

CHAPTER 5
ILLICIT DISCHARGE



Possible illegal discharge



Chapter 5.0 – Illicit Discharge

An effective illicit discharge detection and elimination program is a very important element of any storm water management plan. The following is the requirement in the NPDES permit to address illicit discharge:



Illegal dumping of paint

“D.1.c. Illicit Discharge Detection and Elimination

- (1) The Permittee shall continue to implement the ongoing program to detect and eliminate illicit connections and illegal discharges into its MS4 and shall include an updated program in the revised SWMP.*

(a) Improper Discharge Activities. The Permittee shall develop and implement an improper discharge activities program to reduce to the MEP the unauthorized and illegal discharge of pollutants to its MS4.”

The common sources of illicit discharges are from:

- Sewage inflows from leaking sewage collection and transmission lines;
- Wash water flows from a variety of activities and operations such as fleet car washings;
- Commercial carwash wastewater;
- Commercial laundry wastewater;
- Floor washing to shop drains and car wash;
- Laundry wastewater from residential neighborhoods; and
- Liquid wastes containing oil, paint and process water.

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

- a. Water line flushing;
- b. Landscape irrigation;
- c. Diverted stream flows;
- d. Rising ground waters;
- e. Uncontaminated ground water infiltration (as defined in 40 CFR §35.2005(20));

- f. Uncontaminated pumped ground water;
- g. Discharges from potable water sources and foundation drains;
- h. Air conditioning condensate;
- i. Irrigation water;
- j. Springs;
- k. Water from crawl space pumps and footing drains;
- l. Lawn watering runoff;
- m. Water from individual residential car washing;
- n. Water from charity car washes;
- o. Flows from riparian habitats and wetlands;
- p. Dechlorinated swimming pool discharges;
- q. Exterior building wash water (water only);
- r. Residual street wash water (water only), including wash water from sidewalks, plazas, and driveways, but excluding parking lots; and
- s. Discharges or flows from fire fighting activities.

The City may also develop a list of other similar occasional incidental non-storm water discharges (e.g. non-commercial or charity car washes, etc.) that will not be addressed as illicit discharges. These non-storm water discharges must not be reasonably expected (based on information available) to be significant sources of pollutants to the MS4, because of either the nature of the discharges or conditions the City has established for allowing these discharges to the MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive water bodies, BMPs on the wash water, etc).

The City will document any local controls or conditions placed on the discharges, and include a provision prohibiting any individual non-storm water discharge that is determined to be contributing pollutants to the MS4.

In view of the foregoing, it is clear that illicit discharges could be found through the storm water system including residential, commercial, industrial, municipal facilities, as well as from institutions. Table 5-1 shows some typical sources of illicit discharges to the City's MS4.

Table 5-1: Land Uses, Generating Sites and Activities That Produce Indirect Discharges		
Land Use	Generating Site	Activity that Produces Discharge
Residential	<ul style="list-style-type: none"> • Apartments • Multi-Family • Single Family Detached 	<ul style="list-style-type: none"> • Car Washing • Driveway Cleaning • Dumping/Spills (e.g., leaf litter) • Equipment Washdowns • Lawn/Landscape Watering • Septic system Maintenance • Swimming Pool Discharges
Commercial	<ul style="list-style-type: none"> • Campgrounds • Car Dealers/Rental Car Companies • Car Washes • Commercial Laundry/Dry Cleaning • Gas Stations/Auto Repair Shops • Marinas • Nurseries and Garden Centers • Oil Change Shops • Restaurants • Swimming Pools 	<ul style="list-style-type: none"> • Building Maintenance (power washing) • Dumping/Spills • Landscaping/Ground Care (irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (power washing) • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing • Washdown of greasy equipment and grease traps
Industrial	<ul style="list-style-type: none"> • Auto recyclers • Beverages and brewing • Construction vehicle washouts • Distribution centers • Food processing • Garbage truck washouts • Marinas, boat building and repair • Metal plating operations • Paper and wood products • Petroleum storage and refining • Printing 	<ul style="list-style-type: none"> • All commercial activities • Industrial process water or rinse water • Loading and un-loading area washdowns • Outdoor material storage (fluids)
Institutional	<ul style="list-style-type: none"> • Cemeteries • Churches • Corporate Campuses • Hospitals • Schools and Universities 	<ul style="list-style-type: none"> • Building maintenance (e.g., power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Parking Lot Maintenance (power washing) • Vehicle Washing
Municipal	<ul style="list-style-type: none"> • Airports • Landfills • Municipal Fleet Storage Areas • Ports • Maintenance Yards • Streets and Highways 	<ul style="list-style-type: none"> • Building Maintenance (power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (power washing) • Road Maintenance • Spill Prevention/Response • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing

5.1 Improper Discharge Activities

The City through the Department of Environmental Services and Department of Planning and Permitting has implemented a program to detect, eliminate and prevent illicit discharges. The City's program includes:

- Licenses for private storm drain connections including plan review, permitting and inspection activities;
- Field screening;
- Database of illegal discharges;
- Public reporting of illicit discharges;
- Enforcement of illegal discharges;
- Response plan for illegal discharges;
- Prevent and response plan;
- Disposal of used oil and toxic materials; and
- Training for illicit discharges.

The City will continue to implement the foregoing program, and develop and implement improvements to the illicit discharge and detection program as described in the following sections.

5.2 Licenses for Private Drain Connections

The City has a licensing program for private drain connections to prevent to the maximum extent practicable (MEP) illegal discharges. The requirement in the NPDES permit is as follows:

“D.1.c.(b) Licenses for private drain connections. The Permittee shall continue to require licenses for private drain connections and maintain a database of all licensed connections to its MS4.”

The licensing program includes procedures for plan review, permitting and compliance inspections. The major condition of the permit is that the discharge from the private drainage system must meet the water quality standards of the State or any provisions of the City's NPDES permit. Any discharge that does not meet the State's standards or the City's municipal permit requirements may result in permit termination and a cease and desist order.

DPP continues to issue all licenses of private drain connections to the municipal separate storm sewer system. During Fiscal Year (FY) 06, a total of 51 applications for private drain connection licenses were issued and \$6,650 in fees collected. A database has been developed for all licensed connections to the City's MS4.

The City will continue to implement the private drain connections permitting program.

5.3 Field Screening of Industrial Areas

Field screening involves an intensive search for illegal discharges in a priority industrial area. The field screening activity involves reviewing the inventory and map of the storm water system in the area, conducting inspections of drain outfalls in the designated area and conducting walkthrough inspections of facilities to review existing practices, encourage businesses to use BMPs and, when necessary, follow up with enforcement actions. The permit requirement related to field screening is as follows:

“D.1.c.(c) Field Screening. The Permittee shall develop a written plan for observing major and minor outfalls to screen for improper discharges. The plan shall designate priority areas for screening, specify the frequency for screening, and identify the procedures to be followed if a discharge is observed. The field screening plan shall be submitted to DOH within one (1) year of the effective date of this permit.”

The City has been conducting at least one field screening survey annually since 1995 and has identified priority areas for field screening up to the fiscal year 2009. Enforcement procedures for any observed improper discharges have been implemented. The priority areas are Kaneohe, Aiea/Pearl City and Waipahu Business Center. The Field Screening Plan can be found in Appendix B.1.

5.4 Investigative Complaints

Databases are useful tools to help with the illicit discharge and detection effort. The database will include information about each suspected improper discharge, the City’s investigation of that discharge, follow-up activities, and the resolution of each discharge, including remedial and enforcement actions. The permit requirement for developing a database for tracking illegal discharge is as follows:

“D.1.c.(d) Investigative complaints. The Permittee shall promptly investigate observed, suspected, or reported illicit flows and pursue enforcement actions, as appropriate. To assist in this effort, within one (1) year of the effective date of this permit, the Permittee shall:

- (i) Develop a database to identify improper discharge activity by Tax Map Key (TMK). The database shall include information about each suspected improper discharge, the Permittee’s investigation of that discharge, follow-up activities, and the resolution of each discharge.”*

The City currently tracks investigations on Microsoft Excel spreadsheets. The spreadsheets contain the address, tax map key (TMK), owner, date of inspection, and follow-up actions. Files of the investigation report and photographs are stored separately

from the spreadsheets but are linked for ease of access. The City has improved the database system by implementing the following:

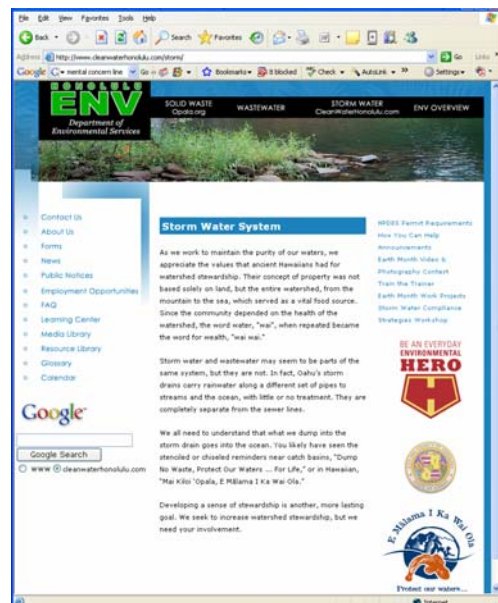
- Developed a Microsoft Access database containing all the information that ENV’s existing Microsoft Excel files contain. The City has converted their Excel files into Access, which is linked to Docushare. Depending on their system capacity, it would be advisable to re-link all of their reports and photographs to the database. If existing capacity is an issue, determine if increasing capacity with a new or expanded server is possible.
- Created an input form to make day-to-day data entry as simple as possible. The input form is customized to look like the actual filed inspection form. An output report would also be created to make standard tallies and reports that the staff need on a regular basis.

5.5 Public Reporting and Response Plan for Investigating Illicit Discharge

The City receives hundreds of reports of illegal discharges annually. As indicated below in the requirement of the NPDES permit, the City will continue to implement a program for reporting illicit discharge. The requirement in the permit is stated below.

- D.1.c(1)(d) (ii) “Continue to implement a program to facilitate public reporting of illicit discharges (i.e., City’s Environmental Concern Line and/or website for reporting); and*
- (iii) Update the “Response Plan for Investigations of Illegal Discharges,” dated March 2000, to be consistent with the requirements of this permit.”*

The City currently maintains the Environmental Concern Line (692-5656) and has a website www.cleanwaterhonolulu.com for reporting improper discharges. Reports of illegal discharges, litter, bulky items, clogged drains, odor, etc. are also received by the Mayor’s office and Road Maintenance Division. The City’s “Response Plan for Investigations of Illegal Discharges and Accidental Spills” dated March 2000 (See Appendix B.2) includes descriptions of how investigations are initiated as well as response procedures for illegal discharges, discharges from failing cesspools, sanitary sewer spills, or spills of hazardous and/or toxic wastes. It describes coordination with other key agencies, Oahu Civil Defense, Coast Guard, DOH’s Hazard Evaluation and Emergency



City website

Response Team, and the Fire Department’s Hazardous Material (HAZMAT) team. The City’s enforcement procedures are also presented in the document.

If the source of the illicit discharge is not known, efforts to determine its location are made as time permits. The Storm Water Quality Branch with, in some cases, assistance from the Division of Road Maintenance, does the follow-up action. If the source of the illicit discharge is known, the database of private drain connections is searched. If there is no license issued for the connection, a notice and findings of violation, and/or letter of warning is sent to the property owner of the facility. Whenever a property owner is cited for an illegal private drain connection to the municipal separate storm sewer system (MS4), Section 14-12.12 of the City ordinances allows the property owner a period of 90 days from the date of the citation to obtain a connection license. The City will issue a connection license to the property owner without a penalty within the 90-day period, provided, however, that only storm water or allowed NPDES permitted nonstorm water is being discharged into the MS4.

The Storm Water Quality (SWQ) Branch is responsible for acting on reported incidents of complaints of illicit discharge of effluent (nonstorm water) and pollutants onto and/or into the municipal separate storm sewer system. The Division of Road Maintenance (DRM) assists the SWQ Branch when called upon, especially when a reported discharge is occurring in rural areas of Oahu that is readily accessible by the rural base yards. The DRM investigators and field crews also conduct investigations by request or conduct their own investigations whenever they observe violations of the Drainage Ordinance.



Clogged inlet in residential area

Most of the investigations are initiated by calls received from the public on the Environmental Concern Line or from Road Maintenance Division crews. Other sources for complaints include the Regulatory Control Branch, Division of Environmental Quality, ENV; Department of Customer Services; DPP building and construction site inspectors; DTS Street Usage Section; Honolulu Police Department (HPD); Oahu Civil Defense Agency; and the State Department of Health, Clean Water Branch.

