

# GENERIC STORMWATER POLLUTION PREVENTION PLAN

---

## City of Seattle Fleets and Facilities Department

In Compliance with the Washington State Department of Ecology  
Phase I Municipal Stormwater Permit 2007

Prepared for

City of Seattle  
Fleets and Facilities Department

Original copy	<input type="checkbox"/>
Training copy	<input type="checkbox"/>
_____ Facility copy	<input type="checkbox"/>
Other	<input type="checkbox"/>

October 2008 Draft

**Note:**

Some pages in this document have been purposefully skipped or blank pages inserted so that this document will copy correctly when duplexed.

# **GENERIC STORMWATER POLLUTION PREVENTION PLAN**

---

## **City of Seattle Fleets and Facilities Department**

In Compliance with the Washington State Department of Ecology  
Phase I Municipal Stormwater Permit 2007

Prepared for

City of Seattle  
Fleets and Facilities Department  
Facility Operations Division  
2203 Airport Way South, Suite 500  
Seattle, Washington 98134  
Telephone: 206/684-5494

Prepared by

Herrera Environmental Consultants, Inc.  
2200 Sixth Avenue, Suite 1100  
Seattle, Washington 98121  
Telephone: 206/441-9080

October 27, 2008 Draft



---

# Contents

1.0	Background and General Requirements .....	1
1.1	Objectives of the SWPPP .....	1
1.2	NPDES Permit Coverage .....	3
1.3	Integration with Other Coverage.....	3
1.4	SWPPP Availability .....	3
2.0	Facility Assessment .....	5
2.1	Operations at FFD Facilities .....	5
2.1.1	Haller Lake Shops Complex.....	5
2.1.2	SDOT Sign Manufacturing Shop (Sunny Jim Shops).....	6
2.2	Vicinity Map and Site Drainage Plans .....	6
2.3	Receiving Waters and Wetlands .....	7
3.0	Areas Associated with Permit-covered Activity.....	9
3.1	Activities in the Area.....	9
3.2	Pollutants.....	9
4.0	Historical Spills and Leaks .....	11
5.0	Monitoring Plan.....	13
6.0	Illicit Non-stormwater Discharges.....	15
7.0	Schedule for Implementing Additional or Enhanced BMPs .....	19
8.0	BMPs for Compliance with the NPDES Permit .....	21
9.0	Operational BMPs .....	23
9.1	Required Citywide BMPs.....	23
9.1.1	BMP 1- Eliminate illicit connections to storm drains .....	23
9.1.2	BMP 2- Perform routine maintenance for stormwater drainage systems.....	23
9.1.3	BMP 3- Dispose of fluids and wastes properly .....	24
9.1.4	BMP 4- Proper storage of solid wastes .....	24
9.1.5	BMP 5- Spill prevention and cleanup .....	24
9.1.6	BMP 6- Provide oversight and training for staff.....	25
9.2	Formation of a Pollution Prevention Team .....	25
9.3	Reporting and Recordkeeping.....	27
9.4	Inspections.....	27
10.0	Source-specific Structural Source Control BMPs .....	29
11.0	Treatment BMPs.....	33
12.0	Flow Control BMPs.....	35
13.0	Erosion and Sediment Control BMPs.....	37

---

14.0	Operation and Maintenance .....	39
15.0	Handling and Disposal of Solid and Liquid Wastes from Stormwater Treatment, Storage, and Conveyance Systems .....	41
16.0	Concluding Statement.....	43
17.0	References.....	45
Appendix A	Fleets and Facilities Department Stormwater Pollution Prevention Plan Vicinity Map and Site Drainage Plans	
Appendix B	Fleets and Facilities Department Spill History and Spill Reporting Form	
Appendix C	Fleets and Facilities Department Stormwater O&M Requirements Table	
Appendix D	Fleets and Facilities Department Annual Inspection Form	

## Tables

Table 1.	Addresses and points of discharge for the Haller Lake Shops Complex and the SDOT Sign Manufacturing Shop (Sunny Jim Shops).....	7
Table 2.	Pollution-generating activities, potential pollutants, and relevant BMPs at Haller Lake Shops Complex and the SDOT Sign Manufacturing Shop (Sunny Jim Shops).....	10
Table 3.	Pollution prevention team for the Haller Lake Shops Complex. ....	26
Table 4.	Pollution prevention team for the SDOT Sign Manufacturing Shop (Sunny Jim Shops).....	27
Table 5.	Pollution-generating activities, existing BMPs, and corrective actions for the Haller Lake Shops Complex. ....	30
Table 6.	Pollution-generating activities, existing BMPs, and corrective actions for the SDOT Sign Manufacturing Shop (Sunny Jim Shops).....	31

---

## Stormwater Pollution Prevention Plan Certification

I certify under penalty of law that this Stormwater Pollution Prevention Plan (SWPPP) and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

DRAFT



## 1.0 Background and General Requirements

The Washington State Department of Ecology (Ecology) requires that the City of Seattle (the City) meet the requirements of the National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit, Phase I Municipal Stormwater Permit (the Permit). This NPDES permit covers discharges from the City's separate storm drainage system which is defined as:

“a conveyance, or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains): (a) owned or operated by a . . . city . . . (b) designed or used for collecting or conveying stormwater; (c) which is not a combined sewer; and (d) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.”

NPDES Permit condition S5.C.9.b.xi requires the City develop and implement a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards and material storage facilities owned or operated by the City in areas subject to the NPDES Permit that are not covered under another Ecology-issued stormwater discharge permit.

The City Fleets and Facilities Department (FFD) has developed this generic SWPPP to be implemented at applicable facilities in compliance with the NPDES Permit requirement based on the *Guidance Manual for Preparing/Updating a Stormwater Pollution Prevention Plan for Industrial Facilities* (Ecology 2004).

### 1.1 Objectives of the SWPPP

This document serves as the generic SWPPP for all heavy equipment maintenance or storage yards and material storage facilities conducted at facilities owned or operated FFD. Heavy equipment maintenance or storage yards are defined as an uncovered area where any heavy equipment (e.g., mowing equipment, excavators, dump trucks, backhoes, bulldozers) are washed or maintained, or where at least five pieces of heavy equipment are stored on a long term basis. Material storage facilities are defined as an uncovered area where bulk materials (e.g., liquid, solid, granular, etc.) are stored in piles, barrels, tanks, bins, crates, or other means.

Twenty-eight FFD facilities discharge to the separate storm drainage system; however, only two of these facilities (Haller Lake Shops Complex and Seattle Department of Transportation [SDOT] Sign Manufacturing Shop [Sunny Jim Shops]) are included in this SWPPP since activities at these two sites can be categorized as heavy equipment maintenance or storage yards and/or material storage facilities. These two facilities will be discussed in detail in the subsequent sections of this SWPPP.

The objectives of this generic SWPPP are:

- To implement and maintain best management practices (BMPs) that identify, reduce, eliminate, and/or prevent the discharge of stormwater pollutants
- To prevent violations of Ecology surface water quality, groundwater quality, and sediment management standards
- To prevent adverse impacts to receiving water by controlling peak rates and volumes of stormwater runoff
- To eliminate unpermitted discharges and other illicit discharges to separate storm drainage systems.

This document describes the methods and procedures that FFD personnel and tenants will implement in order to reduce and/or eliminate the contamination of stormwater runoff and/or discharges of pollutants from FFD facilities.

The SWPPP contains BMPs that FFD facilities implement to reduce or eliminate the release of pollutants to the separate storm drainage system and/or surface waters. The mechanisms for such a release may include the inadvertent contamination of stormwater or a direct discharge of pollutants to the separate storm drainage system. This document includes the following information:

- Definition of SWPPP Coordinator requirements and responsibilities
- Identification of Pollution Prevention Team personnel
- Facility descriptions and generic activities
- Description of BMPs
- Description of monitoring, inspection, and recordkeeping requirements.

