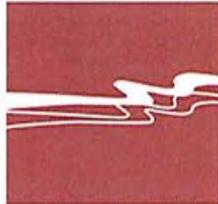


Illicit Discharge Detection and Elimination Plan (IDDE)

Approved August 2015

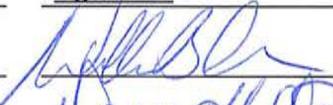
Prepared by



WALLACE GROUP®

In compliance with the provisions of the California State Water Resources Control Board Water Quality Order NO. 2013-0001DWQ , the City of Hollister is establishing this Illicit Discharge Detection and Elimination Plan (IDDE) to serve as a cooperative municipal strategy in concert with the City's Total Maximum Daily Load (TMDL) Waste Load Attainment Allocation Plan (WAAP) towards the City's storm water compliance. Following formal adoption by the City, this IDDE will become effective immediately. Subsequent actions must be consistent with this IDDE.

CITY OF HOLLISTER: APPROVAL SIGNATURES

<u>Title:</u>	<u>Name:</u>	<u>Signature:</u>	<u>Date:</u>
City Manager	William B. Avera		10-15-15
Utilities Engineer, Authorized Signatory	Danny Hillstock, P.E.		10-15-15

Pursuant to Section E.9.d (Illicit Discharge Detection and Elimination (IDDE) Source Investigation and Corrective Actions) and Section E.9.e (Spill Response Plan) of the Phase II Municipal Separate Storm Sewer System Permit (MS4 Permit), the city is required to develop an IDDE Source Investigation and Clean-up Procedures as well as a spill response plan.

The following plan summarizes the above requirements. It should be noted that this plan is not a standalone document and relies and references existing emergency response, sewage spill response plans, and municipal code. The City views this document as dynamic to allow for improvements as necessary.

1. Definition:

An Illicit discharge is any discharge to a municipal separate storm sewer that is not entirely composed of storm water, except discharges exempted by the State for discharge into the waters of the United States. Non-stormwater is any water flow that is not rain water. The City’s municipal storm drain collection system includes streets, gutters, storm drain inlets (DIs), drainage channels, and creeks and streams that drain into the San Benito River and Santa Ana Creek. In addition, most open drains that are not covered by a roof are connected or discharge to the City’s storm drain system and ultimately discharge into creeks and rivers. The City takes an active role in responding to various spills, such as sewage, hazardous, and non-stormwater discharges as these are illegal and are likely to have a major impact on the City and the State’s recreational waters.

2. Agency Roles and Responsibilities

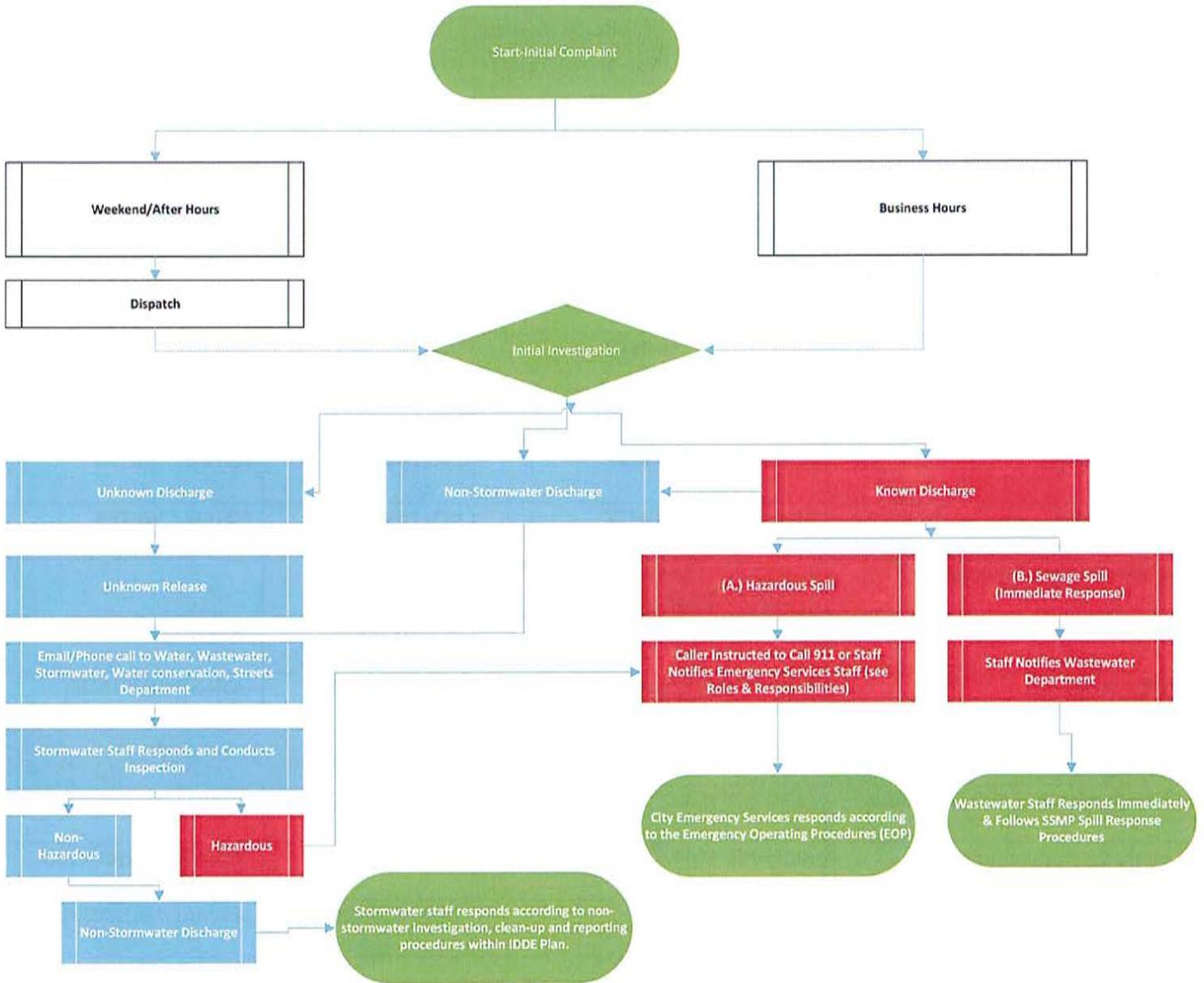
The table below provides contacts names and phone numbers for responsible City departments that respond to spills depending on the spill type. In addition, the table below includes phone numbers for external agencies that require notification.

