STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Department of Public Works
Highway Garage & Storage Yard
Town of Hanover

June 2020
Revised September 2020

ENVIRONMENTAL PARTNERS

TABLE OF CONTENTS

SECTION 1 INTRODUCTION 1

SECTION 2 DETAILED FACILITY ASSESSMENT 3

2.1 Facility Summary 3
2.2 site inspection 3
2.3 Pollution Prevention Team 3
2.4 Facility Description 4
2.5 Facility Structures 5
2.5.1 Additional Site Features 5
2.6 Site Drainage 6
2.6.1 Receiving Waters 6
2.6.2 Applicable TMDLS 7
2.7 Site activities 7
2.7.1 Compost Production or Storage 8
2.7.2 Stockpiles and Sand Storage 8
2.7.3 Salt Storage 9
2.7.4 Solid Waste Management 10
2.7.5 Snow Dump 11
2.7.6 Use or Storage of Pesticides or Fertilizers 12
2.7.7 Vehicle and Equipment Storage 12
2.7.8 Vehicle and Equipment Maintenance/Repair 12
2.7.9 Vehicle and Equipment Washing 13
2.7.10 Waste Handling and Disposal 14
2.7.11 Waste Oil Storage 16
2.8 Vehicle and Equipment Inventory 16
2.9 Location of Leak and Spill Cleanup Materials 16
2.10 Allowable Non-Stormwater Discharges 17
2.11 Existing Stormwater Monitoring Data 17
2.12 Significant Material Inventory 18
2.13 Applicability of Spill Prevention, control and Countermeasure (SPCC) Requirements 19
2.14 Description of Significant Material Storage Areas 19
2.15 List of Significant Leaks or Spills 20
2.16 Structural bmps 20
2.16.1 Pretreatment Structural BMPs 20
2.16.2 Treatment Structural BMPs 21
2.16.3 Other Structural BMPs 21
2.17 sediment and erosion control 21

SECTION 3 NON-STRUCTURAL CONTROLS 22

3.1 GOOD HOUSEKEEPING 22
3.2 PREVENTATIVE MAINTENANCE 23
3.3 BEST MANAGEMENT PRACTICES 23
3.4 SPILL PREVENTION AND RESPONSE 23

SECTION 4 PLAN IMPLEMENTATION 25

4.1 EMPLOYEE TRAINING 25
4.2 SITE INSPECTION REQUIREMENTS 25
4.3 RECORDKEEPING AND REPORTING 26
4.4 TRIGGERS FOR SWPPP REVISIONS 26

SECTION 5 SWPPP CERTIFICATION 28

LIST OF TABLES

Table 1: Impaired Waters Receiving Drainage from the Facility 7

Table 2: Vehicle Inventory 16

Table 3: Leak and Spill Cleanup Materials 17

Table 4: Exhisting Stormwater Monitoring Data 17

Table 5: Significant Material Inventory 18

Table 6: Significant Leaks or Spills 20

LIST OF FIGURES

Figure 2-1: Locus Map

Figure 2-2: Site Map

LIST OF APPENDICES

Appendix A: Standard Operating Procedures

Appendix B: Spill Documentation Forms

Appendix C: Training Documentation and Attendance Sheets

Appendix D: Facility Inspection Forms

SECTION 1 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) has been developed for the Town of Hanover to address the requirements of the United States Environmental Protection Agency's (USEPA's) 2016 National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts, hereafter referred to as the 2016 Massachusetts MS4 Permit.

The 2016 Massachusetts MS4 Permit requires that each permittee, or regulated community, address six Minimum Control Measures. These measures include the following:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination Program
4. Construction Site Stormwater Runoff Control
5. Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management); and
6. Good Housekeeping and Pollution Prevention for Permittee Owned Operations.