The following appendices are also included:

- Appendix A – Fleets and Facilities Department Facility Stormwater Pollution Prevention Plan Vicinity Map and Site Maps
- Appendix B – Fleets and Facilities Department Spill History and Spill Reporting Form
- Appendix C – Fleets and Facilities Department Stormwater O&M Requirements Table
- Appendix D – Fleets and Facilities Department Annual Inspection Form.

Update this SWPPP whenever there is a significant impact on discharges of pollutants from FFD facilities (e.g., construction or a change in facility design).

## 1.2 NPDES Permit Coverage

The City's stormwater discharges are authorized under the terms and conditions of the NPDES Permit, effective on February 16, 2007 until the NPDES Permit expires on February 15, 2012, or as notified by Ecology. FFD owns and manages property throughout the City and has tenants (e.g., SDOT, Seattle Public Utilities [SPU]) at some facilities. In general, FFD is responsible for operation and maintenance (O&M) of the separate stormwater drainage system and other flow control and treatment stormwater BMPs located at their facilities. The tenants are primarily responsible for operational and structural source control BMPs.

## 1.3 Integration with Other Coverage

This SWPPP identifies:

- Citywide operational BMPs
- Source-specific structural BMPs
- Treatment BMPs
- Stormwater peak runoff rate and volume control BMPs
- Erosion and sediment control BMPs
- O&M requirements
- Stormwater control waste management requirements.

Applicable Citywide BMPs and source-specific BMPs are provided in this SWPPP; all other BMPs and supplemental requirements are referred to in the following City manuals (Seattle 2008a):

- Volume 1 - Source Control Technical Requirements Manual
- Volume 2 - Construction Stormwater Control Manual Technical Requirements Manual
- Volume 3 - Stormwater Flow Control and Water Quality Treatment Best Management Practices Technical Requirements Manual.

In addition, FFD requires each of its tenants to designate an individual or a team responsible for implementation of, and compliance with, this generic SWPPP.

## 1.4 SWPPP Availability

A copy of this generic SWPPP will kept at each applicable FFD facility or within reasonable

access to the facility. It will be made immediately available to Ecology personnel onsite to the extent practicable. If the public request to view the SWPPP, a copy of the document will be made available within a reasonable time frame.

The Facility Supervisor **must** certify the completeness and accuracy of the SWPPP by signing the certification statement at the front of this document.

DRAFT

## 2.0 Facility Assessment

### 2.1 Operations at FFD Facilities

The FFD facilities covered by this SWPPP include operations and maintenance facilities that maintain and store heavy equipment and store materials used at FFD facilities. The two FFD facilities requiring a SWPPP, according to NPDES Permit requirements, include:

- Haller Lake Shops Complex
- Seattle Department of Transportation (SDOT) Sign Manufacturing Shop (Sunny Jim Shops).

#### 2.1.1 Haller Lake Shops Complex

The Haller Lake Shops Complex is located at Ashworth Avenue North and North 127th Street in Seattle, Washington. The site covers approximately 12 acres and includes six main buildings: the FFD maintenance building, a vactor storage building, the Seattle Public Utilities (SPU) Aurora Hazardous Waste Disposal building, the SPU Drainage and Wastewater building, the SDOT Bridge Mechanics section building, and the SPU Construction Management building. Several smaller buildings, work areas, and materials storage areas are also located at the site.

The primary uses of the Haller Lake Shops Complex include storage and maintenance of FFD vehicles, a FFD fueling station, SPU vactor truck storage, vactor truck unloading area (Grits Pit), SPU Drainage and Wastewater vehicle maintenance and storage, SDOT bridge mechanics and SPU construction management office space, and collection of household hazardous waste materials brought in by city residents for proper disposal. SDOT divisions housed onsite include street maintenance, asphalt and concrete paving, street cleaning, roadway structures, and bridge mechanics.

Ten pollution-generating activities conducted at the Haller Lake Shops Complex were identified during Phase I of the Citywide Source Control Assessment (Herrera 2006):

- Washing, pressure washing, and steam cleaning of vehicles, equipment, and building structures
- Loading and unloading of liquid or solid material
- Fueling at dedicated stations
- Automotive repair and maintenance

- Landscaping and lawn and vegetation management
- Painting, finishing, and coating of vehicles, boats, buildings, and equipment
- Outdoor storage or transfer of solid raw materials, byproducts, or finished products
- Outdoor portable container storage
- Storage of liquids in permanent aboveground tanks
- Parking lot maintenance and storage of vehicles and equipment.

### **2.1.2 SDOT Sign Manufacturing Shop (Sunny Jim Shops)**

The SDOT Sign Manufacturing Shop (Sunny Jim Shops) facility is located at 4200 Airport Way South in Seattle, Washington. The site consists of one large building and a storage yard on a 4.3-acre parcel. The primary uses of the SDOT Sign Manufacturing Shop (Sunny Jim Shops) facility include traffic signal operations, traffic sign manufacturing, and a base for traffic signs and marking crews.

Five pollution-generating activities conducted at the SDOT Sign Manufacturing Shop (Sunny Jim Shops) were identified during Phase I of the Citywide Source Control Assessment (Herrera 2006):

- Loading and unloading of liquid or solid material
- Automotive repair and maintenance
- Outdoor storage or transfer of solid raw materials, byproducts, or finished products
- Outdoor portable container storage
- Parking lot maintenance and storage of vehicles and equipment.

## **2.2 Vicinity Map and Site Drainage Plans**

A vicinity map (Figure A-1) and individual site drainage plans for Haller Lake Shops Complex (Figure A-2) and SDOT Sign Manufacturing Shop (Sunny Jim Shops) (Figure A-3) are provided in Appendix A. Individual site drainage plans should be posted at each facility as part of the site-specific spill plan. Each site drainage plan identifies the facility layout; buildings;

stormwater drainage system, sanitary sewer system, or combined sewer system (as applicable); spill kit locations; heavy equipment maintenance and/or storage areas; and material storage areas.

## 2.3 Receiving Waters and Wetlands

In general, stormwater runoff from FFD facilities includes runoff from buildings, parking lots, and other paved areas. The stormwater runoff discussed in this SWPPP is conveyed to the City's separate storm drainage system. Table 1 lists the point of discharge for the two FFD facilities requiring SWPPPs. These water bodies are also identified on the vicinity map (Figure A-1) in Appendix A.

**Table 1. Addresses and points of discharge for the Haller Lake Shops Complex and the SDOT Sign Manufacturing Shop (Sunny Jim Shops).**

Facility Name	Address	Point of Discharge
Haller Lake Shops Complex	Ashworth Ave. N and N 127th St.	Lake Union (also discharges to Green Lake during large storm events) via the Densmore Drain
SDOT Sign Manufacturing Shop (Sunny Jim Shops)	4200 Airport Way South	Duwamish River



## **3.0 Areas Associated with Permit-covered Activity**

### **3.1 Activities in the Area**

The two FFD facilities that conduct permit-covered activities are listed below in Table 2 and are shown in Figures A-2 and A-3 in Appendix A. All pollutant-generating activities are conducted on impervious surfaces (i.e., pavement) or inside buildings, depending on the facility. The typical 'wet' season when these activities may impact stormwater can be defined as October through April.

FFD is currently changing some of the permit-covered activities by covering portions of the facility or moving the activity indoors. This generic SWPPP will be updated as the changes occur and/or updates are warranted.

### **3.2 Pollutants**

Heavy equipment maintenance or storage yard pollutants include, but are not limited to, diesel, gasoline, hydraulic fluids, oil, solvents, antifreeze, and other soluble and non-soluble chemicals used for the day-to-day maintenance of FFD heavy equipment (e.g., mowing equipment, excavators, dump trucks, backhoes, bulldozers, etc.).

Material storage pollutants include, but are not limited to sand, bark, mulch, gravel, de-icing salts, gasoline, diesel, wood (treated and non-treated), loose metal equipment, and waste materials from day-to-day operations.

Table 2 lists the potential pollutants associated with the two facilities. These facilities should post spill plans that list the potential pollutants present.