DEPARTMENT AND AGENCY PHONE NUMBERS

Department or Agency	Primary Phone Number	Alternate Phone Number	Spill Type
CITY DEPARTMENTS			
Fire Department	(831) 636-4325 (Non-emergencies)	911 (Emergencies)	HAZARDOUS
Police Department	(831) 636-4330 (Non-emergencies)	911 (Emergencies)	HAZARDOUS
Community Services (Public Works)	(831) 636-4370 Administrative	911 (Emergencies)	NON-STORMWATER
Utilities Division-Wastewater	Main # (831) 636-4377	911 (Emergencies)	NON-STORMWATER
Henry Gonzales	Main # (831) 636-4377	(831) 636-4370	SEWAGE
Pete Galvan	Main # (831) 636-4377	(831) 636-4370	SEWAGE
Utilities Division-Water	Main # (831) 636-4377	(831) 636-4370	
Henry Gonzales	Main # (831) 636-4377	(831) 636-4370	POTABLE WATER
Dee J Burbank	Main # (831) 636-4377	(831) 636-4370	POTABLE WATER
Utilities Division-Stormwater	Main # (831) 636-4377 or 1-800-78-CRIME Anonymous	(831) 636-4370	
Danny Hillstock	Main # (831) 636-4377	(831) 636-4370	NON-STORMWATER
Utility Technician	Main # (831) 636-4377	(831) 636-4370	NON-STORMWATER
EXTERNAL AGENCIES			
CA Department of Fish & Wildlife	(800) 852-7550	(888) 334-2258	SEWAGE/HAZARDOUS
County Environmental Health	(805) 781-5544	(831) 636-4035	SEWAGE/HAZARDOUS
County Office of Emergency Services	(831) 636-4168	(831) 636-4000	SEWAGE/HAZARDOUS

RESPONSE PROCEDURE

The figure below provides procedures on how City staff responds to complaints received or referred from an external agency.



1. Investigation Procedures

The following investigation procedures are prioritized and are proposed as general guidelines, which should be followed to the extent that the procedures are appropriate for the situation. Details of individual investigation procedures are may not be captured below. Initial response and investigations activities are identified in greater detail in existing standard operating procedures for emergency response and sanitary sewer overflows.

A. Hazardous Spills

Investigation and clean-up procedures for hazardous material spills are contained in the Hazardous Material Response Plan and will be conducted by the Emergency Services Department (Fire and Police) as well as any other local fire/emergency response agencies through existing mutual aid agreements. Hazardous material spills require immediate response, containment, and clean-up.

B. Sewage Spills -Sanitary Sewer Overflows-(SSOs)

Investigation and clean-up procedures for sewage spills are contained in the City's Sanitary Sewer Management Plan (SSMP) and will be conducted by Public Works Wastewater Division staff. Sewage spills require immediate response, containment, and clean-up and are to be reported immediately to the local Health Department, and the Regional Board.

C. Non-Stormwater Discharges (Routine & Non-Routine)

This section outlines the methods used to track non-stormwater discharges within the City's storm sewer system. For non-routine investigations into non-stormwater discharges, City staff determines if the release/spill is not hazardous materials or sewage, then stormwater staff initiates investigation procedures outlined in the following steps. In general, City staff shall conduct investigations to identify and locate the source of the illicit discharges within 72 hours (3 days) of discovery. It should be noted that the methods that are used may vary depending on the nature of the non-stormwater complaint (i.e., duration and amount of discharge, complexity of stormwater network in immediate area, etc.). The following steps are to be used when conducting the investigation.

Routine- Scheduled, dry season weather outfall site visits conducted twice annually at the City's outfalls is to be conducted twice a year. Some general outfall survey parameters are listed below:

- Conduct after a dry period of at least 48 hours,
- If possible conduct early morning, or early afternoon, when people are home, which may increase the chances of catching an illicit connection.

Non-Routine- Random observation of non-stormwater discharges anytime they are observed.

Within 72 hours of discovering a non-stormwater discharge, City staff shall:

- 1) Document the Discharge: Conduct an investigation by creating a case file that highlights the date and time of discovery, field notes, visual observations and photographs.
- 2) Sample at Outfall:

The City shall take a field sample at any outfall with flowing or ponding water if it is 72 hours past the last rain event. Water quality data (if collected and analyzed), and a copy of the outfall inspection form (OR Field Sheet).
- 3) Immediate Investigatory Response and Public Complaint: In most cases, public complainants know where the discharge source is generating and can direct staff to the source immediately. In addition, staff may immediately detect the source of discharge by following the flow from the curb and gutter. Staff can immediately respond and cease the discharge.
- 4) Storm Drain Network Investigation: In some rare cases, staff will encounter dry weather flows in the outfall or flows generating from unknown sources. By using the existing stormwater atlas and GIS layers,

systematically isolate the area from which the polluted discharge generated. The general concept is to use existing maps to allow staff to strategically and quickly investigate up the storm sewer lines.

- (a) Consult the Stormwater Atlas to identify the correct outfall and major storm sewer branches that lead to the outfall. Map out street names and locations of storm sewer manholes. Use the GIS land use overlay to better understand the potential sources in the immediate area.
 - (b) Starting from the outfall, staff will observe flow at the nearest upstream manhole or junction. Staff shall systematically move up the trunk at each manhole or junction to observe flows, foul odors, colors, oil sheen, foam (soapy materials), or water quality screenings. Investigation may require additional field staff to investigate the unknown discharges especially with forked storm sewer branches.
 - (c) Staff shall continue the manhole observation working upstream from the outfall. However, if staff discovers a manhole or junction with no evidence of a discharge (or "clean" manhole), then the discharge may be located between two manholes or along another storm sewer line.
 - (d) Staff shall work downstream from the "clean" manhole to better isolate the location of the discharge. This can be accomplished by investigating drain inlets and observing and flows, odors, color, foam, or oil sheen.
 - (e) If visual observation do not allow staff to identify the source, smoke testing, dye testing, or CCTV may be necessary.
- 5) Catchment Area Investigation: By using existing land use information and storm drain network information, staff is able to quickly determine potential sources provided that there is a unique characteristic of the discharge that can be directly tied to a specific land use or specific facility.
- (a) Consult the GIS Land Use overlay, industrial/commercial inventory list, active construction site list to better understand the potential sources located in the immediate area, which have the potential to discharge to the storm sewer system. Based on the known facilities (and associated activities) located in the catchment area, staff can use the following visual observations to readily identify the source.

Common Discharges and Associated Activities

Observed Discharges Entering DI	Source Activities
Sediment Laden Water	Construction Activities Roadway Work Outdoor work/Landscaping
Oil Spill	Fueling Operations Vehicle Maintenance
Soapy Discharge	Power Washing Vehicle/Equipment Washing Mobile Cleaning Operations Laundry Household Discharges
Grease Spills	Restaurant Discharge Grease interceptor
Sewage Spills	Failing Septic System Sanitary Sewage Overflow

(b) Once staff determines the observed discharge (with additional water quality field testing if necessary), staff will conduct “Windshield Survey” to better identify the specific source facility.