Under Measure 6, Good Housekeeping and Pollution Prevention for Permittee Owned Operations, the permittee is required, per Section 2.3.7.b of the 2016 Massachusetts MS4 Permit (page 50-54), to:

> *…develop and fully implement a SWPPP for each of the following permittee-owned or operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater as determined by the permittee.*
>
> *The SWPPP shall contain the following elements:*
> 1. *Pollution Prevention Team*
> 2. *Description of the facility and identification of potential pollutant sources.*
> 3. *Identification of stormwater controls*
> 4. *Management practices including: minimize or prevent exposure, good housekeeping, preventative maintenance, spill prevention and response, erosion and sediment control, management of runoff, management of salt storage piles or piles containing salt, employee training, and maintenance of control measures.*
> 5. *Site inspections*

This SWPPP accomplishes these requirements by:

- Providing an inventory of the materials and equipment at a facility that have the potential to cause stormwater pollution, and identifying locations where these materials are stored;

- Describing how stormwater is managed at a facility, including: engineered storm drain system conveyance; on-site pretreatment, treatment and infiltration systems; and discharges to surface water directly from the site;
- Reviewing activities that occur at the facility that represent a potential for stormwater pollution;
- Describing the Best Management Practices (BMPs) that will be implemented at the facility to reduce, eliminate and prevent the discharge of pollutants to stormwater;
- Identifying the employees responsible for developing, implementing, maintaining, and revising, as necessary, this SWPPP;
- Establishing a schedule and description of site inspections to be conducted at the facility to determine if the SWPPP is effective in preventing the discharge of pollutants;
- Serving as a tool for the facility employees, including a place to maintain recordkeeping associated with these requirements.

SECTION 2 DETAILED FACILITY ASSESSMENT

2.1 FACILITY SUMMARY

The Hanover Department of Public Works (DPW) Highway Garage and Storage Yard is located at 229 Ames Way, Hanover, MA 02339 and is owned and operated by the Town of Hanover. The Locus Map in Figure 2-1 shows the location of the facility within the Town of Hanover.

The Department of Public Works is primarily responsible for activities at, and maintenance of, the facility.

2.2 SITE INSPECTION

The site inspection associated with the development of this SWPPP was completed on October 17, 2019. The inspection was conducted by Vern Lincoln, of Environmental Partners and was a good housekeeping and Best Management Practices facility audit; not specifically for SWPPP development.

During the site inspection, information related to activities at the site, vehicles stored at the site, fueling operations, material storage, transport of oil and other materials, and spill history was gathered. Information from this facility audit are supplemented with information from the Deputy Superintendent of Public Works (field operations)

2.3 POLLUTION PREVENTION TEAM

A Pollution Prevention Team for the Hanover DPW has been prepared and designated the task of developing, implementing, maintaining, and revising, as necessary, the SWPPP for this facility. Listed below are Pollution Prevention Team members and their respective responsibilities.

Responsibilities assigned to one or more members of the Pollution Prevention Team include:

- Implementing, administering and revising the SWPPP
- Regularly inspecting stormwater control structures
- Conducting stormwater training
- Recordkeeping

Leader: Kurt Kelley **Office Phone:** 781-826-3189
Title: Deputy Superintendent of Public Works

Responsibilities: Considers all stages of plan development, inspections, and implementation; coordinates employee training programs; maintains all records and ensures that reports are submitted; oversees sampling program. Responsible for certifying the completeness and accuracy of the SWPPP.

Member: Stephen McNamara **Office Phone:** 781-826-3189
Title: Foreman

Responsibilities: Implements the preventative maintenance program; oversees good housekeeping activities; serves as spill response coordinator; conducts inspections; assists with employee training programs; conducts sampling/visual monitoring.

Member: John Olson **Office Phone:** 781-826-3189
Title: Foreman

Responsibilities: Assists in all components of the stormwater program, as needed. Maintains spill kits at the Hanover DPW.