**Table 2. Pollution-generating activities, potential pollutants, and relevant BMPs at Haller Lake Shops Complex and the SDOT Sign Manufacturing Shop (Sunny Jim Shops).**

Facility Name	Address	Pollution-Generating Activity	Potential Pollutants	Relevant Source Control BMP <sup>a</sup>
Haller Lake Shops Complex	Ashworth Ave. N and N 127th St.	Washing, pressure washing, and steam cleaning of vehicles, equipment, and building structures	Soaps and detergents, oils and greases, suspended solids, metals	BMP 9
		Loading and unloading of liquid or solid materials	Fuels, hydraulic fluids, oils, bulk salt, granular de-icing material, mixed rubble	BMP 11
		Fueling at dedicated stations	Gasoline or diesel fuel	BMP 12
		Automotive repair and maintenance	Gasoline or diesel fuel, lubricating oils, antifreeze, solvents	BMP 13
		Landscaping and lawn and vegetation management	Pesticides, fertilizers	BMP 20
		Painting, finishing, and coating of vehicles, boats, buildings, and equipment	Paint, solvents, metals	BMP 21
		Outdoor storage or transfer of solid raw materials, byproducts, or finished products	Street sweeping debris, clean asphalt, clean-screened soil, mixed rubble, clean green debris, crushed rock, bulk salt, granular de-icing salt, and sand	BMP 24
		Outdoor portable container storage	Motor oil, pesticides, lacquers, latex paint, ethyl ether, mercury, and PCBs	BMP 28
		Storage of liquids in permanent aboveground tanks	Motor oil, waste oil, mixed fuel	BMP 29
		Parking lot maintenance and storage of vehicles and equipment	Oils and greases, suspended solids, metals	BMP 30
		Loading and unloading of liquid or solid material	Paint, used equipment	BMP 11
		Automotive repair and maintenance	Gasoline or diesel fuel, lubricating oils, antifreeze, solvents	BMP 13
		Outdoor storage or transfer of solid raw materials, byproducts, or finished products	Used equipment, scrap metal, treated wood	BMP 24
Outdoor portable container storage	Latex paint, aerosols, paint	BMP 28		
Parking lot maintenance and storage of vehicles and equipment	Oils and greases, suspended solids, metals	BMP 30		
SDOT Sign Manufacturing Shop (Sunny Jim Shops)	4200 Airport Way South			

<sup>a</sup> Source: Volume 1 - Source Control Technical Requirements Manual (Seattle 2008a).

## 4.0 Historical Spills and Leaks

Spill histories between 2000 and 2006 were included in the Spill Prevention and Clean Up Plans prepared for the Haller Lake Shops Complex and the SDOT Sign Manufacturing Shop (Sunny Jim Shops) (SDOT 2006a, 2006b) and are summarized for both facilities in Appendix B. Records of all significant spills or leaks of oils and toxic or hazardous pollutants that have occurred during the last three years at areas either exposed to precipitation or that drain to a stormwater conveyance should be kept at each facility using the FFD Spill Reporting Form provided in Appendix B. A significant spill or leak is defined as either greater than five gallons or in excess of the chemical's reportable quantity that enters a storm drain or receiving water or contaminates soil and/or surface water. Reportable quantities of chemicals used at each facility can be determined by entering the chemical name or chemical abstract service (CAS) number into the reportable quantity calculator on the United States Department of Energy website (<http://homer.ornl.gov/rq/>).

Individual facilities should retain spill history records and maintain a copy of their own spill records for a minimum of five years. A copy of the spill records from the last three years must be produced if requested by Ecology. FFD should continue to maintain spill records for each facility and update these records in the event of a spill.



## 5.0 Monitoring Plan

The City has developed and is implementing a stormwater monitoring plan (Seattle 2008b) in accordance with its NPDES Permit. SPU is the lead department for implementation of this monitoring plan; FFD currently does not have a separate monitoring program for its facilities.

DRAFT



## 6.0 Illicit Non-stormwater Discharges

Some FFD facilities may have internal building drains, sump overflows, process wastewater discharges, or sanitary sewer pipes that are incorrectly plumbed to the separate storm drainage system. These storm drain connections allow a variety of pollutants to flow directly to receiving waters instead of to the sanitary sewer or combined sewer system. Frequently, such connections are not intentional, but are harmful to the environment and must be eliminated.

All City facilities must examine their plumbing systems to identify any illicit connections. A good place to start is by examining site plans. If any toilets, sinks, appliances, showers, bathtubs, floor drains, or other water-using equipment are connected to the separate storm drainage system, these connections must either be permanently plugged or disconnected and rerouted as soon as possible. If it is not obvious through observation or examination of site plans, one method of determining where a pipe or structure drains is to perform a dye test with a nontoxic dye or a smoke test. These tests should be performed by qualified personnel.

FFD depends on its tenants to implement spill prevention programs to supply spill kit materials, clean up leaks and/or spills, and report spills. If the spill enters the separate storm drainage system, SPU should be notified. SPU manages the illicit discharge detection elimination (IDDE) program for the City, which includes a water quality hotline, business inspections, and illicit connection investigations. A major component of the IDDE program is the 24-hour citizen Water Quality Hotline (206-684-7587) and web form (<http://www2.seattle.gov/util/forms/surfacewater/surfacewaterForm.asp>) for reporting water quality complaints. In addition to citizen reports, the Water Quality Hotline and web form can also be used to capture complaints from other departments and agencies.

If it is found that sanitary facilities, such as toilets and sinks, are hooked up to the separate storm drainage system, a plumbing permit must be obtained from the City Department of Planning and Development (DPD) to reroute them to the sanitary sewer. Other options for correcting discharges to the separate storm drainage system include using a holding tank or installing a process treatment system.

Certain non-stormwater discharges are allowed with the current Seattle Municipal Code (SMC). The permissible non-stormwater discharges to the separate storm drainage system that are allowed by SMC 22.802.030 Permissible Discharges include:

- Discharges from potable water sources, including flushing of potable water lines, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the drainage system

- Discharges from washing of potable water storage reservoirs, dechlorinated as above
- Discharges from surface waters, including diverted stream flows
- Discharges of uncontaminated groundwater, including uncontaminated groundwater infiltration (as defined at 40 CFR 35.2005(2)), uncontaminated pumped groundwater, and rising ground waters
- Discharges of air conditioning condensation
- Discharges from springs
- Discharges of uncontaminated water from crawl space pumps
- Discharges from lawn watering
- Discharges from irrigation runoff, including irrigation water from agricultural sources that is commingled with stormwater
- Discharges from riparian habitats and wetlands
- Discharges from approved footing drains and other subsurface drains or, where approval is not required, installed in compliance with this subtitle and rules promulgated pursuant to this subtitle
- Discharges from foundation drains
- Discharges from swimming pools, hot tubs, fountains, or similar aquatic recreation facilities and constructed water features, provided the discharges have been de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the drainage controls system
- Discharges of street and sidewalk wash-water that does not use detergents or chemical additives
- Discharges of water used to control dust
- Discharges of water from routine external building washdown that does not use detergents or chemical additives
- Discharges that are in compliance with a separate individual or general NPDES permit

- Discharges that are from emergency fire fighting activities
- Other non-stormwater discharges, provided these discharges are in compliance with the requirements of an approved stormwater pollution prevention plan that addresses such discharges.

If still unsure whether a discharge to the separate storm drainage system is permissible, please contact Robert Chandler at Seattle Public Utilities.

*DRAFT*



## **7.0 Schedule for Implementing Additional or Enhanced BMPs**

If additional or enhanced BMPs are either ordered by Ecology or are necessary due to facility change or a self-inspection, a schedule for their implementation will be incorporated into this SWPPP within 30 days of the self-determination or Ecology order.

DRAFT



## **8.0 BMPs for Compliance with the NPDES Permit**

The NPDES Permit requires the implementation of BMPs to comply with Ecology water quality standards; all known, available, and reasonable methods of prevention, control, and treatment (AKART); and federal technology-based treatment requirements. These standards and technology-based requirements have been adopted by Ecology as rules. The BMPs presented in this document meet the standards and requirements described in the Ecology rules (they follow the stormwater management practices contained in the Ecology-approved City Volume 1 - Source Control Technical Requirements Manual [Seattle 2008a]). These BMPs are presumed to have satisfied the demonstration requirement per the NPDES Permit.