(c) Staff shall conduct individual facility inspections to better identify the Illicit discharge. In which case staff shall initiate contact with the facility owner.

6) Dry Weather Water Quality Screening: Pursuant to Section E.9.c of the MS4 Permit, the City is required to conduct dry weather water quality sampling if non-stormwater is encountered at any outfall more than 72 hours after the last rain event. During investigation, City staff will be equipped with field sampling equipment (e.g., field test strips and probes) in order to get immediate feedback on the discharge characteristics. The following table provides water quality parameters that can be used as indicators for possible non-stormwater discharges.

Indicator Parameters

Parameters ¹	Discharge Indication	Concentration Range
F. Coli	Fecal Bacteria	>200 CFU/100 mL
Ammonia	Sewage Fertilizer	>50mg/L
Detergents/Surfactants (MBAS)	Sewage Wash Water Industrial Discharges	0 to 1,400 ppm
pH	Wash Water Industrial Discharges	<5 or >9
Chlorine	Water Line Break Swimming Pool Discharge Industrial Discharges	0 to 10 ppm

1 – Water quality parameters identified above will be collected through the use of field test strips and indicator test tubes. ppm – Parts Per Million s.u. – Standard Units

In accordance with Section E.9.c(ii) of the MS4 Permit, the City is required to sample for ammonia, color, conductivity, detergents/surfactants, Fluoride, hardness, pH, potassium, and turbidity when dry weather flows are encountered. This section of the MS4 Permit also allows modifications to the indicator parameters provided that the modifications are justified. The City proposes to eliminate color, conductivity, fluoride, hardness, potassium, and turbidity for the following purpose.

- (a) Color – This is not a reliable indicator for non-stormwater discharges. Ammonia, MBAS, pH, and chlorine in combination are stronger indicators for non-stormwater discharges.
- (b) Conductivity - This is not a reliable indicator for non-stormwater discharges. Ammonia, MBAS, pH, and chlorine in combination are stronger indicators for non-stormwater discharges.
- (c) Fluoride – The City does not use Fluoride in its community water system.
- (d) Hardness – This is not a reliable indicator for non-stormwater discharges. Ammonia, MBAS, pH, and chlorine in combination are stronger indicators for non-stormwater discharges.
- (e) Potassium – The City believes that this parameter is not needed as MBAS, pH, and Chloride are suitable indicators for industrial discharges. Potassium would be an additional cost and would be redundant.
- (f) Turbidity – This is not a reliable indicator for non-stormwater discharges. Ammonia, MBAS, pH, and chlorine in combination are stronger indicators for non-stormwater discharges.

Investigation greater than 72 hours:

If an investigation lasts longer than 72 hours or if the Illicit discharge source was not located, staff shall document the actions taken to investigate the Illicit discharge, details of the discharge (color, odor, water quality, duration, quantity, etc.), and any necessary follow-up investigations of the suspected area.

Authorized Non-Stormwater Discharges:

If the non-stormwater discharge is determined to be an authorized non-stormwater discharge authorized by the MS4 Permit or authorized through another National Pollutant Discharge Elimination System (NPDES) permit, then staff is not required to conduct clean-up and enforcement activities. It should be noted that there are multiple natural spring seep located on the west and east side of the City.

D. Priority Area Investigation:

In accordance with Section E.9.b (ii)(e) of the General Permit) the City is required to develop procedures to proactively investigate/identify Illicit discharges originating from priority areas identified in E.9.a (ii)(c). The investigations shall occur once over the five year term of the General Permit. The investigations shall include field observations, field screening, inspections, and other appropriate effective survey methods as necessary.

2. Field Preparation

A checklist of suggested supply items is included below.

Suggested Supply List	
<i>Field</i>	<i>Lab</i>
Field Binder with maps	Detergent test kits
Camera	Fluoride meter + reagents
GPS Unit	Potassium meter + standards
Measuring tape	Bacteria plates
Outfall marker	Incubator
Field Tape (50' min)	Sterile 1-ml pipettes
Stopwatch	Alconox or other cleaning solution
Ping-Pong ball	Deionized water
Flashlight	Stopwatch
Graduated milk jug (marked at 1 L)	Gloves
Gloves	Filter
Dipper and/or telescoping rod	Filter paper
Pencils/Pens	Material Data Safety Sheets
Sharpies	
First Aid Kit	
Deionized Water	
Sterile sample bottles*	
Cooler and ice packs	
Nalgene bottles*	
Ammonia meter + reagents	

Chem wipes	
Ziploc Bags	
Waders	
*1 bottle each/site plus extra for duplicates	

A checklist of items to include in the Field Binders is provided below:

- Contact Numbers for Field Crews (i.e. cell phone number)
- Meeting Location/Address
- Safety Procedures and Emergency Numbers
- Location of Nearest Hospital
- Field Maps
- Chain-of Custody Form
- Outfall Reconnaissance Inventory Forms (see Appendix A)

Preparation of supplies should include the following:

- Ensure batteries in cameras, GPS units, meters, etc. are charged.
- Ensure all sample bottles are cleaned with Alcanox or similar cleaning product.
- Remove old labels from sample bottles and replace with new labels, if necessary.
- Ensure you have one bottle for each anticipated outfall as well as extra bottles for randomly selected replicates, if needed.
- Freeze all ice packs.
- Set temperature of incubator to that specified by manufacturer for bacterium of interest

3. Clean-Up Procedures

The City's clean-up procedures are identified in the existing documents:

- A. Hazardous Materials: Section 2.3.1. of the Emergency Operation Plan (Annex B) of the Hazardous Material Response Plan
- B. Sewage Overflows: Overflow Emergency Response Section of the Sanitary Sewer Management Plan (SSMP)
- C. Non-Stormwater Discharges: Clean-up Activities will follow the procedures identified in the City's Sewer System Management Plan. However, if staff determines that the discharges are an authorized non-stormwater discharges, then clean-up activities are not required.

4. Reporting Procedures

The City's reporting procedures are identified in existing documents and are summarized below.

- A. Hazardous Materials: Reporting procedures for hazardous material spills are contained in the Hazardous Material Response Plan. Reporting procedures include communications with San Luis Obispo County Environmental Health and Safety, Office of Emergency Services, local Fire agencies that participate in the mutual aid agreement.
- B. Sewage Overflow: Reporting procedures for sewage overflows are contained in the SSMP. Reporting procedures include communications with Office of Emergency Services and the Regional Water Quality Control Board. In addition, City staff is required to report the spill details on the California Integrated Water Quality System (CWIQS) database. Spills to water ways require reporting three business days after the spill was discovered. All other spills require reporting within 30 days. Details of the spill are also documented and kept with the City.
- C. Non-Stormwater Discharges: Reporting procedure for non-stormwater discharges include communications with City Emergency Services, local Environmental Health and Safety, and Office of Emergency Services if the discharge is determined to be a threat to public health and safety. In all other circumstances, stormwater staff shall document the discharge and notify the appropriate staff for clean-up. The incident shall be documented (date, time, location, responsible party, enforcement actions, referrals to another agency, corrective actions, follow-up date) in the Illicit discharge database.