2.4 FACILITY DESCRIPTION

The primary purpose of the Highway Garage is to provide the Town of Hanover personnel with a heated, covered area in which to complete minor maintenance, oil changes and preparation of vehicles, equipment and tools for use at locations around the Town of Hanover. The Storage Yard is used for the storage of road deicing material, yard debris, compost, and other materials used throughout the Town of Hanover. Activities at the site are described in SECTION 2.7

The facility covers approximately 10.52 acres, and contains the structures and other features shown on the Site Map in Figure 2-2 and described in detail in the following sections. Components shown on the site map, if present, include:

- Location of the engineered drainage system, including catch basins, ditches, drain manholes, and treatment BMPs
- Outfalls to a receiving water, and the name of the receiving water
- Direction of surface water flow
- Structural stormwater pollution control measures
- Location of floor drains
- Vehicle washing areas
- Vehicle fueling areas
- Aboveground storage tanks (indoors and outdoors)
- Underground storage tanks
- Chemical storage areas
- Pesticide and fertilizer storage areas
- Salt storage areas
- Materials stockpiles
- Waste disposal areas.

2.5 FACILITY STRUCTURES

Vehicle Storage and Maintenance

The Highway Garage building is used to provide the Town of Hanover personnel with a heated, covered area in which to complete minor maintenance, oil changes and preparation of vehicles, equipment and tools for use at locations around the Town of Hanover. This building contains floor drains in bathrooms and garage bays, which discharge to tight tank.

Waste Oil Burner

The Highway Garage portion of the property contains a waste oil furnace used and operated by the Town of Hanover.

This structure provides fully-enclosed storage for waste oil drums, and serves as a heated, enclosed workspace for maintenance of the Town of Hanover vehicles. Latex paint, spray paint, and similar products in this building were observed to be properly stored in flammable materials storage cabinets.

Storage of Deicing Materials

Road salt is stored in a salt shed, located next to the Highway Garage. Magnesium chloride wetting agent is stored in tanks next to the salt shed. The salt shed is covered, enclosed, and the materials are fully contained within the building. The good housekeeping measure used to minimize the exposure resulting for adding to or removing stored materials include sweeping the loading/unloading area regularly or when salt has accumulated on the paved surface.

Storage of Road Deicing Equipment

The Town of Hanover utilizes 11 salt spreaders and 25 snow plows on its vehicles to adequately maintain roads. In the off-season, this equipment is stored at the Highway Garage in two outside locations, as shown on Figure 2.

2.5.1 Additional Site Features

Aboveground Storage Tanks

An aboveground storage tank (AST) at the Highway Garage is used for storage of magnesium chloride. An inventory of significant materials is included in SECTION 2.12.

Two ASTs are located at the center portion of the property for storage of magnesium chloride. The AST is not covered and is within concrete secondary containment.

Fuel Islands

A covered island containing two fuel pumps for gasoline and diesel is located at the southern portion of the property, and is used on a 24-hour basis for fueling of Town of Hanover vehicles. Access to these fuel pumps is secured behind gates at the entrance to the facility. The location of the fuel island is such that all users are visible to personnel at the Highway Garage.

Tight Tanks

The Town of Hanover maintains one tight tank at the Highway Garage.

The tight tank is located near the center portion of the property, as shown on Figure 1. This pretreatment structure has a cleanout manhole, and is pumped on an annual basis. The Department of Public Works is responsible for contracting this work, and maintains records on the pump out activities. This tight tank provides treatment of flow from the Highway Garage. Floor drains in all areas where oil materials are used and/or where vehicles are stored discharge to this tight tank

Materials for Use by Residents

The Town of Hanover maintains an area for storage of yard debris and compost for use by the Town of Hanover residents. This area is located at the western portion of the property and is uncovered.

Parking Areas

There are two designated parking areas at the Highway Garage, some of which are impervious surface. These parking areas are used primarily for the storage of Town of Hanover-owned trucks and for daily use by the Hanover DPW employees. In the spring, summer and fall months a total of approximately 12 vehicles are parked outside at these locations.

In the winter time all vehicles are stored inside at the Highway Garage or inside the Operations Building that abuts the property to the east.

2.6 SITE DRAINAGE

No stormwater from adjacent properties impact the Hanover Highway Garage property.

Sheet Flow

Drainage from the impervious surfaces at the Highway Garage and Storage Yard is directed partially to the single catch basin on-site.