Section 14-12 of the Revised Ordinances of Honolulu addresses administrative enforcement, judicial enforcement or order, and administrative and civil penalties for water pollution-related violations. Any person violating any provisions of the ordinance, rule, or any permit or license issued pursuant thereto can be served with a notice of violation and order. Orders may include one or more of the following: cease and desist from the violation, correct the violation by a specified date, and/or payment of an administrative fine, which to date has ranged from \$1,000 to \$25,000. Violators can be assessed an administrative or civil penalty of up to \$25,000 per violation per day. Criminal penalties may be imposed on the same schedules of fines plus imprisonment not exceeding 90 days.

In addition to the Notice and Findings of Violation (NFOV), ENV issues Letters of Warning (LOW) of Violation for the discharge or dumping of nonstorm water or pollutant into the MS4 without a permit, discharge or dumping of construction waste and material and soil sediments, or unlicensed private drain connections. These LOWs normally require corrective action and a response from the addressee. LOWs are the most prevalent means of alerting the public that past practices of discharging concrete wash water, sediment, yard waste and trimmings, and refuse will not be tolerated and will subject violators to administrative penalties. An informational letter is sent where the illegal discharge cannot be substantiated.

An investigative report is prepared for each incident that is brought to the attention of the Storm Water Quality Branch and is filed by tax map key number. Written logs are kept for all incidents that result in a Notice and Finding of Violation, Letter of Warning of Violation, or Informational Letter. Enforcement actions initiated by the Storm Water Quality Branch, ENV, during the past fiscal year are listed in Table 5-2, "Enforcement Actions Related to Illegal Connections and Discharges, FY01 – FY06."

DESCRIPTION	ACTIONS					
	FY01	FY02	FY03	FY04	FY05	FY06
Investigations closed	223	195	287	300	359	407
Informational letters sent	9	17	47	46	73	79
Warning letters sent	50	67	98	144	180	210
Notices of violations issued	4	3	8	7	18	29
Total Fines collected	\$8,000	\$5,000	\$2,000	\$4,000	\$27,000	\$25,300

The total number of investigations completed and enforcement actions taken by the Storm Water Quality Branch has increased steadily over the permit period. The total fines collected have remained low; however, ENV began issuing more notices of violations in the latter part of FY04, so the levels of fines increased significantly in FY05.

In FY04, as recommended in Tetra Tech's evaluation report, ENV began issuing letters to businesses and construction sites with potential violations. This served a similar function as warning letters for first time offenders.

The City will improve this program by implementing the following:

- Increase public reporting of potential illicit discharges through education and outreach of the public as discussed in Chapter 4 and ensuring that the reporting reaches the appropriate City staff in the shortest time period.

- Update the “Response Plan for Investigations of Illegal Discharges and Accidental Spills.”
- Continue work with other agencies to improve response by all key agencies (Federal, State and City).

5.6 Enforcement of Illegal Drain Connections

Once an illegal connection or improper discharge has been detected and identified, procedures to eliminate the illegal connection or improper discharge must be pursued expediently. The permit requirement for illegal drainage connections is as follows:

“D.1.c(1)(e) The Permittee shall ensure compliance with local ordinances and pursue enforcement actions against property owners with illegal drain connections and persons illegally discharging pollutants to its MS4.”

The City has procedures in place to take enforcement actions against property owners with illegal drain connections and persons illegally discharging pollutants to its MS4.



Possible illegal discharge

The first action is to determine whether or not the drain connection in question has a permit to connect from the City. If there is no license issued for the connection, ENV issues a notice and findings of violation or sends a warning letter to the property owner of the facility. Whenever a property owner is cited for an illegal private drain connection to the municipal separate storm sewer system (MS4), Section 14-14.12 of the City ordinances allow the property owner a period of 90 days from the date of the citation to obtain a connection license.

DPP will issue a connection license to the property owner without a penalty within the 90-day period; provided however, that only storm water or allowed NPDES permitted non-storm water is being discharged into the MS4.

Section 14-12.22 (a) of the Revised Ordinances of Honolulu (ROH), provides that no person discharge, dump, spill, leak, or place any non-storm water into any public right-of-way and/or into any drainage facility without first obtaining a permit from the director. The following enforcement procedures are used for illegal discharge, discharge without a permit and illegal connections:

1. Informational Letter;
2. Letter of Warning to the discharger(s) for first offense; and
3. Notice of Violation with fines for first major or any repeat offense.

For minor or first time offenses, ENV issues a letter of warning. For more serious or repeated violations, ENV issues a formal notice of violation that normally includes an administrative fine. In FY04, the procedures were revised to include informational letters and letters of warning for potential violations. The City will continue to implement the foregoing procedures.