DRAFT



## 9.0 Operational BMPs

Operational BMPs are defined by Ecology (2004) as a “schedule of activities, prohibition of practices, maintenance procedures, employee training, good housekeeping, and other managerial practices to prevent or reduce the contamination of stormwater.” Volume 1 - Source Control Technical Requirements Manual (Seattle 2008a) identifies required operational Citywide BMPs that must, at a minimum, be implemented at FFD facilities. A brief summary of the Citywide BMPs are presented in this section; please refer to Volume 1 - Source Control Technical Requirements Manual (Seattle 2008a) for additional detail regarding the following BMPs.

### 9.1 Required Citywide BMPs

All facilities within the City must implement the following six Citywide operational source control BMPs:

- BMP 1- Eliminate illicit connections to storm drains
- BMP 2- Perform routine maintenance for stormwater drainage systems
- BMP 3- Dispose of fluids and wastes properly
- BMP 4- Proper storage of solid wastes
- BMP 5- Spill prevention and cleanup
- BMP 6- Provide oversight and training for staff.

#### 9.1.1 BMP 1- Eliminate illicit connections to storm drains

Every City facility must examine their plumbing systems to identify any illicit connections. A good place to start is by examining the site plans. SPU manages the IDDE program for the City which includes a water quality hotline, business inspections and illicit connection investigation. Please refer to Section 6.0 of this report for additional information pertaining to this BMP.

#### 9.1.2 BMP 2- Perform routine maintenance for stormwater drainage systems

Sediment and pollutants can accumulate over time in various components of stormwater collection, conveyance, and treatment systems, such as catch basins, ditches, storm drains, and oil/water separators. Regular maintenance of the stormwater drainage system decreases the amount of pollutants that are available to contaminate the stormwater. Routine cleaning of catch basins is one of the most important stormwater source control measures that a facility can implement. When catch basins are about 60 percent full of sediment, further sediment removal does not take place. For site-specific stormwater drainage system structures, conditions, and routine maintenance requirements, refer to Appendix C.

### **9.1.3 BMP 3- Dispose of fluids and wastes properly**

Every City facility must properly dispose of solid and liquid wastes, and contaminated stormwater. There are generally four options for disposal, depending on the type of waste:

- Recycling facilities
- Municipal solid waste disposal facilities
- Hazardous waste treatment, storage, and disposal facilities
- Sanitary sewer.

Many liquid wastes and contaminated stormwater (depending on the pollutants and associated concentrations) can be discharged to the sanitary sewer system, which is subject to approval by the King County Industrial Waste Program (206-263-3000). If wastes cannot be legally discharged to a sanitary sewer, one of the three other disposal options must be used. Sumps or holding tanks may be useful for storing liquid wastes temporarily. Dangerous or hazardous wastes must be properly transported to an appropriate hazardous waste treatment, storage, and disposal facility, requiring appropriate documentation.

### **9.1.4 BMP 4- Proper storage of solid wastes**

City facilities must store wastes in suitable containers with leak-proof lids that are closed at all times. The waste storage area must be swept or otherwise cleaned frequently to collect all loose solids for proper disposal in a storage container. The area should not be hosed to collect or clean solids. Employees should be educated about the need to check for and replace leaking containers. Drains located near dumpsters, dumpster pads, and trash compactors should be connected to the sanitary sewer. Discharges to the sanitary sewer system are regulated by the King County Industrial Waste Program (206-263-3000). Accumulated waste should not be allowed to exceed the capacity of the storage container. If this occurs, another storage container should be obtained and used.

### **9.1.5 BMP 5- Spill prevention and cleanup**

A spill can be a one-time event, a continuous leak, or a frequent small leak. All three types of spills must be prevented. Leaks and spills of solid and liquid pollutants including oils, solvents, fuels, and dust from manufacturing operations on any exposed soil, vegetation, or paved area should be promptly contained and cleaned up. Spill cleanup kits should be available at activity locations where spills may occur. In order to reduce the potential for spills, the following practices should be implemented:

- Clearly label all containers that contain potential pollutants
- Store and transport liquid materials in appropriate containers with tight fitting lids

- Place drip pans underneath all containers, fittings, valves, where materials are likely to spill or leak
- Use tarpaulins, ground cloths, or drip pans in areas where materials are mixed, carried, and applied to capture any spilled materials
- Train employees on the safe techniques for handling materials that are used on the site and encourage them to check for leaks and spills.

A spill plan should be developed, implemented, and updated annually or whenever there is a change in business activities or staff responsible for spill cleanup. The spill plan should also identify designated spill response employees who are responsible for implementing the plan. A written summary of the plan should be posted at appropriate points in the building, such as loading docks, product storage areas, waste storage areas, and near a phone. The spill plan may need to be posted at multiple locations. Refer to Section 2.5.1.2 of Volume 1 - Source Control Technical Requirements Manual (Seattle 2008a) for required information to include in the spill plan.

Spill cleanup kits should be stored near areas with a high potential for spills, so that they are easily accessible in the event of a spill. The contents of the spill kit should be selected based on the types and quantities of materials stored or used at the facility and refilled when the materials are used.

#### **9.1.6 BMP 6- Provide oversight and training for staff**

All team members should be trained annually in the operation, maintenance, and inspections of BMPs. This training must be documented. Training staff about good housekeeping expectations is one of the most effective methods for keeping sediment and other pollutants out of stormwater and receiving waters.

Further actions include assigning one or more qualified individuals to be responsible for the oversight and training of staff regarding stormwater pollution control. Regular meetings should be held to review the overall operation of the BMPs, establish responsibilities for inspections and O&M, and determine responsibilities for emergency situations.

## **9.2 Formation of a Pollution Prevention Team**

This section describes the organization of a pollution prevention team responsible for developing the generic SWPPP and assisting in its implementation, maintenance, and modification. The activities and responsibilities of the pollution prevention team address all aspects of this generic SWPPP. The responsibilities include:

- Assigning one or more individuals by name and title to be responsible for developing the SWPPP and assisting the SWPPP Coordinator in its implementation, maintenance, and modification

- Holding regular meetings to review the overall operation of the BMPs
- Establishing responsibilities for inspections, O&M, and emergency situations
- Arranging the training of all team members in the operation, maintenance, and inspections of BMPs.

The pollution prevention team consists of management and facility operations personnel and includes a SWPPP Coordinator (the Facility Supervisor) at each facility and other identified individuals responsible for developing the plan and assisting the supervisor in its implementation. Members of the pollution prevention team should include both FFD and its tenants (e.g., SDOT, SPU). A list of each team’s members, contact information, and a brief description of their primary area of responsibility regarding stormwater pollution prevention is provided in Table 3 for the Haller Lake Shops Complex and Table 4 for the SDOT Sign Manufacturing Shop (Sunny Jim Shops).

**Table 3. Pollution prevention team for the Haller Lake Shops Complex.**

Position	Name	Phone Number	Primary Responsibilities
Facility Supervisor/ SWPPP Coordinator	_____ _____ _____ Print name here	_____ _____ _____ Print number here	Ensure that each facility employee is in compliance with the FFD SWPPP regarding their operations; the Facility Supervisor must certify the completeness and accuracy of the SWPPP by signing a certification statement.
Management	John Sheldon (FFD) Maureen Meehan (SDOT)	(206) 684-5494 (206) 684-8750	Manage NPDES permit requirements (including developing, implementing, maintaining, and revising the SWPPP) and assisting each facility with state and City of Seattle regulatory issues pertaining to stormwater pollution prevention.
Applicable FFD Supervisors and Contractor Staff	_____ _____ _____ Print name(s) here	_____ _____ _____ Print number(s) here	Ensure that BMPs listed are in place, operative, and effective at all times in and around the areas where activities that impact stormwater are conducted.
FFD Trainer(s)	_____ _____ Print name(s) here	_____ _____ Print number(s) here	Ensure stormwater pollution prevention training is conducted and that all applicable staff are trained in the relevant BMPs, as outlined in Section 9.1.6.
Chief of Maintenance and Operations	_____ Print name here	_____ _____ _____ Print number(s) here	Responsible for maintenance and operations at FFD facilities.