Engineered Drainage

Engineered drainage at the Hanover DPW includes approximately one catch basin. Maintenance of the catch basin structure, including sediment removal, is completed by the Department of Public Works or a subcontractor.

2.6.1 Receiving Waters

The discharge location for the one catch basin onsite (shown on Figure 2), is not known. This catch basin may infiltrate onsite or discharge to one of the nearby water bodies, likely to Torrey Brook to the south. Overland flow from the site may discharge to the Drinkwater River to the north and west of the Hanover Highway Garage or to Torrey Brook to the south. The Drinkwater River to the north of the site is not categorized as an impaired water body. The Drinkwater River to the west of the Hanover Highway Garage has been categorized as a 303(d) List (Impaired) surface water Category 5,

with Total Maximum Daily Load (TMDL) required. The impairment of this river, assigned the unique identifier MA94-21, is considered a Category 5, meaning that a TMDL will be required.

Impairments of this water body are shown in Table 1, below.

Table 1: Impaired Waters Receiving Drainage from the Facility
Highway Garage

Water Body Name	ID	Category	Impairment(s)
Drinkwater River	MA94-21	5	• Debris*), (Non-Native Aquatic Plants*), (Trash*), Algae, Chlorophyll-a, Dissolved Oxygen, Dissolved Oxygen, Supersaturation, Mercury in Fish Tissue, Phosphorus, Total Transparency / Clarity
			• Escherichia Coli (E. Coli) (TMDL 61724)
			• Fecal Coliform (TMDL 61724)

The activities and stored materials at the Highway Garage may have the potential to affect these impairments.

The good housekeeping practices, preventative maintenance and Best Management Practices implemented at the facility are methods to limit potential negative impacts to stormwater. These practices are discussed in SECTION 3 of this SWPPP.

2.6.2 Applicable TMDLS

Water bodies identified as Category 5, as shown in Table 1, are impaired or threatened for the defined uses. TMDLs are required for the impairment shown. The following TMDLs have been developed:

- Escherichia Coli (E. Coli) TMDL No. 61724 (Final Pathogen TMDL for the South Coastal Watershed, August 2014)
- Fecal Coliform TMDL No. 61724 (Final Pathogen TMDL for the South Coastal Watershed, August 2014)

2.7 SITE ACTIVITIES

The following activities occur at the facility:

- Compost Production or Storage
- Facility or Building Maintenance
- Fueling Operations
- Landscaping Equipment Storage
- Sand storage
- Salt storage
- Tool storage
- Vehicle and equipment storage
- Vehicle and equipment maintenance/repair (including oil changes)

- Vehicle and equipment washing
- Waste oil storage

Below is a discussion of site activities and the potential pollutant sources associated with each, as well as measures taken to minimize pollution. Locations of each activity are shown on the Site Plan (Figure 2).

There is a small Safety-Kleen solvent-based parts washers in the maintenance garage. Any hazardous materials are collected by a third party vendor contracted by the Town of Hanover. Other waste materials from the Highway Garage include used motor vehicle fluids that cannot be utilized for the waste oil burner, such as used antifreeze and brake fluid. Any oil that may be contaminated with antifreeze, brake fluid, paint, or other additive that makes it unburnable in the waste oil furnace is also collected for disposal by a third party vendor. These materials must be properly labeled and stored using appropriate Best Management Practices between the time of generation and disposal.

The Department of Public Works does not apply or utilize fertilizers, herbicides, or pesticides at any facility owned or managed by the Town of Hanover. All fertilizer, herbicide, or pesticide applications are contracted out to a third party. As such, no fertilizers, herbicides, or pesticides are stored at the Highway Garage.

2.7.1 Compost Production or Storage

Potential Sources of Stormwater Pollution

Compost production and storage locations present the threat to contaminate stormwater with pathogens, including bacteria and viruses, nutrients, including phosphorus and nitrogen, fertilizers, pesticides and sediments.

