

3.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION

3.1 Overview

3.1.1 Purpose

The objectives of the Illicit Discharge Detection and Elimination Program (Illicit Discharge Program) are to detect and eliminate illicit discharges, as well as to remove illegal connections to the Maui District MS4.

3.1.2 Permit Requirement

Part 6.(a)(3) of Appendix K of the State's General Permit (HAR 11-55) requires an operator of a regulated small MS4 to:

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 [of HAR 11-55, Appendix K] 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 CFR Section 122.26(b) (2) ["Illicit discharge means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities."], and*
- (C) *Compilation of a list of non-storm water discharges or flows that are considered to be significant contributor of pollutants to the system and 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.*

HAR 11-55, Appendix K, Part 1.(a) authorizes the following types of non-storm water discharges (if they do not contain pollutants in amounts that will cause or contribute to a violation of an applicable water quality standard):

- 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;
- Discharges from potable water sources and foundation drains;

- Air conditioning condensate;
- Irrigation water;
- Springs;
- Water from crawl space pumps and footing drains;
- Lawn watering runoff;
- Water from individual residential car washing;
- Water from charity car washes;
- Flows from riparian habitats and wetlands;
- De-chlorinated swimming pool discharges;
- Residual street wash water; and
- Discharges or flows from fire fighting activities.

This section serves as a reference for members of the Maui District SWMP team who have responsibilities associated with the detection and elimination of illicit discharges to the Maui District MS4.

3.2 Program Activities

The Maui District SWMP will include the following program activities to satisfy Illicit Discharge Program minimum control measure requirements specified in HAR 11-55, Appendix K:

- Examining Regulatory Issues
- Identifying Illicit Discharges and Illegal Connections
- Developing a Tracking and Reporting System for Illicit Discharges and Illegal Connections
- Investigating and Eliminating Illicit Discharges and Illegal Connections
- Preventing Illicit Discharges
- Developing and Conducting Public Education and Outreach
- Developing and Conducting Training

The following document was an invaluable reference used in developing program activities for the Maui District MS4 Illicit Discharge Program: Edward Brown, Deb Caraco, and Robert Pitt, *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection, Ellicott City, MD, 2004.

3.2.1 Examining Regulatory Issues

3.2.1.1 Existing Regulatory Programs: Maui District MS4 Connection and Discharge Permits

Maui District currently administers a permitting program for any individual, business (commercial or industrial), or agency that wishes to establish a permanent physical connection to their MS4 (connection permit) and/or to discharge its storm water runoff associated with industrial activities, construction activities, hydrotesting, construction dewatering into the Maui District MS4 (discharge permit). Under the Illicit Discharge Program, Maui District will continue this permitting program and will develop and maintain a database that includes all permitted connections/discharges to the MS4 (see Section 3.2.3).

A request for a physical connection or permission to discharge surface storm water runoff to the Maui District MS4 is made by submitting two separate forms as follows. For both a connection permit and a discharge permit, the applicant (owner or authorized representative of the owner applying for the permit) shall submit a completed *Application for A Private Storm Drain Connection and/or Discharge Permit to the State of Hawaii Highways Division Storm Drain System* (see Appendix C.1).

For a connection permit, the applicant shall also complete and submit a *Permit for Connection to the State Highways Drainage System* (see Appendix C.2). For a discharge permit, the applicant shall also complete and submit a *Permit to Discharge into the State Highways Drainage System* (see Appendix C.3).

For each connection/discharge location, the applicant is required to submit information on the connection/discharge location, size, type of discharge, flow rate, and a Drainage Report, if applicable.

In addition, the applicant is required to indicate whether the subject property or facility (project) generates storm water associated with an “industrial” activity. If so, the applicant must submit analysis of a storm water sample performed by a laboratory acceptable to the State within one year after the date of the connection/discharge. Owners of properties associated with certain types of industrial activities are required by 40 CFR 122.26(c) to obtain NPDES permit/permit coverage for industrial activities, which requires them to monitor storm water discharges that leave their property, regardless of whether the activity or facility directly or indirectly discharges into the Maui District MS4. Those property owners under NPDES coverage for industrial activities are required to report monitoring results directly to HDOH.