Note: Update this table if personnel changes occur.

**Table 4. Pollution prevention team for the SDOT Sign Manufacturing Shop (Sunny Jim Shops).**

Position	Name	Phone Number	Primary Responsibilities
Facility Supervisor/ SWPPP Coordinator	_____ _____ _____ Print name here	_____ _____ _____ Print number here	Ensure that each facility employee is in compliance with the FFD SWPPP regarding their operations; the Facility Supervisor must certify the completeness and accuracy of the SWPPP by signing a certification statement.
Management	John Sheldon (FFD)  Maureen Meehan (SDOT)	(206) 684-5494  (206) 684-8750	Manage NPDES permit requirements (including developing, implementing, maintaining, and revising the SWPPP) and assisting each facility with state and City of Seattle regulatory issues pertaining to stormwater pollution prevention.
Applicable FFD Supervisors and Contractor Staff	_____ _____ _____ Print name(s) here	_____ _____ _____ Print number(s) here	Ensure that BMPs listed are in place, operative, and effective at all times in and around the areas where activities that impact stormwater are conducted.
FFD Trainer(s)	_____ _____ Print name(s) here	_____ _____ Print number(s) here	Ensure stormwater pollution prevention training is conducted and that all applicable staff are trained in the relevant BMPs, as outlined in Section 9.1.6.
Chief of Maintenance and Operations	_____ Print name here	_____ _____ _____ Print number(s) here	Responsible for maintenance and operations at FFD facilities.

Note: Update this table if personnel changes occur.

### 9.3 Reporting and Recordkeeping

Records of all inspections, observations, and compliance records, as applicable, will be kept by the tenants at each FFD-owned site for a minimum of five years. Copies of these records should be provided to FFD upon request.

### 9.4 Inspections

Staff identified in each pollution prevention team (Table 3 and Table 4) must regularly inspect all areas on FFD-owned sites where heavy equipment maintenance or storage and material storage are exposed to stormwater and assess how well stormwater BMPs are operating. Complete routine inspections must occur annually; a minimum of one additional inspection, preferable during the wet season (October through April) after trees have lost their leaves, is

required to ensure that trash, debris, sediment, and/or vegetation is not blocking more than 10 percent of the inlet capacity. It is recommended that additional inspections be performed as appropriate after major events (e.g., >1 inch of precipitation in 24 hours or environmental incident that causes contaminant release). Record the results of the inspections on the Inspection Report form provided in Appendix D.

If at any time a BMP is not effective, it must be repaired or maintained before the next anticipated storm event. If maintenance prior to the next storm event is not possible, maintenance must be completed as soon as possible and documented on the form for the extended repair schedule. In the interim, back-up measures must be implemented to ensure that stormwater quality is not diminished.

*DRAFT*

## **10.0 Source-specific Structural Source Control BMPs**

Tables 5 and 6 provide source-specific structural source control BMPs for the Haller Lake Shops Complex and the SDOT Sign Manufacturing Shop (Sunny Jim Shops) based on outdoor activities that could potentially impact stormwater quality identified during a Citywide source control assessment in April 2006 (Herrera 2006). These are actions required in addition to the operational BMPs listed in Section 9.0. Corrective actions recommended in the Phase I Source Control Assessment Report (Herrera 2006) are also listed for compliance with the Source Control Technical Requirements Manual (Seattle 2008).

DRAFT

**Table 5. Pollution-generating activities, existing BMPs, and corrective actions for the Haller Lake Shops Complex.**

Pollution-Generating Activity	Relevant Source Control BMP <sup>a</sup>	Existing BMPs	Corrective Actions
Washing, pressure washing, and steam cleaning of vehicles, equipment, and building structures	BMP 9	Outdoor vehicle and equipment washing operations are conducted in a designated wash area that drains to a sump and then to the sanitary sewer.	None
Loading and unloading of liquid or solid material	BMP 11	Surfaces are frequently swept (3-5 times per week) to remove accumulated debris and other material.	Sweep paved surfaces more frequently to prevent sediment accumulation.
Fueling at dedicated stations	BMP 12	The fueling island has a canopy. The fueling island is paved with Portland cement concrete.	None
Automotive repair and maintenance	BMP 13	Maintenance and repair activities are conducted indoors.	None
Landscaping and lawn and vegetation management	BMP 20	None	Implement integrated pest management plan developed by Seattle Parks and Recreation (2005).
Painting, finishing, and coating of vehicles, boats, buildings, and equipment	BMP 21	None	Use a storm drain cover, catch basin filter, or similarly effective runoff control device if dust, sediment or other pollutants may escape the work area.
Outdoor storage or transfer of solid raw materials, byproducts, or finished products	BMP 24	Temporary plastic sheeting is used to cover stockpiles of bulk salt and granular de-icing material.	Install a permanent roof structure to cover all of the stockpiles. (This design is currently in progress.)
Outdoor portable container storage	BMP 28	Batteries are stored outdoors in secondary containment tub and are covered with a tarp.	None
Storage of liquids in permanent aboveground tanks	BMP 29	Motor oil, waste oil, and mixed fuel storage areas are surrounded by a berm.	Store hazardous materials inside the hazardous material storage shed.
Parking lot maintenance and storage of vehicles and equipment	BMP 30	Surfaces are frequently swept (3-5 times per week) to remove accumulated debris and other material.	Sweep paved surfaces more frequently to prevent sediment accumulation.

<sup>a</sup> Source: Source Control Technical Requirements Manual (Seattle 2008).

**Table 6. Pollution-generating activities, existing BMPs, and corrective actions for the SDOT Sign Manufacturing Shop (Sunny Jim Shops).**

Pollution-Generating Activity	Relevant Source Control BMP <sup>a</sup>	Existing BMPs	Corrective Actions
Loading and unloading of liquid or solid material	BMP 11	Loading and unloading area is paved.	None
Automotive repair and maintenance	BMP 13	Maintenance and repair activities are conducted indoors.	None
Outdoor storage or transfer of solid raw materials, byproducts, or finished products	BMP 24	None	Potential pollutants (i.e., paint cans, scrap metal, treated wood poles) located in the miscellaneous storage area should be disposed of or moved indoors.
Outdoor portable container storage	BMP 28	Paint cans and aerosol cans are stored in secondary containment (flammable storage building and polyethylene hazardous materials storage container). Paint totes are surrounded by a concrete berm.	Concrete berm should be extended to contain all of the paint totes. Inspect container storage areas regularly for corrosion, structural failure, spills, leaks, overfills, and failure of piping systems. Check containers daily for leaks and spills.
Parking lot maintenance and storage of vehicles and equipment	BMP 30	None	Building drain inside vehicle storage area should be covered or disconnected from the separate storm drainage system.

<sup>a</sup> Source: Source Control Technical Requirements Manual (Seattle 2008).



## 11.0 Treatment BMPs

Currently, FFD is required to meet all state and federal surface water quality requirements, but is not required to monitor water discharging from its facilities. FFD will implement the requirements and BMPs identified in Volume 3 - Stormwater Flow Control and Water Quality Treatment Best Management Practices Technical Requirements Manual (Seattle 2008a) for new development and redevelopment projects. Some applicable treatment BMPs include:

- Biofiltration swales
- Filter strips
- Infiltration and bio-infiltration (e.g., infiltration basins and trenches, bio-infiltration swales, bioretention, and ecology embankments)
- Sand filtration
- Wetpools (e.g., wetponds, wetvaults, and stormwater treatment wetlands)
- Oil control facilities
- Emerging technologies.

Due to the variation in site-specific characteristics for each new development and redevelopment project, the applications and limitations, design criteria, and maintenance requirements for each of these, treatment BMPs are not provided in this SWPPP. Please refer to the Volume 3 - Stormwater Flow Control and Water Quality Treatment Best Management Practices Technical Requirements Manual (Seattle 2008a) for additional information regarding treatment BMPs.