5. Enforcement Procedures

The following enforcement and corrective actions procedures are legally authorized by **Chapter 17.16.140** and **Chapter 8.32** of the City's Municipal Code. It should be noted that sewage spills that are a result of failed septic systems or an act of vandalism are subject to the following enforcement procedures. In addition, hazardous materials released or dumped within the City's jurisdiction by a private party are subject to the following enforcement procedures.

Enforcement Procedures

Enforcement Action	Enforcement Trigger
Verbal Communication by Code Enforcement Official	<ul style="list-style-type: none">• Discharge is insignificant (small volume).• Discharge did not leave private property or reach public right of way (street and/or DI).• Discharge did not present a risk to public health and/or the environment.• Discharge left private property. Did not reach DI or waterway.
Compliance Order/ Notice to Abate	<ul style="list-style-type: none">• Discharge reached public right of way, but is not a threat to public health and/or the environment.• Discharge can be eliminated, cleaned up, and prevented in the future.• Discharge is a threat to the environment or public health.• Discharge is a hazardous or toxic waste.
Hearing (Noticed)	<ul style="list-style-type: none">• Discharger is recalcitrant
Cease and Desist Order/Penalties	<ul style="list-style-type: none">• Discharge was not eliminated.

The City Code Enforcement Official is authorized to enter the premises and take actions to abate a discharge if the owner is unavailable or recalcitrant. If the City is required to enter the premises and take actions to stop a discharge then the owner would be required to reimburse the City's clean-up, abatement, restoration and administrative costs. Pursuant to **Section 17.16.140 C. 2** of the Municipal Code, the city may seek recovery of charges. T

6. Public Education and Outreach

An IDDE Plan should address how the City will integrate the key concepts of Illicit Discharge prevention into municipal and public education. The City shall integrate IDDE key concepts into BMPs materials that are planned to be distributed annually as outlined within the City's 2015 TMDL-WAAP and Program Effectiveness Assessment and Implementation Plan.

Suggested Educational Topics

Key planned educational topics are listed below.

- Education of public employees, businesses, and the general public of hazards associated with illicit discharges and improper disposal of waste
- Education on Fats, Oils, and Grease Control as sanitary sewer overflows (SSOs) account for approximately 52% of spill survey respondents. (Center for Watershed Protections Oct. 2004)
- Education to prevent sewage dumping from recreational vehicles (33% of spill survey respondents)
- As shown in the table below, education tailored to land uses and specific audiences regarding activities that produce indirect discharges.

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 and RV/boat holding tank effluent) • Equipment Washdowns • Lawn/Landscape Watering • Septic System Maintenance

Commercial	<ul style="list-style-type: none"> • Campgrounds/RV parks • 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 	<ul style="list-style-type: none"> • Building Maintenance (power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (power washing) • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing • Washdown of greasy equipment and
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 	<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 • Maintenance Depots • Municipal Fleet Storage Areas • Ports • Public Works 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

- Educational activities, public information activities, and other appropriate activities to facilitate the proper management and disposal of used oil and toxic materials
- Education on the public health and safety benefits of sewage-free streams. Effective programs publicize the danger of sewage discharges, and notify the public and elected officials about the discharges that need to be prevented or corrected.

- Leverage discharge prevention as a tool of watershed restoration. Discharge prevention is considered one of the seven primary practices used to restore urban watersheds (Schueler, 2004). Effective programs integrate illicit discharge control as a part of a comprehensive effort to restore local watersheds.
- Utilize assistance from Parks, Schools, Community liaison office, Civic and Watershed groups
- Use of community internet websites to post outreach materials
- Identification of community events where message can be spread
- Leverage of inter-agency communication mechanisms

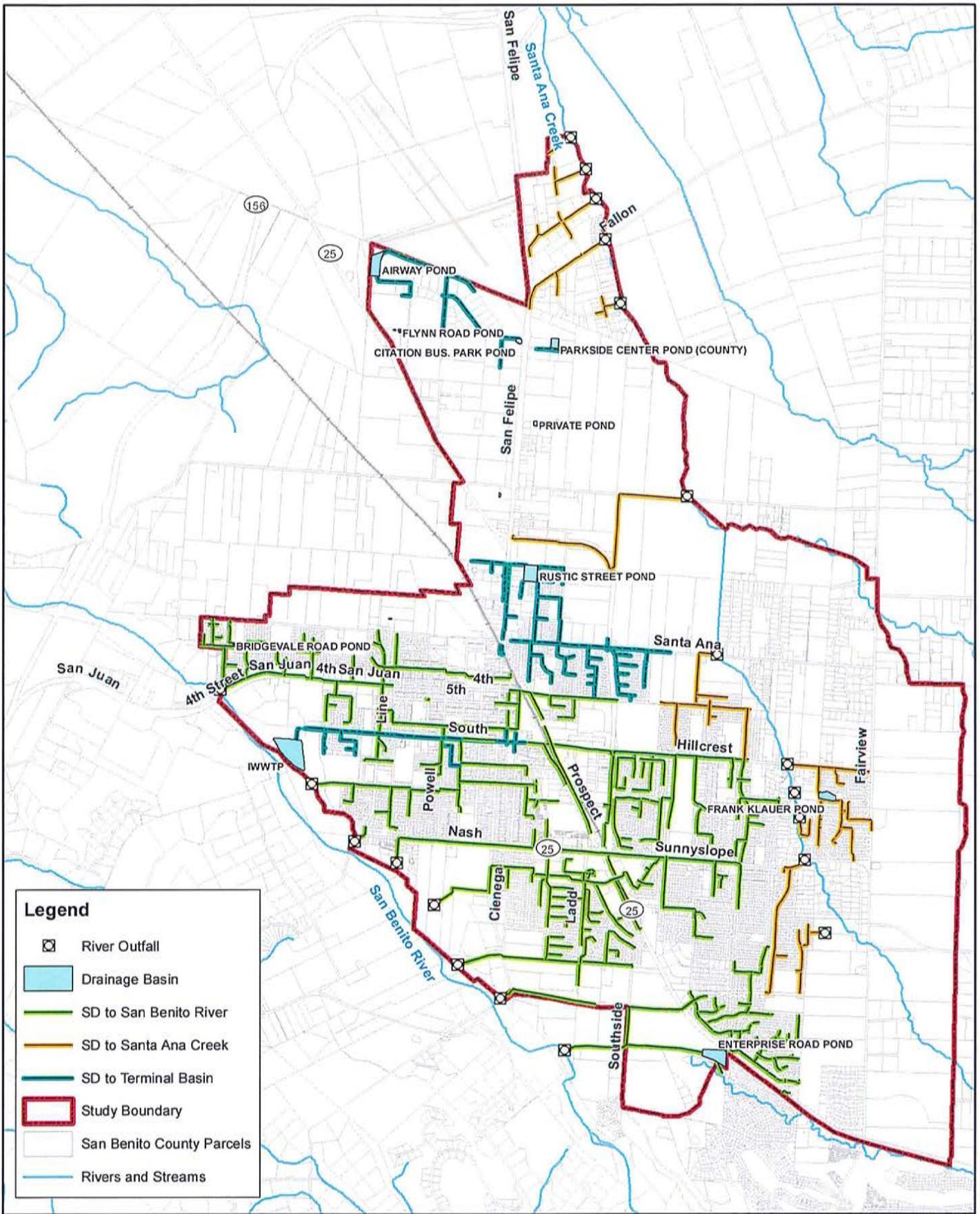
7. Best Management Practices (BMPs)