Pollution Prevention

Compost storage areas shall be located and properly labeled within a designated stockpile area that is covered and contained to prevent exposure to precipitation. If the storage area is unable to be covered it should be contained within an area contained by silt fence or concrete barriers and located in an area that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterbody. The compost shall be kept in neat, separate piles from all other materials.

2.7.2 Stockpiles and Sand Storage

Potential Sources of Stormwater Pollution

Sand stored in piles for use during construction and during winter plowing and deicing activities represents a potential source to stormwater pollution. Stockpiled materials such as gravel, loam, and crushed rock represent a similar source of pollution. When stored unprotected outdoors, sand piles and material stockpiles are exposed to precipitation. When the resulting eroded material enters the stormwater system, the sediment can quickly fill the sumps of catch basin structures, rendering them ineffective.

Mixing sand and salt for use in deicing activities poses an additional element of stormwater pollution, particularly if the mixing area is not fully enclosed and protected from the elements.

Salt storage at the Hanover Highway Garage is stored in a completely covered structure.

Pollution Prevention

To avoid contamination of stormwater by sand and other stockpiled materials, erosion and sediment control measures should be implemented at each storage site. When planning a location for a stockpile, a relatively level site away from slopes, catch basins, and water features should be selected.

Stockpiles can be stabilized by seeding or mulching if they are to remain exposed for more than two weeks, or can be covered with impermeable sheeting to protect the material from rainwater. If the stockpile location becomes a permanent storage site for sand, a roofed structure should be considered to reduce erosion.

Sediment barriers should be placed around the perimeter of the storage site to prevent any runoff carrying sand from entering storm drains and surface waters. If the weather becomes dry and windy, regular light watering of the stockpile and surrounding area will provide effective dust control. Please refer to SOP 6, "Erosion and Sedimentation Control," included in Appendix A, for more information.

Sand that has been mixed with salt for use during winter plowing and deicing activities should always be stored in an enclosed and covered salt shed. Salt sheds should be constructed on level ground with an impervious base on which to store the salt/sand mixture. Under no circumstances should loose salt/sand mix be stored outside and unprotected. All mixing of salt and sand should take place within the salt shed or other covered, enclosed area.

Ensuring that the storage area is regularly swept and kept clean is an important good housekeeping practice.

2.7.3 Salt Storage

Road salt at the Hanover Highway Garage is stored in a salt shed, located next to the Highway Garage. The salt shed is covered, enclosed, and the materials are fully contained within the building. Following are good housekeeping procedures for salt storage.

Potential Sources of Stormwater Pollution

Salt stored in piles for use during winter plowing and deicing operations represents a potential major contributor to stormwater pollution. When stored unprotected outdoors, salt is exposed to precipitation, causing leachate with high chloride that can be discharged to the receiving water. Salt delivery and loading activities can contribute pollutants to stormwater if the material is not handled with care, and if spills from handling operations are not promptly cleaned up.

Pollution Prevention

To prevent stormwater pollution, all salt piles should be enclosed and covered in sheds to prevent exposure to precipitation. Salt sheds should be constructed on level ground with an impervious

base on which to store the salt. The shed should prevent disturbance or migration of the salt by wind.

During delivery and loading activities, salt should be transferred to and from vehicles within the salt shed, whenever possible. Any spills during unloading and loading events should be tended to without delay. Ensuring that the salt storage area is regularly swept and kept clean is an important good housekeeping practice.

If it is not feasible to fully enclose the salt pile, the salt should be stored on an impervious base and covered with an impermeable membrane material. Under no circumstances should loose salt be stored outside and exposed to precipitation.

The area should not be hosed down to a storm drain as a cleaning method. To further limit stormwater pollution, an independent runoff collection system may be installed in the area of the salt storage to collect and convey runoff either directly to a treatment best management practice or to a sanitary sewer system, with approval from the operator of the sanitary sewer system.

2.7.4 Solid Waste Management

Potential Sources of Stormwater Pollution

The Town does not store or handle solid waste at the Highway Garage other than materials used in day-to-day operations.