If the subject project disturbs one acre or greater, including construction sites less than one acre that are part of a larger common plan of development or sale that would disturb one acre or more, the applicant for a connection permit is also required to submit a permanent BMP plan with the application, including documentation for future maintenance. If a permanent BMP plan is not included, the applicant must submit documentation demonstrating that the project is either exempt from permanent BMP requirements or qualifies for a variance from permanent BMP requirements. (see Section 5.2.1, HDOT Highways *Storm Water Permanent Best Management Practices Manual*, Section 3—Appendix E.1.A, and HDOT Harbors *Post-Construction Stormwater Management in New Development and Redevelopment*, Section 1.2—Appendix E.1.B).

Applicants for both connection and discharge permits are required to disclose whether the subject facility, activity or property requires NPDES permit/permit coverage. If so, the applicant must attach a copy of the NPDES permit/permit coverage with the application. If the property does not have an NPDES permit, but Maui District finds based on information contained in the application that the property appears to be engaged in an activity that requires an NPDES permit/permit coverage, the applicant is referred to HDOH for consultation. A Maui District MS4 connection or discharge permit is not issued until either the applicant secures NPDES permit/permit coverage or a determination from HDOH that NPDES coverage is not required.

After Maui District's review and approval of the application and submitted documents are complete, a *Permit for Connection to the State Highways Drainage System* (see Appendix C.2) or a *Permit to Discharge into the State Highways Drainage System* (see Appendix C.3) is issued by Maui District. The permittee (*Licensee*) shall sign the permit, thereby agreeing to terms and conditions included in the *Permit*.

Permit conditions require connection/discharge permit Licensees to notify Maui District at least 48 hours before connection construction begins or before commencing discharge to the Maui District MS4. Discharge permit Licensees are required to notify Maui District at the conclusion of the discharge operations to allow Maui District to conduct final inspections as necessary. In addition, permit Licensees are required to notify HDOT Highways of changes in activities at the project or of changes in ownership.

3.2.1.2 *Review of Regulatory Mechanisms Prohibiting Illicit Discharges*

Maui District will evaluate existing regulatory mechanisms that prohibit illicit discharge/illegal connections and that authorize Maui District to administer and to enforce the Illicit Discharge Program. The following summarizes enforcement policy/authorities for HDOT Highways and HDOT Harbors, respectively.

Highways Maui District will establish an Enforcement Policy (EP) to reduce, to the MEP, the discharge of pollutants from all facilities and activities that discharge into the Maui District MS4. This EP will be executed through the HDOT Highways MOU with HDOH in accordance with the following:

- HRS Chapter 342D-2 Administration,
- HRS Chapter 342D-30 Civil Penalties,
- HRS Chapter 342D-31 Administrative Penalties, and
- HRS Chapter 342D-50(a)(d) Water Pollution Control.

Furthermore, the HDOT Highways EP shall conform to HAR 11-55-40 for fines to settle verifiable violations of HRS Chapter 342D; shall utilize the connection and discharge permits issued by HDOT Highways; and shall be in compliance with requirements of the MS4 Permit.

Harbors Maui District will adopt an environmental policy to manage its facilities and programs in a manner that protects the environment, the safety of its employees, and the public health, while fulfilling its mission to deliver and operate a safe and effective multi-modal transportation system. For Harbors Maui District, the primary objective of the EP will be to a) ensure tenants comply with

applicable environmental regulations, lease agreements and/or revocable permits; b) correct any environmental violation(s); and c) require tenants to operate in accordance with Harbors environmental policy and applicable BMPs. Enforcement options available to Harbors range from administrative actions (including verbal/written warnings, eviction notices, and penalties) to the issuance of citations and a district court verdict of a misdemeanor or fine. For Harbors, EP authority is provided by the following:

- HRS Title 15 Chapter 266: authorizes HDOT Harbors to issue citations and summons for violations of its rules and have its actions enforced through the district courts by verdict of a misdemeanor or fine.
- HAR Title 19 Chapters 41 to 44: establishes uniform safety measures, operational standards and requirements, and the conduct for all tenants at State of Hawai‘i harbors.
- Tenant Lease Agreements and/or Revocable Permits: provide Harbors with the right of entry to conduct inspection and authority to terminate the permit or lease.

3.2.2 Identifying Illicit Discharges and Illegal Connections

Maui District will conduct the following activities to identify parcels that warrant investigation of potential illicit discharges and illegal connections:

- Storm drain inspections,
- Field screening of MS4 outfalls,
- Public reporting or complaints.

