharge. The inspectors will search for the source of the illicit discharge and report it to the DOTA EHS to initiate enforcement actions as necessary.

#### ***3.1.3 Tenant / Construction Inspections***

The DOTA EHS or their designee will observe storm drains and waterways while conducted regular inspections at tenant facilities and construction sites. These inspections may identify an illicit discharge and the DOH EHS will initiate enforcement actions as necessary.

#### ***3.1.4 Reconnaissance***

The DOTA EHS or their contractors/consultants will regularly travel around the airport to complete various required tasks. During that time, personnel will also observe the surrounding area to assist in identifying illicit discharges. Any suspect discharges will be reported to the DOTA EHS for further investigation.



### 3.2 Investigation

The DOTA EHS will investigate reports of illicit discharges as identified in Section 3.1 using the following steps.

- Preparation:
  - Gather available information from informant.
  - Review drainage maps to identify drainage structures in the area of the suspected illicit discharge.
  - Gather necessary equipment.
    - SIS form.
    - Airport drainage map.
    - Pens / pencils and clipboard / field notebook.
    - Level D work uniform (steel toed boots, safety vest, AOA badge)
    - Camera.
    - Flashlight.
    - Manhole puller and hammer / chisel.
    - Cell phone / Radio (movement area).
    - Sample container.
    - Water quality meter as available (temperature, pH, turbidity).
- Field Investigation by DOTA EHS or designee:
  - Mobilize to reported area and document observations on the Site Investigation Sheet (SIS) (Attachment II) and take photograph of the discharge and surrounding area.
  - Look for signs of illicit discharge, such as dry weather flow, discoloration, odor, or stressed vegetation.
- Locate the Source:
  - Follow the storm drain upstream checking the drainage structures and the surrounding area for the source of the illicit discharge. Refer to Table 2 for common observations and their potential pollutant sources.
  - Once the source is identified, determine if the discharge is permitted by the MS4 NPDES permits. If so, document in Enviance under *Airport Events* and in the log for *Public Concerns and Inquiries* and close the investigation.
- Stop the Source:
  - Appropriate corrective action will be identified and communicated to responsible party causing illegal discharge/connection.
  - Initiate enforcement where necessary.

**TABLE 2: 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>
<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>

**3.3 Documentation**

The SIS and photographs should be completed within a timely manner of the investigation and filed by the DOTA EHS. Then, the EHS will enter pertinent data into the Enviance database under *Airport Events* and in the *Site Investigation Sheet (IDDE)* log.

**3.3.1 Completing the SIS**

The inspector will complete the top blocks of the SIS by providing the discharge with a unique name such as “petroleum odor near Access A.” Then, the inspector will assign an incident number,

which will include the last two numbers of the year and a sequential three digit number starting with 001 (e.g. 14.001). The next sequential number can be assigned after reviewing the *Site Investigation Sheet (IDDE)* log in Enviance. After identifying the inspector's name as well as the date and time of the investigation, the inspector will indicate the reason for the investigation based on the descriptions from Section 3.1.

The background information section can be completed prior to conducting the field inspection as a way to summarize the data provided from the hotline, inspection, or reconnaissance. The rainfall data for the past 24 hours should be recorded in the precipitation block. This information can be found on the NOAA website (<http://www.prh.noaa.gov/data/HFO/>) under the RRAHFO logs, which are sorted by date and time. This is important so that the investigator knows whether flows are attributed to storm water runoff or a potential illicit discharge.

The incident location information can be completed to describe where the illicit discharge was occurring. If it occurred on a tenant site or construction site, the project name can be entered. Otherwise a description can be entered on the subsequent line.

The DOTA drainage conveyance affected will be checked to include all affected drainage structures. For drainage structures that have an Environmental Identification Number (EID), the number will be entered where known. If a treatment device is selected, this may include an oil water separator, evaporation pond, or CDS unit. It should also be noted in notes section whether the illicit discharge overwhelmed the treatment device or it was contained.

The source of the discharge should be checked based upon review of Table 2. If the illicit discharge does not meet the criteria listed, it should be described in as much detail as possible in the box marked "other." Then, the investigator can conduct further research to identify the source upon return to the office.