The following California Stormwater Quality Association (CASQA) BMP cut sheets are included in Appendix C for reference:

- **SC-10** Non-Stormwater Discharges
- **SC-11** Spill Prevention, Control and Cleanup

APPENDIX A:

STORM DRAIN COLLECTION SYSTEM MAP



APPENDIX B

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.):	Last 24 hours:	Last 48 hours:
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

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: _____	
<input type="checkbox"/> In-Stream	(applicable when collecting samples)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume	Liter	Bottle	
	Time to fill	Sec		
<input type="checkbox"/> Flow #2	Flow depth	In	Tape measure	
	Flow width	____' ____"	Tape measure	
	Measured length	____' ____"	Tape measure	
	Time of travel		S	Stop watch
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? Yes No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
			1 - Faint	2 - Easily detected	3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? Yes No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

Section 6: Overall Outfall Characterization

Unlikely Potential (presence of two or more indicators) Suspect (one or more indicators with a severity of 3) Obvious

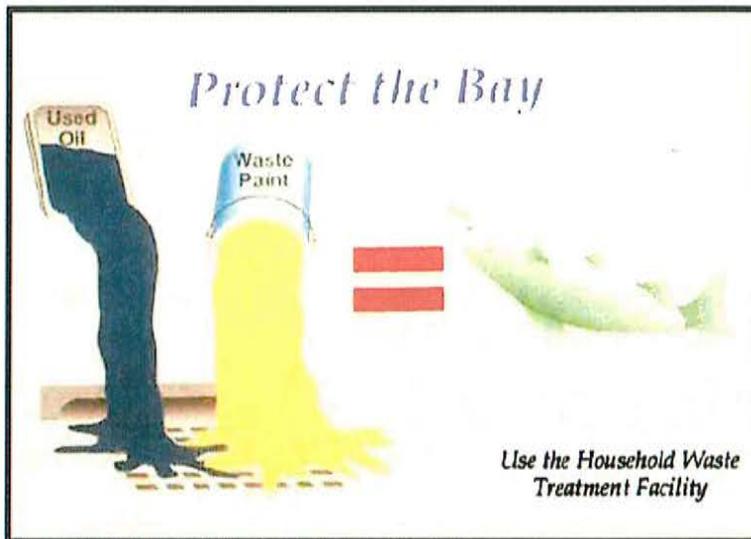
Section 7: Data Collection

- Sample for the lab? Yes No
- If yes, collected from: Flow Pool
- Intermittent flow trap set? Yes No If Yes, type: OBM Caulk dam

Section 8: Any Non-Illlicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

APPENDIX C

IDDE BMPs



Graphic by: Margie Winter

Description

Non-stormwater discharges are those flows that do not consist entirely of stormwater. For municipalities non-stormwater discharges present themselves in two situations. One is from fixed facilities owned and/or operated by the municipality. The other situation is non-stormwater discharges that are discovered during the normal operation of a field program. Some non-stormwater discharges do not include pollutants and may be discharged to the storm drain. These include uncontaminated groundwater and natural springs. There are also some non-stormwater discharges that typically do not contain pollutants and may be discharged to the storm drain with conditions. These include car washing, and surface cleaning. However, there are certain non-stormwater discharges that pose environmental concern. These discharges may originate from illegal dumping or from internal floor drains, appliances, industrial processes, sinks, and toilets that are connected to the nearby storm drainage system. These discharges (which may include: process waste waters, cooling waters, wash waters, and sanitary wastewater) can carry substances (such as paint, oil, fuel and other automotive fluids, chemicals and other pollutants) into storm drains. The ultimate goal is to effectively eliminate non-stormwater discharges to the stormwater drainage system through implementation of measures to detect, correct, and enforce against illicit connections and illegal discharges.

Approach

The municipality must address non-stormwater discharges from its fixed facilities by assessing the types of non-stormwater discharges and implementing BMPs for the discharges determined to pose environmental concern. For field programs

Objectives

- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	<input checked="" type="checkbox"/>
Nutrients	<input checked="" type="checkbox"/>
Trash	<input checked="" type="checkbox"/>
Metals	<input checked="" type="checkbox"/>
Bacteria	<input checked="" type="checkbox"/>
Oil and Grease	<input checked="" type="checkbox"/>
Organics	<input checked="" type="checkbox"/>
Oxygen Demanding	<input checked="" type="checkbox"/>



the field staff must be trained to know what to look for regarding non-stormwater discharges and the procedures to follow in investigating the detected discharges.

Suggested Protocols**Fixed Facility***General*

- Post “No Dumping” signs with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as “Dump No Waste Drains to Stream” stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- Landscaping and beautification efforts of hot spots might also discourage future dumping, as well as provide open space and increase property values.
- Lighting or barriers may also be needed to discourage future dumping.

Illicit Connections

- Locate discharges from the fixed facility drainage system to the municipal storm drain system through review of “as-built” piping schematics.
- Use techniques such as smoke testing, dye testing and television camera inspection (as noted below) to verify physical connections.
- Isolate problem areas and plug illicit discharge points.

Visual Inspection and Inventory

- Inventory and inspect each discharge point during dry weather.
- Keep in mind that drainage from a storm event can continue for several days following the end of a storm and groundwater may infiltrate the underground stormwater collection system. Also, non-stormwater discharges are often intermittent and may require periodic inspections.

Review Infield Piping

- Review the “as-built” piping schematic as a way to determine if there are any connections to the stormwater collection system.
- Inspect the path of floor drains in older buildings.

Smoke Testing

- Smoke testing of wastewater and stormwater collection systems is used to detect connections between the two systems.

- During dry weather the stormwater collection system is filled with smoke and then traced to sources. The appearance of smoke at the base of a toilet indicates that there may be a connection between the sanitary and the stormwater system.

Dye Testing

- A dye test can be performed by simply releasing a dye into either your sanitary or process wastewater system and examining the discharge points from the stormwater collection system for discoloration.