5.7 Prevention and Response Plan

A program to prevent, respond to, contain, and clean up all wastewater and other spills that may enter into their MS4 from any source (including private laterals and failing cesspools) is also an important part of an illicit discharge and detection program. The program will include spill response teams, which may consist of local, state, and/or federal agencies, and be designed to prevent entry of spills into the City’s MS4 and contamination of surface water, ground water, and soil to the maximum extent practicable.



Use of filters in inlets

The program will also address the coordination procedures for the spill prevention, containment, and response activities with all appropriate departments, programs, and agencies to ensure maximum water quality protection at all times. Procedures whereby DOH is notified of all wastewater spills or overflows from private laterals and failing septic systems into their MS4 will also be included. The requirement in the permit is as follows:

“D.1.c(1)(f) Prevent and Respond to Spills to the City MS4. The Permittee shall develop a program to prevent, respond to, contain, and clean up all wastewater and other spills that may enter into their MS4 from any source (including private laterals and failing cesspools). The program shall be included in the SWMP within one (1) year of the effective date of the permit. Spill response teams, which may consist of local, state, and/or federal agencies, shall prevent entry of spills into the City’s MS4 and contamination of surface water, ground water, and soil to the MEP.

The Permittee shall coordinate spill prevention, containment, and response activities throughout all appropriate departments, programs, and agencies to ensure maximum water quality protection at all times.

The Permittee shall develop and implement a procedure whereby DOH is notified of all wastewater spills or overflows from private laterals and failing septic systems into their MS4. The Permittee shall prevent, respond to, contain, and clean up wastewater from any such notification.”

The City will develop a comprehensive spill response program as follows:

- Review the various procedures for discharges and spills that must be responded to, contained, and cleaned up immediately.
- Research the roles and responsibilities of other City, State, and Federal agencies in responding to discharges of spills of pollutants.
- Develop a spill response program in coordination with other City departments, State and Federal agencies to ensure maximum water quality protection including DOH notification procedures.

5.8 Disposal of Used Oil and Toxic Materials

To minimize the improper discharge of used oil and toxic materials to the storm water sewer system, the establishment of a program(s) to facilitate the proper management and disposal or recycling of used oil, vehicle fluids, toxic materials, and other household hazardous wastes is needed. The plan will include educational activities, public information activities, and establishment of collection sites. The permit requirement for used oil and toxic materials is as follows:

“D.1.c(1)(g) Facilitate Disposal of Used Oil and Toxic Materials. The Permittee shall implement or continue to implement a program(s) to facilitate the proper management and disposal or recycling of used oil, vehicle fluids, toxic materials, and other household hazardous wastes. The plan shall include educational activities, public information activities, and establishment of collection sites operated by the Permittee or a private entity. The program(s) shall be implemented with one (1) year of the effective date of the permit.”

The City has developed a program to facilitate the collection, recycling, and disposal of used oil, vehicle fluids, toxic materials, and other household hazardous wastes including establishment of collection sites and a checklist for recycling/disposal sites. Currently, hazardous chemicals are accepted at designated drop off facilities on a quarterly basis. Used oil such as motor oil, cooking oil or fuel oil can be disposed of with regular household rubbish at curbside. Residents are instructed to use oil change boxes or pour the used oil into a plastic bag with an absorbent material and seal the bag. Programs related to used oil and toxic materials can be found at www.opala.org.

Outreach activities such as giveaway of oil change boxes with the purchase of turkeys, roasts, and large quantities of cooking oil at the markets during the holidays, are being conducted by the City.

The City will continue to implement the collection and recycling program and will, in coordination with the State Department of Health, look for opportunities to improve the program.

5.9 Training for Illicit Discharge

Adequate training on identifying and eliminating illicit connections, illegal discharges, and spills to the MS4 for all City staff is an essential element of an effective illicit discharge and detection program. The specific permit requirement is as follows:

“D.1.c(1)(h) The Permittee shall develop and provide training within one (1) year of the effective date of the permit, and annually thereafter, to City staff on identifying and eliminating illicit connections, illegal discharges, and spills to the MS4. At a minimum, the staff of DPP, DDC, DFM and ENV must receive training that should include complete checklists and updated training materials.”