The observations made about the illicit discharge or illegal connection will be communicated in the two subsequent sections.

Finally, the investigator will indicate the suspected party responsible for the discharge and indicate which enforcement actions may be appropriate.

## **4.0 ENFORCEMENT**

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The DOTA uses several tools to prevent, reduce, and/or eliminate illicit discharges to their MS4s.

### **4.1 Tenant Discharge Permit**

All tenants at airports with MS4 NPDES permits will be required to complete and sign a discharge permit for storm water runoff from their site to the MS4. An example of that permit is included in Attachment III. The permit prohibits non-storm water discharges to the MS4, except those listed in Section 2.1 that do not cause or contribute to any violations of water quality standards. Additionally, tenant must implement BMPs for their site activities.

Existing tenants will be educated about and required to complete the discharge permit during their upcoming regular tenant inspection by the DOTA EHS. New tenants will be given the same opportunity during their initial inspection by the DOTA EHS.

### **4.2 Tenant Connection Permit**

Any tenant seeking to install a new connection to the DOTA MS4s must complete the connection permit application available in the *Construction and Post-Construction Storm Water Management Plan*. The completion of the application is a part of the construction design review process conducted by the DOTA Environmental Section and requires proof of NPDES application for construction activities where applicable.

### **4.3 Enforcement Actions**

Once an illicit discharge has been identified, the DOTA EHS will initiate enforcement actions to stop the source. If the illicit discharge has originated from a tenant facility, the *Airport Tenant Inspection and Enforcement Manual* will be utilized to achieve compliance. If the discharge is from a construction project, the *Construction and Post-Construction Storm Water Management Plan* will be utilized to achieve compliance. All other situations will be evaluated on a case-by-case basis. If a responsible party cannot be identified, DOTA will assume responsibility for stopping the illicit discharge.

## **5.0 TRAINING**

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Various training and educational measures are implemented at DOTA to aid in identifying, investigating, and eliminating illicit discharges.

### **5.1 Inspectors**

DOTA EHS and other personnel involved in investigating illicit discharges will be trained prior to conducting inspections. The training will include the information from this plan, enforcement procedures identified in the *Airport Tenant Inspection and Enforcement Manual* and the *Construction and Post-Construction Storm Water Management Plan*, and examples of past illicit discharges. Training will be documented on a sign-in roster and entered into Enviance.

### **5.2 Public Education**

An integral part of the identification and elimination of illegal discharges/connections is to educate users of the airport about the water quality impacts and related environmental degradation that can result from illegal discharges/connections to DOTA's Small MS4.

#### **5.2.1 Training Sessions**

Whenever DOTA hosts a training session, information about what constitutes an illicit discharge and the reporting hotline phone numbers are posted. This repetition of information has proven to engage the airport community in the environmental program and aid in preventing illicit discharges.

#### **5.2.2 Environmental Survey**

Further during training sessions, attendees are often provided with a survey, which includes questions about illicit discharges. The effectiveness of the educational programs can be determined based on the percentage of correct answers. Additionally, the surveys assist in educating airport users about illicit discharges and the airport MS4.

#### **5.2.3 Storm Drain Stenciling**

Another component of the public education program is the stenciling on/near storm drain inlets in areas frequented by the general public to inform them not to discharge waste materials into the inlets.

## 6.0 REFERENCES

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- 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*.
- 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- 54 & 11-55*.
- State of Hawaii, Department of Transportation, Airports Division. *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**

## **Outfall Inspection and Field Screening Plan**

*\*Most recent version is available on the DOTA website at:*

[http://hidot.hawaii.gov/airports/files/2014/11/2.-Outfall-Inspection-Program\\_2014.pdf](http://hidot.hawaii.gov/airports/files/2014/11/2.-Outfall-Inspection-Program_2014.pdf)

# **Attachment II**

## **Site Investigation Sheet**

*\*Most recent version is available on the DOTA website at:*

<http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/ogg-storm-water-program/>



# **Attachment III**

## **Tenant Discharge Permit**

*\*Most recent version is available on the DOTA website at:*

<http://hidot.hawaii.gov/airports/doing-business/engineering/environmental/ogg-storm-water-program/>