3.2.2.1 Storm Drain Inspections

Maui District will conduct storm drain inspections of its entire MS4 within the Kahului urbanized area established by the U.S. Census Bureau’s 2010 Census data. The purpose of these inspections includes the following:

- To confirm storm drain alignments, conveyance structure sizes, and inlet/catch basin locations for MS4 GIS mapping purposes.
- To conduct baseline condition assessments of storm drain infrastructure in accordance with requirements of the Maui District MS4 permit Pollution Prevention/Good Housekeeping Program. Data collected during these inspections include degree of accumulation of debris, type of debris, and evaluation of potential impacts, which collectively will be used to develop a storm drain cleaning strategy and to determine inspection intervals.

While conducting the above described inspections, illicit discharges/illicit connections may be discovered. The findings will be documented by photographs and field notes for planning and scheduling of follow-up inspections, as described in section 3.2.4. The field data will be uploaded to the Maui District MS4 Database as described in section 3.2.3.

Location of identified illicit discharges/illicit connection sites will be mapped in GIS and reviewed to determine if there are any repeating or other significant patterns of occurrence. Follow-up

inspections of industrial and commercial sites will be assigned the highest risk rankings for scheduling of follow-up inspections.

3.2.2.2 *Field screening of MS4 Outfalls*

Maui District MS4 outfalls will be field screened for illicit discharges and illegal connections. During outfall screenings, inspectors will collect data regarding the presence of pollutants, which could be an indication that one or more parcels or the roadways along the drainage system of the outfall are causing an illicit discharge or that an illegal connection may exist.

Outfalls located within the Maui District MS4 Region will be screened according to established priorities and frequencies and will be coordinated with the permanent BMP inspection program described in Section 5.2.3 and the outfall and discharge point inspection program described in Section 7.2.

The procedures for finding and reporting illicit discharges identified at Maui District MS4 outfalls are similar to other inspection procedures. Data gathered from the outfall screenings will be reviewed by Maui District staff on a regular basis. Any reported illicit discharge will be referred to the Maui District Engineer for appropriate action.

3.2.2.3 *Public Reporting or Complaints*

Information from the public can be an important source for identifying potential illicit discharges or illegal connections. Currently, Maui District receives public complaints via phone calls or other communications to the Maui District Office. Maui District will develop and maintain an illicit discharge/illegal connection database (see Section 3.2.3) that will include potential illegal connection and illicit discharge complaints received through the Maui District Office. Maui District staff will assess complaints, rank them for potential risks to the MS4, and then schedule and conduct follow-up investigations, targeting high-risk sites for priority screening (see Section 3.2.4).

The database will include fields to map and track the progress of follow-up investigations, such as the TMK of the suspect parcel, information about each suspected improper discharge, the nature of the investigation of that discharge, follow-up activities, and the resolution of each investigation. The database will have the capability of identifying whether a suspect property has NPDES permit coverage. If the property or facility has such coverage, Maui District will notify HDOH of the complaint and potential violation. After HDOH acknowledges receipt of the complaint and confirms that they will investigate, Maui District will close the complaint record with a database entry that the complaint has been referred to HDOH.

For properties that do not have NPDES permit coverage, first, the database will be updated to reflect the newest records from all data sources. Then, investigations will be scheduled based on Maui District's assessment of the relative risk that the discharge may be contaminated with pollutants, and the effect that discharge might have on the quality of storm water runoff entering the Maui District MS4.

3.2.3 Developing a Tracking and Reporting System for Illicit Discharges and Illegal Connections

The Maui District MS4 Illicit Discharge and Illegal Connection tracking and reporting system (Maui District MS4 Database) will consist of a relational database linked to a GIS system, which Maui District will use to store and analyze data and to produce maps. Because storm water flowing from industrial and commercial areas may be a significant source of pollutants that enter the Maui District MS4, Maui District will place a particular emphasis on including data from those types of sources. Key data from all types of sources will include the following:

- Storm Drain Inspection Data: See section 3.2.2.1 for a description of these data.
- Existing and Newly Permitted Maui District MS4 Connection and Discharge Data: Data fields will include permit holder identification, permit number, property location, TMK, discharge type, inspection/investigation records, and if applicable, NPDES permit information and industrial/commercial discharge information.
- Outfall Screening Data: Location data (geospatial coordinates, if available), watershed and subwatershed information, contributing land use data, photographs, inspection and maintenance data, if applicable, follow-up monitoring data, and status/disposition of any enforcement actions.
- Industrial Facility Data: Types of industrial facilities to be included in the database are municipal landfills (open and closed); hazardous waste recovery, treatment, storage, and disposal facilities; facilities subject to Section 313 of the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11023; facilities adjacent to HDOT property or facilities discharging to the Maui District MS4; facilities subject to General Industrial Storm Water permit coverage or any other applicable NPDES permit coverage; and any other industrial facility that HDOT Highways, HDOT Harbors, or HDOH determines is contributing a substantial pollutant loading to the Maui District MS4. Inventoried data from these sites will typically include:
 - Facility activity, zoning, land use, and parcel ownership data,
 - Field investigation data, and
 - Readily available intra-agency informational data.
- Commercial Facility Data: Types of commercial facilities to be included in the database are retail gasoline outlets; retail automotive services, including repair facilities; and restaurants. Inventoried data will be similar to data previously described for industrial facilities.
- Maui District MS4 Illicit Discharge/Illegal Connection and Hazardous Waste Spill Investigation Data: Inventoried data will include discharge type, responsible party, documentation of Maui District's response to the incident, and investigation disposition.
- Maui District's Public Complaint Data: Information collected from caller complaints or other communications to Maui District regarding potential illicit discharge/illegal connections to the Maui District MS4 will be included in the database.

3.2.4 Investigating and Eliminating Illicit Discharges and Illegal Connections

Once properties or facilities have been identified and ranked as potential illicit discharge/illegal connection sites warranting field investigations, Maui District will conduct the work as described in this section.

3.2.4.1 Investigating Illicit Discharges and Illegal Connections: Field Investigation Process

Investigations for non-storm water discharges will be conducted during dry weather. The investigator will record observations made during inspections of a property or facility suspected of illicit discharges or illegal connections, on a MS4 Site Investigation Sheet (SIS) (see Appendix C.4). For industrial or commercial site investigations, inspectors will record data on an Industrial/Commercial MS4 Site Investigation Sheet (SIS) (see Appendix C.5). Investigators will use the following general procedures when conducting illicit discharge or illegal connection investigations:

- Obtain plans of the relevant drainage facilities within HDOT property (i.e., location of all associated Maui District MS4 outfalls or flow paths by which the suspected illicit discharge or illegal connection could enter or affect State waters) using the Maui District MS4 Database prior to conducting the site investigation.
- Confirm the location of the reported or suspected illicit discharge or illegal connection to the Maui District MS4, if any.
- Record the location, size, depth, and orientation of any illicit discharge or illegal connection.
- Record any unusual colors, stains, or odors observed from any illicit discharge or illegal connection.
- Assess the likely source of any illegal connection and point of entry into HDOT property based on the connection's configuration and alignment.
- For any surface discharges, record the location of any stains or other evidence proving direction of flow into the MS4 system.
- Photograph the location of any discharge or connection at or along the suspected point of entry into HDOT property. Include photographs of any surface stains and of all adjacent properties. Note and record the frame numbers of the photographs, the time and location of the photographs, and other pertinent information for future reference.
- Prepare a neat, accurate sketch of the relevant aspects of the site and the potential illegal connection or flow path of the illicit discharge.
- Record the date and time of the investigation and complete the checklist or GPS data inputs as fully as possible.

3.2.4.2 Eliminating Illicit Discharges and Illegal Connections: Follow-Up Actions

For those parcels or activities with confirmed illicit discharges or illegal connections and approval from the Maui District Engineer to proceed, Maui District investigators will use the following general procedures to follow-up on illicit discharge or illegal connection investigations:

- Send the property owner a letter, with an attached application for a connection or discharge permit, requiring the owner to complete and return the application;
- Send a letter to the property owner requesting additional information regarding the discharge or connection;
- Schedule a site meeting with the property owner to obtain additional information regarding the illicit discharge or illegal connection; and
- Send a warning letter to the property owner advising the owner to remove the illegal connection or to eliminate the illicit discharge by a specified date or face an enforcement action.
- If the property owner does not make necessary correction within the specified time frame, HDOT Maui District will notify HDOH Enforcement Section via e-mail notification to take further actions.