The City has previously conducted training for City employees involved with identifying and eliminating illicit connections, illegal discharges, and spills to the MS4. While the ENV inspectors received continuous training, more training is needed for other City department employees, which is estimated to be 200 employees. The City has invested more resources to conduct training activities as follows:

- Updated the current training materials and checklists.
- Conducted training sessions for City employees and will conduct annual refresher/updated training thereafter.
- Conducted training for DPP, DDC, and DFM inspectors, field staff and code compliance officers.
- Video taped training for annual refresher/update training in the form of a DVD

Appendix B.3 documents the training that was conducted along with the slide presentations, handouts and exercises used during the classes.

The responsible party for each of the tasks associated with Illicit Discharge is shown in Figure 5-1.

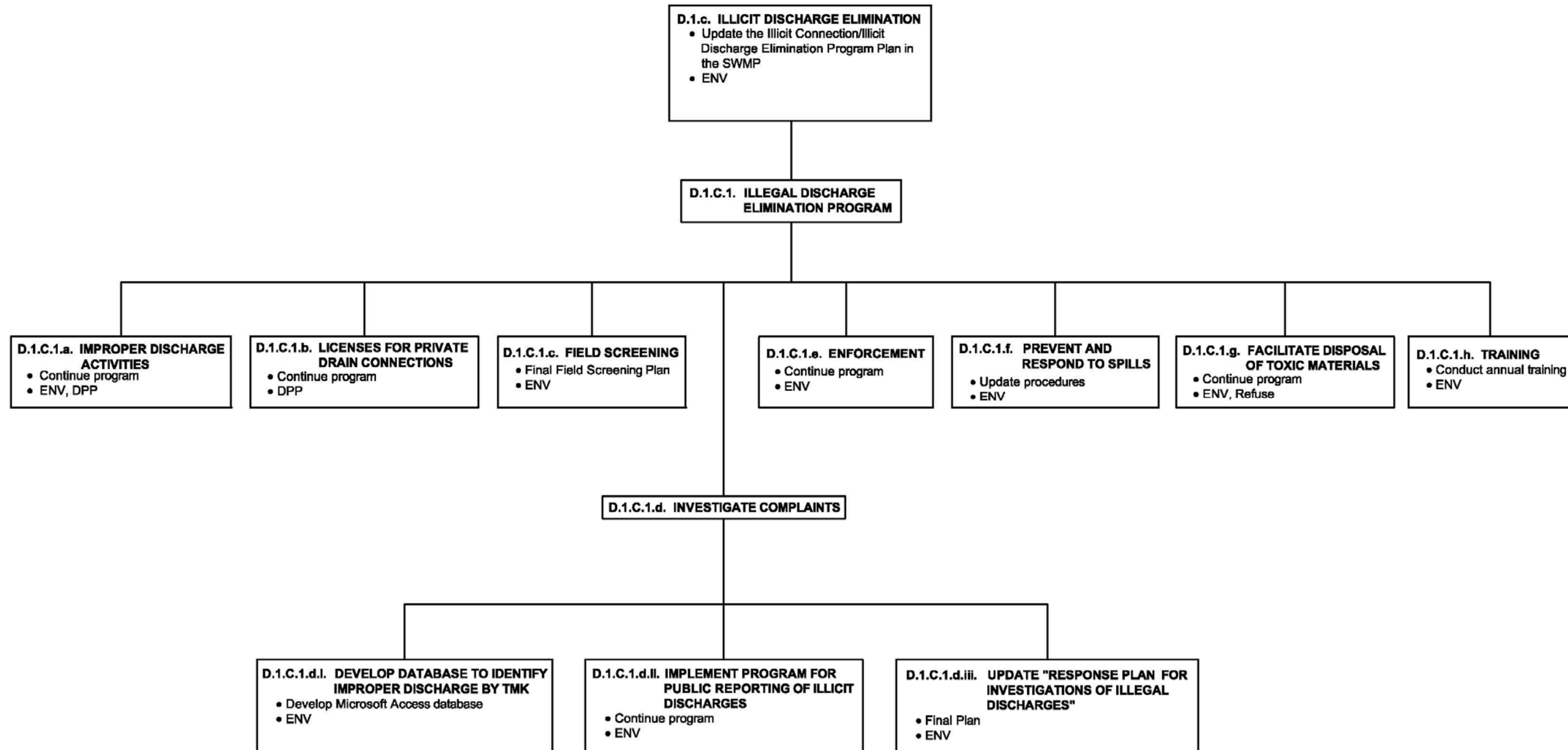


FIGURE 5-1
Responsible Agency
Illicit Discharge