## 12.0 Flow Control BMPs

Flow control BMPs required for new development and redevelopment are included in the Volume 3 - Stormwater Flow Control and Water Quality Treatment Best Management Practices Technical Requirements Manual (Seattle 2008a) and FFD will implement requirements and BMPs specified in that manual. Some applicable flow control BMPs include:

- Bioretention
- Pervious pavement
- Vegetated roofs
- Detention cisterns
- Dispersion (e.g., downspout or sheet flow)
- Infiltration (e.g., infiltration basins, infiltration trenches, drywells)
- Detention (e.g., detention pond, detention pipe, detention vault).

Due to the variation in site-specific characteristics for each new development and redevelopment project, the applications and limitations, design criteria, and maintenance requirements for each of these, flow control BMPs are not provided in this SWPPP. Please refer to the Volume 3 - Stormwater Flow Control and Water Quality Treatment Best Management Practices Technical Requirements Manual (Seattle 2008a) for additional information regarding flow control BMPs.



## 13.0 Erosion and Sediment Control BMPs

If an activity or area has a high potential for significant soil erosion during new development or redevelopment, FFD will implement the requirements and BMPs identified in Volume 2 - Construction Stormwater Control Technical Requirements Manual (Seattle 2008a) which includes 17 elements of water quality and downstream resource protection:

1. Mark Clearing Limits and Sensitive Areas
2. Retain Top Layer
3. Establish Construction Access
4. Protect Downstream Properties and Receiving Waters
5. Prevent Erosion and Sediment Transport from the Site
6. Prevent Erosion and Sediment Transport from the Site by Vehicles
7. Stabilize Soils
8. Protect Slopes
9. Protect Storm Drains
10. Stabilize Channels and Outlets
11. Control Pollutants
12. Control Dewatering
13. Maintain BMPs
14. Inspect BMPs
15. Execute Construction Stormwater Control Plan
16. Minimize Open Trenches
17. Phase the Project.

Each of these 17 elements has 1-10 BMPs associated with its implementation and the most appropriate BMP for the site can be selected. Due to the variation in site-specific characteristics for each new development and redevelopment project, design criteria, and maintenance requirements for each of these, erosion and sediment control BMPs are not provided in this SWPPP. Please refer to the Volume 2 - Construction Stormwater Control Technical Requirements Manual (Seattle 2008a) for additional information regarding erosion and sediment control BMPs.



## 14.0 Operation and Maintenance

An O&M requirements table, which includes required inspection frequencies, has been developed for stormwater drainage structures, flow control facilities, and water quality treatment facilities located at Haller Lake Shops Complex and the SDOT Sign Manufacturing Shop (Sunny Jim Shops). The O&M requirements table for these two facilities can be found in Appendix C.

DRAFT



## **15.0 Handling and Disposal of Solid and Liquid Wastes from Stormwater Treatment, Storage, and Conveyance Systems**

Solid and liquid wastes from stormwater treatment, storage, and conveyance systems are handled according to the requirements and BMPs in the Volume 3 – Stormwater Flow Control and Water Quality Treatment Best Management Practices Technical Requirements Manual (Seattle 2008a). FFD will implement this manual for all waste management from the applicable systems. If new development, redevelopment, or additional properties are acquired by FFD, additional requirements and BMPs may be applicable.

DRAFT



## 16.0 Concluding Statement

Each facility manager is responsible for ensuring employees who are engaged in activities covered by the NPDES Permit at areas near stormwater drains and other such conveyances are informed about the existence and contents of this plan. All such employees will be informed that compliance with the contents of this plan is required by City and State laws and regulations, and that non-compliance can lead to serious civil and criminal penalties against the City and individuals.

DRAFT



## 17.0 References

Ecology. 2004. Guidance Manual for Preparing/Updating a Stormwater Pollution Prevention Plan for Industrial Facilities. Publication Number 04-10-030. Prepared by the Washington State Department of Ecology. April 2004.

Herrera. 2006. Phase I City-wide Source Control Assessment. Prepared for Seattle Public Utilities by Herrera Environmental Consultants, Seattle, Washington. May 2006.

SDOT. 2006a. Spill Prevention & Clean Up Plan, Seattle Department of Transportation, Street Maintenance & Roadway Structures Divisions, Haller Lake Facility. Prepared by the Seattle Department of Transportation. January 9, 2006.

SDOT. 2006b. Spill Prevention & Clean Up Plan, Seattle Department of Transportation, Traffic Management Division, Traffic Shop Facility (aka Sunny Jim). Prepared by the Seattle Department of Transportation. January 2006.

Seattle, City of. 2008a. Director's Rules for Seattle Municipal Code, Chapter 22.800, Stormwater and Drainage Control Code – Volume 1, Source Control Technical Requirements Manual; Volume 2, Construction Stormwater Control Technical Requirements Manual; Volume 3, Stormwater Flow Control and Water Quality Treatment Technical Requirements Manual; Volume 4, Stormwater and Side Sewer Code Enforcement Manual. City of Seattle, Seattle Public Utilities, Department of Planning and Development.

Seattle, City of. 2008b. 2008 NPDES Phase I Municipal Stormwater Permit Stormwater Management Program. Prepared by Seattle Public Utilities and Brown and Caldwell. March 27, 2008.

Seattle Parks and Recreation. 2005. Integrated Pest Management, Chapter 3 of the 2005 BMP Manual. Developed by City of Seattle Department of Parks and Recreation.



## **APPENDIX A**

---

# **Fleets and Facilities Department Stormwater Pollution Prevention Plan Location Map and Site Drainage Plans**





**Figure A-1. Vicinity map for the Fleets and Facilities Department Haller Lake Shops Complex and Seattle Department of Transportation Sign Manufacturing Shop (Sunny Jim Shops).**