TV Inspection of Storm Sewer

- TV Cameras can be employed to visually identify illicit connections to the fixed facility storm drain system.

Illegal Dumping

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Clean up spills on paved surfaces with as little water as possible. Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill cleanup company or Hazmat team may be necessary.
- See fact sheet SC-11 Spill Prevention, Control, and Clean Up.

Field Program

General

- Develop clear protocols and lines of communication for effectively prohibiting non-stormwater discharges, especially ones that involve more than one jurisdiction and those that are not classified as hazardous, which are often not responded to as effectively as they need to be.
- Stencil storm drains, where applicable, to prevent illegal disposal of pollutants. Storm drain inlets should have messages such as "Dump No Waste Drains to Stream" stenciled next to them to warn against ignorant or intentional dumping of pollutants into the storm drainage system.
- See SC-74 Stormwater Drainage System Maintenance for additional information.

Field Inspection

- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- During routine field program maintenance field staff should look for evidence of illegal discharges or illicit connection:
 - Is there evidence of spills such as paints, discoloring, etc.
 - Are there any odors associated with the drainage system
 - Record locations of apparent illegal discharges/illicit connections and notify appropriate investigating agency.
- If trained, conduct field investigation of non-stormwater discharges to determine whether they pose a threat to water quality.

Recommended Complaint Investigation Equipment

- **Field Screening Analysis**
 - pH paper or meter
 - Commercial stormwater pollutant screening kit that can detect for reactive phosphorus, nitrate nitrogen, ammonium nitrogen, specific conductance, and turbidity
 - Sample jars
 - Sample collection pole
 - A tool to remove access hole covers
- **Laboratory Analysis**
 - Sample cooler
 - Ice
 - Sample jars and labels
 - Chain of custody forms.
- **Documentation**
 - Camera
 - Notebook
 - Pens
 - Notice of Violation forms

Educational materials

Reporting

- A database is useful for defining and tracking the magnitude and location of the problem.
- Report prohibited non-stormwater discharges observed during the course of normal daily activities so they can be investigated, contained and cleaned up or eliminated.
- Document that non-stormwater discharges have been eliminated by recording tests performed, methods used, dates of testing, and any onsite drainage points observed.
- Maintain documentation of illicit connection and illegal dumping incidents, including significant conditionally exempt discharges that are not properly managed.

Enforcement

- Educate the responsible party if identified on the impacts of their actions, explain the stormwater requirements, and provide information regarding Best Management Practices (BMP), as appropriate. Initiate follow-up and/or enforcement procedures.
- If an illegal discharge is traced to a commercial, residential or industrial source, conduct the following activities or coordinate the following activities with the appropriate agency:
 - Contact the responsible party to discuss methods of eliminating the non-stormwater discharge, including disposal options, recycling, and possible discharge to the sanitary sewer (if within POTW limits).
 - Provide information regarding BMPs to the responsible party, where appropriate.
 - Begin enforcement procedures, if appropriate.
 - Continue inspection and follow-up activities until the illicit discharge activity has ceased.
- If an illegal discharge is traced to a commercial or industrial activity, coordinate information on the discharge with the jurisdiction's commercial and industrial facility inspection program.

Training

- Train technical staff to identify and document illegal dumping incidents.
- Well-trained employees can reduce human errors that lead to accidental releases or spills. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur. Employees should be familiar with the Spill Prevention Control and Countermeasure Plan.
- Train employees to identify non-stormwater discharges and report them to the appropriate departments.
- Train staff who have the authority to conduct surveillance and inspections, and write citations for those caught illegally dumping.

- Train municipal staff responsible for surveillance and inspection in the following:
 - OSHA-required Health and Safety Training (29 CFR 1910.120) plus annual refresher training (as needed).
 - OSHA Confined Space Entry training (Cal-OSHA Confined Space, Title 8 and federal OSHA 29 CFR 1910.146).
 - Procedural training (field screening, sampling, smoke/dye testing, TV inspection).
- Educate the identified responsible party on the impacts of his or her actions.

Spill Response and Prevention

- See SC-11 Spill Prevention Control and Clean Up

Other Considerations

- The elimination of illegal dumping is dependent on the availability, convenience, and cost of alternative means of disposal. The cost of fees for dumping at a proper waste disposal facility are often more than the fine for an illegal dumping offense, thereby discouraging people from complying with the law. The absence of routine or affordable pickup service for trash and recyclables in some communities also encourages illegal dumping. A lack of understanding regarding applicable laws or the inadequacy of existing laws may also contribute to the problem.
- Municipal codes should include sections prohibiting the discharge of soil, debris, refuse, hazardous wastes, and other pollutants into the storm drain system.
- Many facilities do not have accurate, up-to-date schematic drawings.
- Can be difficult to locate illicit connections especially if there is groundwater infiltration.

Requirements***Costs***

- Eliminating illicit connections can be expensive especially if structural modifications are required such re-plumbing cross connections under an existing slab.
- Minor cost to train field crews regarding the identification of non-stormwater discharges. The primary cost is for a fully integrated program to identify and eliminate illicit connections and illegal dumping. However, by combining with other municipal programs (i.e. pretreatment program) cost may be lowered.
- Municipal cost for containment and disposal may be borne by the discharger.

Maintenance

Not applicable

Supplemental Information

Further Detail of the BMP

What constitutes a “non-stormwater” discharge?

- Non-stormwater discharges are discharges not made up entirely of stormwater and include water used directly in the manufacturing process (process wastewater), air conditioning condensate and coolant, non-contact cooling water, cooling equipment condensate, outdoor secondary containment water, vehicle and equipment wash water, landscape irrigation, sink and drinking fountain wastewater, sanitary wastes, or other wastewaters.

Permit Requirements

- Current municipal NPDES permits require municipalities to effectively prohibit non-stormwater discharges unless authorized by a separate NPDES permit or allowed in accordance with the current NPDES permit conditions. Typically the current permits allow certain non-stormwater discharges in the storm drain system as long as the discharges are not significant sources of pollutants. In this context the following non-stormwater discharges are typically allowed:
 - Diverted stream flows;
 - Rising found waters;
 - Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
 - Uncontaminated pumped ground water;
 - Foundation drains;
 - **Springs;**
 - Water from crawl space pumps;
 - Footing **drains;**
 - Air conditioning condensation;
 - Flows from riparian habitats and wetlands;
 - Water line and hydrant flushing ;
 - Landscape irrigation;
 - Planned and unplanned discharges from potable water sources;
 - Irrigation water;
 - Individual residential car washing; and
 - Lawn watering.

Municipal facilities subject to industrial general permit requirements must include a certification that the stormwater collection system has been tested or evaluated for the presence of non-stormwater discharges. The state's General Industrial Stormwater Permit requires that non-stormwater discharges be eliminated prior to implementation of the facility's SWPPP.