3.2.5 Preventing Illicit Discharges

Intermittent and transitory illicit discharges are difficult to detect through storm drain inspections, outfall screening or indicator monitoring. Consequently, an effective way to manage these discharges is to conduct public education and outreach programs focused on pollution prevention practices that will prevent or will minimize illicit discharges from occurring in the community. An illicit discharge prevention program requires identifying key behaviors of neighborhoods, generating sites, and municipal operations that produce intermittent and transitory discharges. These key discharge behaviors are then targeted for improved pollution control practices that will prevent or reduce the risk of illicit discharges.

Targeted pollution prevention programs will typically focus on two sectors of the community:

- **Neighborhood Discharges:** The program could include storm drain stenciling, lawn care, septic system maintenance, vehicle fluid changing, car washing, household toxins waste disposal, and swimming pool draining.
- **Generating Sites:** A program for this community sector that includes common business operations could involve business outreach, spill prevention and response plans, employee training, and site inspections.

3.2.6 Developing and Conducting Public Education and Outreach

Maui District has developed a Public Education and Outreach Strategy, described in Section 1.2.2, which will include an Illicit Discharge Program component.

3.2.7 Developing and Conducting Training

Training is an important element of the Illicit Discharge Program because it ensures that personnel responsible for conducting inspections or managing the program's system are knowledgeable in the process of detecting, eliminating, and preventing illicit discharges or illegal connections. Section 1.2.2.4 Training under Public Education and Outreach discusses the overall training program for the Maui District SWMP.

3.3 Measurable Goals

Table 3-1 describes the goals and activities to meet each goal, including annual targets, for the Illicit Discharge Program.

Table 3-1: Illicit Discharge Program Measurable Goals

Goal	Activities and Targets			
	Year 1	Year 2	Year 3	Year 4
Establish mechanisms to prohibit illicit discharges/illegal connections.	Evaluate and identify current ordinances, policies, and/or procedures related to prohibition of illicit discharges/illegal connections.	Propose changes in ordinance, policy, and/or procedural language to stakeholders.	Draft changes in ordinances, policies, and/or procedures for stakeholders' coordination.	N/A
Design and develop database to detect and eliminate illicit discharges/illegal connections	Conduct preliminary design/development of Maui District MS4 Database.	Conduct final design/development of Maui District MS4 Database.	Use Maui District MS4 Database to schedule and track illicit discharge investigations.	Continue to use Maui District MS4 Database to schedule and track illicit discharge investigations.
Use public complaints to detect and identify possible illicit discharges/illegal connections	Compile list of public complaints of possible illicit discharges/illegal connections.	Prioritize list of sites generated by public complaints of possible illicit discharges/illegal connections and conduct initial field investigations of highest-priority sites.	Investigate all other suspect sites generated by public complaints.	Continue to investigate any suspect sites generated by public complaints.
Use outfall screening to detect and identify possible illicit discharges/illegal connections	Develop list of MS4 Outfalls and supporting data needed for field screening.	Conduct initial field screening of MS4 Outfalls.	Continue follow-up field screening of MS4 Outfalls.	Continue outfall screening as a means to detect and identify possible illicit discharges/illegal connections.
Conduct field investigations to detect and identify possible illicit discharges/illegal connections	Initiate development of training program for staff who will conduct field investigations of sites suspected of illicit discharges/illegal connections.	Train staff and begin field investigations of highest-priority sites suspected of illicit discharges/illegal connections.	Continue to conduct field investigations of other sites suspected of illicit discharges/illegal connections.	Continue to conduct field investigations of sites suspected of illicit discharges/illegal connections.

Goal	Activities and Targets			
	Year 1	Year 2	Year 3	Year 4
Conduct follow-up investigations to eliminate known illicit discharges/illegal connections	None	Pursue follow-up actions for highest-priority sites with confirmed illicit discharges/illegal connections.	Continue follow-up actions for other sites with confirmed illicit discharges/illegal connections.	Continue to conduct follow-up investigations of sites with confirmed illicit discharges/illegal connections.
Promote pollution prevention practices through public education and outreach programs designed to prevent/minimize illicit discharges.	Initiate development of pollution prevention plan to prevent/minimize illicit discharges.	Continue development of pollution prevention plan to prevent/minimize illicit discharges.	Conduct public education and outreach programs to promote pollution prevention practices.	Continue conducting public education and outreach programs as outlined in Public Outreach and Training Strategy document.

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