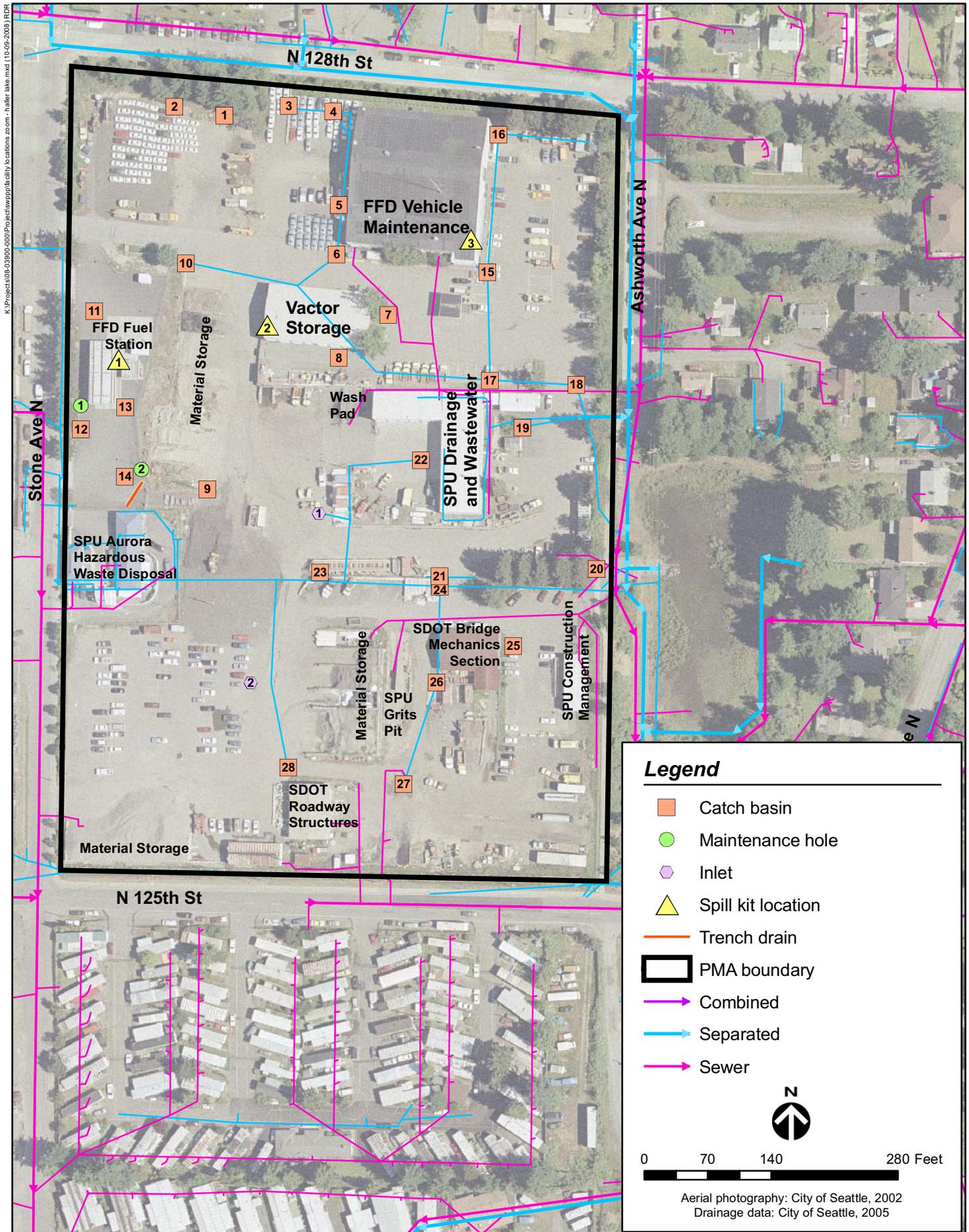
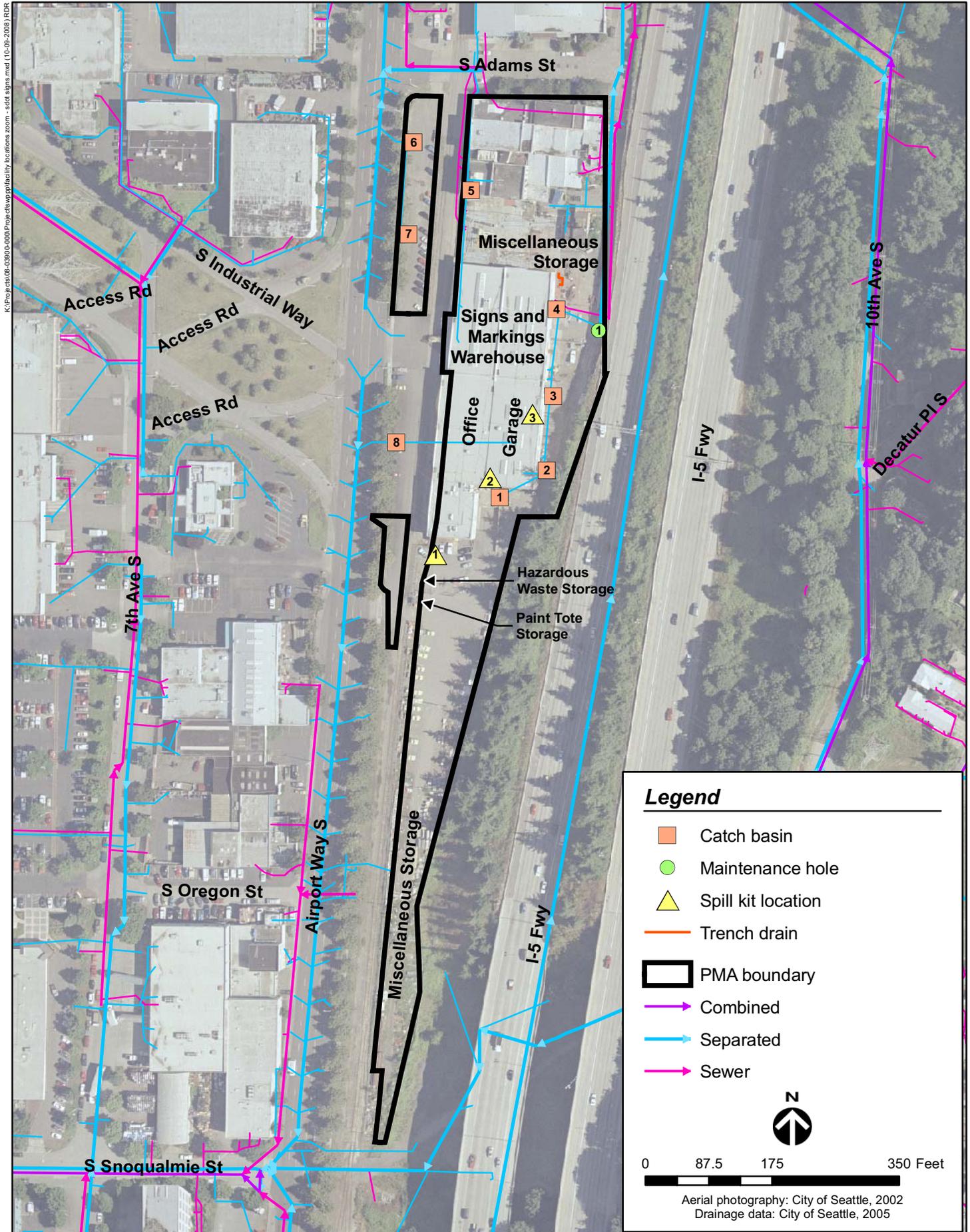


Figure A-2. Haller Lake Shops Complex (PMA 691) site drainage plan, Ashworth Ave N & N 127th St., Seattle, Washington.



**Figure A-3. Seattle Department of Transportation Sign Manufacturing Shop (Sunny Jim Shops) (PMA 139) site drainage plan, 4200 Airport Way S., Seattle, Washington.**



## **APPENDIX B**

---

# Fleets and Facilities Department Spill History and Spill Reporting Form



**Haller Lake Shops Spill History**

**Completed by: Rebecca Dugopolski**  
**Title: Staff Engineer**  
**Date: September 22, 2008**

*List all spills and leaks of toxic or hazardous pollutants. Although not required, spills and leaks of non-hazardous materials can also be listed.*

Date (month/day/year)	Location	Type of Material	Quantity	Source/Cause, If Known	Media Affected (Soil/Water)	Response Procedure	Notes
1-13-2000	South yard near asphalt tack tank	Asphalt tack and diesel	25 gallons	55-gallon drum of asphalt tack and diesel had been knocked over	Soil and Water (drainage ditch along N 125th St. was affected)	Foss Environmental was called in to cleanup the spill	2,500 lbs. of contaminated absorbents, soils, and gravel; 400 gallons of contaminated water; \$4,200

ah...appendix b - haller lake spill history

<b>Sunny Jim Shops Spill History</b>		<b>Completed by: Rebecca Dugopolski Title: Staff Engineer Date: September 23, 2008</b>					
<i>List all spills and leaks of toxic or hazardous pollutants. Although not required, spills and leaks of non-hazardous materials can also be listed.</i>							Notes
Date (month/day/year)	Location	Type of Material	Quantity	Source/Cause, If Known	Media Affected (Soil/Water)	Response Procedure	Notes
2-23-2000	Garage	Hydraulic Fluid	Unknown	Hydraulic line break on one of the Signal's Hydraulic Lift trucks	None (Spill was contained to the garage)	Spill contained to garage, absorbents used to clean up spill	175 pound of contaminated absorbents
5-24-2004	Garage	Oil	2-3 gallons	Crack in oil pan on SPU Warehouse's truck	None (No oil reached the storm drains)	Contained and cleaned up by SPU	

ab:\appendix b - sunny jim spill history

## **APPENDIX C**

---

# Fleets and Facilities Department Stormwater O&M Requirements Table



**Table C-1. General descriptions, required actions, and recommendations for stormwater drainage systems present at FFD facilities.**