Solid waste production and storage locations present the threat to contaminate stormwater with pathogens, including bacteria and viruses, nutrients, including phosphorus and nitrogen, metals and sediments.

Solid waste may be classified as both hazardous and non-hazardous waste consisting of agricultural, construction and demolition, dead animals, industrial, municipal, and tire waste.

Pollution Prevention

To prevent or reduce the potential for stormwater pollution from solid waste management practices the following preventative maintenance procedures are recommended:

1. All staff shall be properly trained in correct solid waste management practices, including waste disposal and spill prevention and response. All employees shall also be knowledge of the potential hazards associated with solid waste handling and storage.
2. Each waste storage location shall be properly labeled and all significant sources of pollution shall be kept in a secure, covered and contained area.
3. The facility and storage containers shall remain locked at all times other than during normal hours of operation.
4. All waste storage containers and waste handling equipment shall be routinely inspected for signs of spills, leaks, corrosion or general deterioration.
5. The facility shall maintain spill response materials in accordance with SOP 4, “Spill Response and Cleanup”.

2.7.5 Snow Dump

Potential Sources of Stormwater Pollution

The Town does not use the Highway Garage for snow dumps.

Snow collected from plowing and road clearing activities and managed in snow dumps can contaminate engineered storm drain systems and receiving waters if disposal sites are not properly selected and maintained. As snow is removed from roadways, parking lots, sidewalks, and other paved areas, contaminants such as sand, salt, litter, and automotive oil are collected along with the snow. These pollutants are ultimately transported to the storage site and eventually to receiving waters once the snow melts.

Infiltration of pollutants in snow, such as chlorides from road salt, can impact groundwater, including drinking water aquifers.

When snow, including sand and debris contained within it, is stored directly on top of catch basins, when combined with sand and debris, discharge to the engineered drainage system can be blocked, causing localized flooding.

Pollution Prevention

To avoid contamination of stormwater and drinking water supplies by snow dumps, storage sites should be selected and prepared before the snow season begins. The snow dump should be located on a pervious surface in an upland area away from water resources and wells, so that meltwater can be filtered through the soil.

Selected sites should have a combined capacity large enough to cope with the estimated snowfall totals for the season. Snow should not be dumped within a Zone II or Interim Wellhead Protection Area of a public water supply, or within 75 feet of a private well. Sanitary landfills are not appropriate locations for snow dumps because the infiltration of meltwater will result in greater amounts of contaminated leachate. High groundwater levels also make gravel pits poor sites for snow storage.

Proper preparation and maintenance of snow disposal sites will also prevent stormwater pollution. Before winter begins, a silt fence or sediment barrier should be placed on the down-gradient side of the snow dump to collect any sediment in snow meltwater. If the site is located near a body of water, a 50-foot vegetated buffer strip (at minimum) should be maintained during the growth season to filter pollutants out of meltwater. Prior to using the site for snow disposal, all debris should be cleared.

Debris and litter left after the snow has melted should be cleared and disposed of at the end of the snow season, no later than May 15 of each year.

Except under the most extraordinary of circumstances, when all land-based snow disposal options have been exhausted, snow should not be dumped into any body of water. When this option is necessary, requirements of “Snow Disposal Guidance” (BRPG01-01) issued by MassDEP on March 8, 2001, shall be followed.

2.7.6 Use or Storage of Pesticides or Fertilizers

Potential Sources of Stormwater Pollution

The Town does not utilize or store pesticides or fertilizers at the Highway Garage.

Pollution Prevention

The Town does not utilize or store pesticides or fertilizers at the Highway Garage.

2.7.7 Vehicle and Equipment Storage

Potential Sources of Stormwater Pollution

Vehicle and equipment storage activities are a potential source of pollution due to the diesel fuel, gasoline, oil, hydraulic fluid, antifreeze and similar hazardous material or fuel the machinery may contain. In addition, vehicles or machinery may pick up pollutants during the course of offsite activities or at other facilities, and then deposit these pollutants at the storage facility.