Illegal Dumping

- Establish a system for tracking incidents. The system should be designed to identify the following:
 - **Illegal dumping hot spots**
 - Types and quantities (in some cases) of wastes
 - Patterns in time of occurrence (time of day/night, month, or year)
 - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
 - **Responsible parties**

Outreach

One of the keys to success of reducing or eliminating illegal dumping is increasing the number of people on the street who are aware of the problem and who have the tools to at least identify the incident, if not correct it. There are a number of ways of accomplishing this:

- Train municipal staff from all departments (public works, utilities, street cleaning, parks and recreation, industrial waste inspection, hazardous waste inspection, sewer maintenance) to recognize and report the incidents.
- Deputize municipal staff who may come into contact with illegal dumping with the authority to write illegal dumping tickets for offenders caught in the act (see below).
- Educate the public. As many as 3 out of 4 people do not understand that in most communities the storm drain does not go to the wastewater treatment plant. Unfortunately, with the heavy emphasis in recent years on public education about solid waste management, including recycling and household hazardous waste, the sewer system (both storm and sanitary) has been the likely recipient of cross-media transfers of waste.
- Provide the public with a mechanism for reporting incidents such as a hot line and/or door hanger (see below).
- Help areas where incidents occur more frequently set up environmental watch programs (like crime watch programs).
- Train volunteers to notice and report the presence and suspected source of an observed pollutant to the appropriate public agency.

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of non-stormwater discharges. The state's General Industrial Stormwater Permit requires that non-stormwater discharges be eliminated prior to implementation of the facility's SWPPP.

Storm Drain Stenciling

- Stencil storm drain inlets with a message to prohibit illegal dumpings, especially in areas with waste handling facilities.
- Encourage public reporting of improper waste disposal by a HOTLINE number stenciled onto the storm drain inlet.
- See Supplemental Information section of this fact sheet for further detail on stenciling program approach.

Oil Recycling

- Contract collection and hauling of used oil to a private licensed used oil hauler/recycler.
- Comply with all applicable state and federal regulations regarding storage, handling, and transport of petroleum products.
- Create procedures for collection such as; collection locations and schedule, acceptable containers, and maximum amounts accepted.
- The California Integrated Waste Management Board has a Recycling Hotline, (800) 553-2962, that provides information and recycling locations for used oil.

Household Hazardous Waste

- Provide household hazardous waste (HHW) collection facilities. Several types of collection approaches are available including permanent, periodic, or mobile centers, curbside collection, or a combination of these systems.

Training

- Train municipal employees and contractors in proper and consistent methods for waste disposal.
- Train municipal employees to recognize and report illegal dumping.
- Train employees and subcontractors in proper hazardous waste management.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Federal Regulations (RCRA, SARA, CERCLA) and state regulations exist regarding the disposal of hazardous waste.
- Municipalities are required to have a used oil recycling element and a HHW element within their integrated waste management plan.
- Significant liability issues are involved with the collection, handling, and disposal of HHW.

Examples

The City of Palo Alto has developed a public participation program for reporting dumping violations. When a concerned citizen or public employee encounters evidence of illegal dumping, a door hanger (similar in format to hotel "Do Not Disturb" signs) is placed on the front doors in the neighborhood. The door hanger notes that a violation has occurred in the neighborhood, informs the reader why illegal dumping is a problem, and notes that illegal dumping carries a significant financial penalty. Information is also provided on what citizens can do as well as contact numbers for more information or to report a violation.

The Port of Long Beach has a state of the art database incorporating storm drain infrastructure, potential pollutant sources, facility management practices, and a pollutant tracking system.

The State Department of Fish and Game has a hotline for reporting violations called CalTIP (1-800-952-5400). The phone number may be used to report any violation of a Fish and Game code (illegal dumping, poaching, etc.).

The California Department of Toxic Substances Control's Waste Alert Hotline, 1-800-69TOXIC, can be used to report hazardous waste violations.

References and Resources

<http://www.stormwatercenter.net/>

California's Nonpoint Source Program Plan <http://www.co.clark.wa.us/pubworks/bmpman.pdf>

King County Stormwater Pollution Control Manual - <http://dnr.metrokc.gov/wlr/dss/spcm.htm>

Orange County Stormwater Program,
http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program
(<http://www.projectcleanwater.org>)

Santa Clara Valley Urban Runoff Pollution Prevention Program
http://www.securppp-w2k.com/pdf%20documents/PS_ICID.PDF

Spill Prevention, Control & Cleanup SC-11



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Spills and leaks, if not properly controlled, can adversely impact the storm drain system and receiving waters. Due to the type of work or the materials involved, many activities that occur either at a municipal facility or as a part of municipal field programs have the potential for accidental spills and leaks. Proper spill response planning and preparation can enable municipal employees to effectively respond to problems when they occur and minimize the discharge of pollutants to the environment.

Approach

- An effective spill response and control plan should include:
 - Spill/leak prevention measures;
 - Spill response procedures;
 - Spill cleanup procedures;
 - Reporting; and
 - Training
- A well thought out and implemented plan can prevent pollutants from entering the storm drainage system and can be used as a tool for training personnel to prevent and control future spills as well.

Pollution Prevention

- Develop and implement a Spill Prevention Control and Response Plan. The plan should include:

Targeted Constituents

Sediment	
Nutrients	<input checked="" type="checkbox"/>
Trash	
Metals	<input checked="" type="checkbox"/>
Bacteria	
Oil and Grease	<input checked="" type="checkbox"/>
Organics	<input checked="" type="checkbox"/>
Oxygen Demanding	<input checked="" type="checkbox"/>



SC-11 Spill Prevention, Control & Cleanup

- A description of the facility, the address, activities and materials involved
- Identification of key spill response personnel
- Identification of the potential spill areas or operations prone to spills/leaks
- Identification of which areas should be or are bermed to contain spills/leaks
- Facility map identifying the key locations of areas, activities, materials, structural BMPs, etc.
- Material handling procedures
- Spill response procedures including:
 - Assessment of the site and potential impacts
 - Containment of the material
 - Notification of the proper personnel and evacuation procedures
 - Clean up of the site
 - Disposal of the waste material and
 - Proper record keeping
- Product substitution – use less toxic materials (i.e. use water based paints instead of oil based paints)
- Recycle, reclaim, or reuse materials whenever possible. This will reduce the amount of materials that are brought into the facility or into the field.

Suggested Protocols

Spill/Leak Prevention Measures

- If possible, move material handling indoors, under cover, or away from storm drains or sensitive water bodies.
- Properly label all containers so that the contents are easily identifiable.
- Berm storage areas so that if a spill or leak occurs, the material is contained.
- Cover outside storage areas either with a permanent structure or with a seasonal one such as a tarp so that rain can not come into contact with the materials.
- Check containers (and any containment sumps) often for leaks and spills. Replace containers that are leaking, corroded, or otherwise deteriorating with containers in good condition. Collect all spilled liquids and properly dispose of them.