Type and number of stormwater drainage system structures	General Site Stormwater Drainage System Condition <sup>a</sup>	Notes	Required Maintenance Actions <sup>b</sup>	Required Structural/Operational Actions	Recommendations	Inspection and Maintenance Requirements <sup>c,d</sup>
<b>Heller Lake Shops Complex (PMA 691)</b>						
28 CBs 2 MHs	Fair	Sediment observed on impervious areas throughout site; sediment levels exceeding CB capacity and <18 in from sediment to outlet in most CBs, MHs, and storm drain inlets.	Sweep and remove sediment from impervious areas, then clean all CBs and MHs; remove/discard sediment in accordance with state and federal regulations.	Repair/replace cover for CB-1 and CB-20.	Improve housekeeping, including sweeping asphalt areas across the site.	Annually - Complete inspection Biannually - Inlet inspection only (Refer to Pages D-4 and D-5 for specific details).
2 Storm Drain Inlets 1 Trench Drain <sup>f</sup>	Good	CB-2 has turbid water potentially from sump pump in CB-1 near loading dock or spilled paint around CB-2 inlet grate, also has cracks wider than 0.5 in around outlet pipe.	Clean spilled roadway marking paint from around CB-2; remove/discard in accordance with state and federal regulations.	Repair cracks around outlet pipe in CB-2.	Remove/discard of spilled roadway marking paints from paved areas in accordance with state and federal regulations.	Annually - Complete inspection Biannually - Inlet inspection only (Refer to Pages D-4 and D-5 for specific details).
<b>SDOT Sign Manufacturing Shop (Sunny Jim Shops) (PMA 139)</b>						
		All CBs had > 1 in of sediment - Tanya Reeves indicated that the CBs have been cleaned recently.				

Notes:

<sup>a</sup> Good = structures are not physically damaged; however, may need cleaning and/or maintenance; Fair = specific structures in need of structural repair; Poor = majority of structures in need of structural repair or replacement and not functioning as designed.

<sup>b</sup> Discharges from catch basin cleaning should be prevented from entering the stormwater system. The preferred decant liquids disposal option is to discharge to the sanitary sewer system, if prior approval is obtained by the King County Industrial Waste Program and Seattle Public Utilities. If this preferred option is not available, discharge of decant liquids may be allowed to a stormwater treatment BMP if prior approval has been obtained from Seattle Public Utilities. Solids removed during the cleaning process should be disposed of at a King County Solid Waste Division Solid Waste Handling Facility and must be accompanied by a Waste Clearance Decision (to be provided by the cleanout contractor). If the generator or hauler notices suspicious odor or coloration, a separate waste clearance and testing is required. Verify that the person(s) responsible for cleaning the facility can demonstrate appropriate disposal capabilities.

<sup>c</sup> Refer to Volume 3 - Stormwater Flow Control and Water Quality Treatment Technical Requirements Manual, City of Seattle, Appendix D for a complete checklist of items to be inspected including a comprehensive list of maintenance requirements.

<sup>d</sup> It is recommended that at least one inspection occur during the wet season, preferably after trees have lost their leaves. It is also recommended that additional inspections be performed as appropriate after major storm events (e.g. > 1 inch of precipitation in 24 hours) or an environmental incident that causes a contaminant release.

<sup>e</sup> Although no inspection schedule or O&M requirements are provided for trench drains in Volume 3 - Stormwater Flow Control and Water Quality Treatment Technical Requirements Manual, City of Seattle, Appendix D, it is recommended that these be inspected during the annual inspection. If accumulated debris/sediment is impacting the function of the trench drain, it should be removed during catch basin cleaning.

Abbreviations:

- CB- catch basin
- MH- maintenance hole
- SDOT- Seattle Department of Transportation



## **APPENDIX D**

---

# Fleets and Facilities Department Annual Inspection Forms



**Fleets and Facilities Department Annual Inspection Form for Catch Basins, Maintenance Holes, and Inlets**

Components	Inspection Frequency <sup>a</sup>	Condition when Maintenance Required	Action Required	Satisfactory	Unsatisfactory	Comments
Cleaning Trash, debris, sediment, vegetation						
	A <sup>b</sup>	Accumulated material within 18 inches of the bottom of the lowest pipe entering or exiting the structure or filling greater than 60 percent of the sump depth.	Remove/dispose in accordance with state and federal regulations.			
	A	Sediment, debris, or vegetation blocking 1/3 capacity of inlet or outlet pipes.	Remove/dispose in accordance with state and federal regulations.			
	B, W, E	Vegetation/debris blocking 10 percent or more of inlet capacity.	Clean and dispose of material			
	A	Dead animals or vegetation that could generate odors and cause complaints or dangerous gases (e.g., methane).	Remove/dispose			
Pollution	A <sup>b</sup> , E	Any visible accumulation of oil, gas, paint, or other contaminant (includes concrete debris or slurry).	Remove/dispose in accordance with state and federal regulations. If possible, identify and control source			
Structure						
	A	Corner extends more than 0.75 inches past curb face or street surface (where applicable).	Repair so frame even with curb			
	A	Holes greater than 2 inches or cracks greater than 0.25 inches in top slab.	Repair to water tight condition			
	A	Frame not flush with top slab (separation >0.75 inches) or not securely attached.	Repair			
	A	Cracks wider than 0.5 inches and longer than 1 foot, missing bricks, evidence of water of soil entering, or judged to be structurally unsound by maintenance personnel.	Repair			
	A	Cracks wider than 0.5 inches and longer than 1 foot at pipe inlet/outlet.	Repair			

**Fleets and Facilities Department Annual Inspection Form for Catch Basins, Maintenance Holes, and Inlets (continued)**

Components	Inspection Frequency <sup>a</sup>	Condition when Maintenance Required	Action Required	Satisfactory	Unsatisfactory	Comments
<b>Structure (continued)</b>						
Cover/grate	A	Cover/grate missing, damaged, or only partially in place.	Repair/replace			
	A	Grate openings are wider than 7/8 inch.	Replace			
	A	Cannot be opened by one person. Locking bolts missing, damaged, or have less than 1/2 inch of thread.	Repair/replace			
	A	Buried.	Expose and restore to surface grade.			
Ladder	A	Ladder rungs damaged, missing, or misaligned.	Repair/replace			

<sup>a</sup> Inspection frequency:

A = Annually; B = Biannually (twice per year); W = Recommend that at least one inspection occur during the wet season, preferably after trees have lost their leaves; E = Recommend that additional inspections be performed as appropriate after major events (e.g., > 1 inch of precipitation in 24 hours or environmental incident which causes contaminant release).

<sup>b</sup> Minimum requirement is for annual inspections. More frequent inspections and maintenance may be required depending on site conditions.



# FFD Source Control Annual Inspection Form

Date and time of inspection: \_\_\_\_\_

Weather conditions: \_\_\_\_\_

Site inspector name(s): \_\_\_\_\_

Site inspector title(s): \_\_\_\_\_

Site inspector phone number(s): \_\_\_\_\_

## **Spill Prevention**

Are spill kits located near high-risk spill areas?  Yes  No

Circle the following spill kit supplies that need to be refilled:

<b>Sorbent booms</b>	<b>Sorbent pads</b>	<b>Kitty litter</b>	<b>Granular sorbent</b>
<b>Acid/base neutralizer</b>	<b>Solvent absorbent</b>	<b>Drip pans</b>	<b>Drain cover</b>

Recommended Actions: \_\_\_\_\_

\_\_\_\_\_

## **Vehicles and Fueling**

Are there signs of leaking vehicles?  Yes  No

Are there non-operating vehicles parked onsite?  Yes  No

Recommended Actions: \_\_\_\_\_

\_\_\_\_\_

## **Outdoor Storage Areas**

Does yard area have oil staining or visible sheen?  Yes  No

Does yard area have signs of distressed vegetation?  Yes  No

Are garbage dumpsters covered and free of leaks?  Yes  No

Is there evidence of significant spilled materials around waste containers?  Yes  No

Are there oils, grease, or other substances exposed to stormwater?  Yes  No

Recommended Actions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