Pollution Prevention

Regular visual inspection and maintenance of vehicles and equipment can greatly reduce the potential for pollution by finding and addressing leaks before pollution of the environment occurs. When in storage, vehicles and equipment should be kept on a covered slab or within a building with a common drain. Discharge to this drain shall be managed by an oil/ water separator (refer to SOP 11, "Oil/Water Separator Maintenance", included in Appendix A) to remove oils and gasoline. Vehicle washing activities shall not be completed in areas served by an oil/water separator.

No equipment should be kept in an area where leaks could result in pollutants entering catch basins, channels leading to outfalls, or the engineered storm drain system. If vehicles and equipment are stored outdoors, catch basins or engineered drainage system structures should include devices intended to remove oils and sediments prior to entering the system. These treatment devices should be inspected and replaced at the frequency recommended by the manufacturer.

2.7.8 Vehicle and Equipment Maintenance/Repair

Potential Sources of Stormwater Pollution

Vehicle and equipment maintenance and repair often requires the use of harmful liquids such as fuels, oils, and lubricants, and has the potential for producing dust, scrap and by-products that may contain pollutants. Both accidental and purposeful spillage, i.e., a leaky oil pan needing repair vs. draining the pan during an oil change, can lead to situations where pollutants can potentially enter stormwater runoff if the situations are not approached properly. Although there is little potential for effecting stormwater, it should be noted that hazardous gases can be produced during maintenance and repair as well.

Pollution Prevention

Proper maintenance and repair for vehicles and equipment shall include a preliminary assessment of potential pollutant sources. This assessment shall be used to determine the best means of containing any potential spills or by-products of the situation at hand. Approved containers shall be used to capture hazardous liquids to then be disposed of according to applicable MassDEP and USEPA guidelines. If the project may produce hazardous dust that could come in contact and mix with any liquids, the proper containment shall be utilized.

Due to heavy metal accumulation in antifreeze, brake fluid, transmission fluid, and hydraulic oils, it is not recommended that any of these liquids are disposed of in the sanitary sewer system. Contaminated parts removed or replaced on any vehicles or equipment shall be disposed of properly.

All work shall take place on a covered slab or within a building with a common drain. Discharge to this drain shall be managed by an oil/ water separator (refer to SOP 11, "Oil/Water Separator Maintenance", included in Appendix A) to remove oils and gasoline.

Maintenance and repairs shall not take place in areas prone to stormwater runoff or where pollutants could enter catch basins, channels leading to outfalls, or an engineered storm drain system. All catch basins or engineered drainage systems on site that could be affected by accidental spills should include devices intended to remove oils and sediments prior to entering the system. These treatment devices should be inspected and replaced at the frequency recommended by the manufacturer.

2.7.9 Vehicle and Equipment Washing

Potential Sources of Stormwater Pollution

Vehicle and equipment washing is performed at the Highway Garage. Light equipment and small vehicles may be washed inside the maintenance garage. Heavy equipment is washed outside in the yard on pervious ground surface.

Vehicle and equipment washing activities are a potential source of pollution not only from petroleum products and pollutants deposited on the exterior of the equipment, but also from nutrients and sediment being washed into water bodies from the act of washing itself. Although some cleaning agents are becoming environmentally friendly, many still contain regulated contaminants. Due to the possibility for multiple types of pollutants, vehicle and equipment washing activities have a high potential for degrading stormwater quality.

Pollution Prevention

Outdoors, the use of a tight tank or other similar structure that can contain the wash water is ideal. If the wash water cannot be contained, it shall not be allowed to directly enter water bodies. Use phosphate free detergents that do not contain regulated contaminants, and avoid using solvents where the wash water may enter a sanitary sewer. Impervious surfaces may be used to promote infiltration and treatment before wash water enters the groundwater, but wash water coming from impervious pavement shall be treated to remove nutrients and petroleum products before entering

an engineered storm drain system. Infiltration shall not be used within wellhead protection areas or other protected resource areas. Power washing, steam cleaning and engine and undercarriage washing shall not occur outdoors. Heavily soiled or vehicle dirtied from salting shall not be washed outdoors. All adjacent catch basins shall have a sump and be cleaned periodically, (refer to SOP 3, "Catch Basin Inspection and Cleaning", included in Appendix A). All debris and particulate accumulation shall be removed and swept clean in all outdoor washing areas.