Spill Prevention, Control & Cleanup SC-11

- Store, contain and transfer liquid materials in such a manner that if the container is ruptured or the contents spilled, they will not discharge, flow or be washed into the storm drainage system, surface waters, or groundwater.
- Place drip pans or absorbent materials beneath all mounted taps and at all potential drip and spill locations during the filling and unloading of containers. Any collected liquids or soiled absorbent materials should be reused/recycled or properly disposed of.
- For field programs, only transport the minimum amount of material needed for the daily activities and transfer materials between containers at a municipal yard where leaks and spill are easier to control.
- If paved, sweep and clean storage areas monthly, do not use water to hose down the area unless all of the water will be collected and disposed of properly.
- Install a spill control device (such as a tee section) in any catch basins that collect runoff from any storage areas if the materials stored are oil, gas, or other materials that separate from and float on water. This will allow for easier cleanup if a spill occurs.
- If necessary, protect catch basins while conducting field activities so that if a spill occurs, the material will be contained.

Training

- Educate employees about spill prevention, spill response and cleanup on a routine basis.
- Well-trained employees can reduce human errors that lead to accidental releases or spills:
 - The employees should have the tools and knowledge to immediately begin cleaning up a **spill if one should occur**.
 - Employees should be familiar with the Spill Prevention Control and Countermeasure Plan if one is available.
- Training of staff from all municipal departments should focus on recognizing and reporting potential or current spills/leaks and who they should contact.
- Employees responsible for aboveground storage tanks and liquid transfers for large bulk containers should be thoroughly familiar with the Spill Prevention Control and Countermeasure Plan and the plan should be readily available.

Spill Response and Prevention

- Identify key spill response personnel and train employees on who they are.
- Store and maintain appropriate spill cleanup materials in a clearly marked location near storage areas; and train employees to ensure familiarity with the site's spill control plan and/or proper spill cleanup procedures.
- Locate spill cleanup materials, such as absorbents, where they will be readily accessible (e.g. near storage and maintenance areas, on field trucks).

SC-11 Spill Prevention, Control & Cleanup

- Follow the Spill Prevention Control and Countermeasure Plan if one is available.
- If a spill occurs, notify the key spill response personnel immediately. If the material is unknown or hazardous, the local fire department may also need to be contacted.
- If safe to do so, attempt to contain the material and block the nearby storm drains so that the area impacted is minimized. If the material is unknown or hazardous wait for properly trained personnel to contain the materials.
- Perform an assessment of the area where the spill occurred and the downstream area that it could impact. Relay this information to the key spill response and clean up personnel.

Spill Cleanup Procedures

- Small non-hazardous spills
 - Use a rag, damp cloth or absorbent materials for general clean up of liquids
 - Use brooms or shovels for the general clean up of dry materials
 - If water is used, it must be collected and properly disposed of. The wash water can not be allowed to enter the storm drain.
 - Dispose of any waste materials properly
 - Clean or dispose of any equipment used to clean up the spill properly
- Large non-hazardous spills
 - Use absorbent materials for general clean up of liquids
 - Use brooms, shovels or street sweepers for the general clean up of dry materials
 - If water is used, it must be collected and properly disposed of. The wash water can not be allowed to enter the storm drain.
 - Dispose of any waste materials properly
 - Clean or dispose of any equipment used to clean up the spill properly
- For hazardous or very large spills, a private cleanup company or Hazmat team may need to be contacted to assess the situation and conduct the cleanup and disposal of the materials.
- Chemical cleanups of material can be achieved with the use of absorbents, gels, and foams. Remove the adsorbent materials promptly and dispose of according to regulations.
- If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste.

Reporting

- Report any spills immediately to the identified key municipal spill response personnel.

Spill Prevention, Control & Cleanup SC-11

- Report spills in accordance with applicable reporting laws. Spills that pose an immediate threat to human health or the environment must be reported immediately to the Office of Emergency Service (OES)
- Spills that pose an immediate threat to human health or the environment may also need to be reported within 24 hours to the Regional Water Quality Control Board.
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour)
- After the spill has been contained and cleaned up, a detailed report about the incident should be generated and kept on file (see the section on Reporting below). The incident may also be used in briefing staff about proper procedures

Other Considerations

- State regulations exist for facilities with a storage capacity of 10,000 gallons or more of petroleum to prepare a Spill Prevention Control and Countermeasure Plan (SPCC) Plan (Health & Safety Code Chapter 6.67).
- State regulations also exist for storage of hazardous materials (Health & Safety Code Chapter 6.95), including the preparation of area and business plans for emergency response to the releases or threatened releases.
- Consider requiring smaller secondary containment areas (less than 200 sq. ft.) to be connected to the sanitary sewer, if permitted to do so, prohibiting any hard connections to the storm drain.

Requirements

Costs

- Will vary depending on the size of the facility and the necessary controls.
- Prevention of leaks and spills is inexpensive. Treatment and/or disposal of wastes, contaminated soil and water is very expensive

Maintenance

- This BMP has no major administrative or staffing requirements. However, extra time is needed to properly handle and dispose of spills, which results in increased labor costs

Supplemental Information

Further Detail of the BMP

Reporting

Record keeping and internal reporting represent good operating practices because they can increase the efficiency of the response and containment of a spill. A good record keeping system helps the municipality minimize incident recurrence, correctly respond with appropriate containment and cleanup activities, and comply with legal requirements.

A record keeping and reporting system should be set up for documenting spills, leaks, and other discharges, including discharges of hazardous substances in reportable quantities. Incident records describe the quality and quantity of non-stormwater discharges to the storm drain.

SC-11 Spill Prevention, Control & Cleanup

These records should contain the following information:

- Date and time of the incident
- Weather conditions
- Duration of the spill/leak/discharge
- Cause of the spill/leak/discharge
- Response procedures implemented
- Persons notified
- Environmental problems associated with the spill/leak/discharge

Separate record keeping systems should be established to document housekeeping and preventive maintenance inspections, and training activities. All housekeeping and preventive maintenance inspections should be documented. Inspection documentation should contain the following information:

- The date and time the inspection was performed
- Name of the inspector
- Items inspected
- Problems noted
- Corrective action required
- Date corrective action was taken

Other means to document and record inspection results are field notes, timed and dated photographs, videotapes, and drawings and maps.

Examples

The City of Palo Alto includes spill prevention and control as a major element of its highly effective program for municipal vehicle maintenance shops.

References and Resources

King County Stormwater Pollution Control Manual - <http://dnr.metrokc.gov/wlr/dss/spcm.htm>

Orange County Stormwater Program

http://www.ocwatersheds.com/stormwater/swp_introduction.asp

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP)

<http://www.projectcleanwater.org/pdf/Model%20Program%20Municipal%20Facilities.pdf>