Washing vehicles and equipment indoors in the proper facilities is preferred over washing outdoors whenever possible. Indoor facilities shall have a common drain and it shall utilize a tight tank or other containment device to hold the wash water. The use of detergents shall be avoided and when the use of detergents cannot be avoided, use detergents free from phosphates and regulated contaminants. Detergents shall not be used when the discharge of this drain is controlled by an oil/ water separator (refer to SOP 11, "Oil/Water Separator Maintenance", included in Appendix A). All drains that discharge directly to a water body of engineered storm drain system shall be plugged or abandoned. Dry clean-up methods such as vacuuming and sweeping shall be used whenever possible to avoid washing down floors with water.

For both outdoor and indoor washing, maintain absorbent pads and drip pans to collect spills and leaks observed during washing activities. Refer to SOP 4, "Spill Response and Cleanup Procedures" included in Appendix A for more information.

Washing of large facility vehicles is completed outside of the Highway Garage. Washing of smaller vehicles is performed inside the Highway Garage, where water from the floor drain system is discharged to a tight tank that is maintained by the Department of Public Works.

Salt and sand spreaders stored at the Highway Garage are occasionally pressure washed at that location.

2.7.10 Waste Handling and Disposal

Potential Sources of Stormwater Pollution

Waste handling and disposal facilities and activities present a potential to contaminate stormwater with pathogens (including bacteria and viruses), nutrients, including phosphorus and nitrogen, fertilizers, pesticides and sediments.

There are several classifications of waste that contribute to stormwater pollution, including:

1. Solid Waste
2. Hazardous Materials and Waste
3. Pesticides and Fertilizers
4. Detergents

Pollution Prevention

A variety of measures are considered appropriate to prevent pollution from waste handling and disposal activities, based on the waste classifications noted previously.

Solid Waste

1. Designate a waste collection area on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a receiving water.
2. Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible.
3. Schedule waste collection to prevent the containers from overfilling.
4. Clean up spills immediately and in accordance with SOP 4, “Spill Response and Cleanup Procedures” included in Appendix A.

Hazardous Materials and Wastes

1. To prevent leaks, empty and clean hazardous waste containers before disposing of them.
2. Never remove the original product label from the container. Follow the manufacturer's recommended method of disposal, printed on the label.
3. Never mix excess products when disposing of them, unless specifically recommended by the manufacturer.
4. Clean up spills immediately and in accordance with SOP 4 “Spill Response and Cleanup”.

Pesticides, Fertilizers and Petroleum Products

1. Do not handle the materials more than necessary.
2. Store materials in a dry, covered, contained area.
3. Clean up spills immediately and in accordance with SOP 4, “Spill Response and Cleanup”.

Detergents

1. Never dump wastes containing detergents to a storm drain system. All wastes containing detergents shall be directed to a sanitary sewer system for treatment at a wastewater treatment plant.

Additional Recommendations

In addition to the pollution prevention requirements a waste management plan is recommended. The plan shall include employee training and signage informing individuals of the hazards associated with improper storage, handling and disposal of wastes. It is imperative that all employees are properly trained and follow the correct procedures to reduce or eliminate stormwater pollution. Routine visual inspection of storage and use areas is critical. The visual inspection process shall include identification of containers or equipment which could malfunction and cause leaks or spills. The equipment and containers shall be inspected for the following:

1. Leaks
2. Corrosion
3. Support or Foundation Failure
4. Other Deterioration

In the case a defect is found, immediately repair or replace.

2.7.11 Waste Oil Storage

Potential Sources of Stormwater Pollution

When not stored properly, waste oil can be a potential source of petroleum in stormwater. Waste oil containers can leak, and spills can occur while during transportation activities.

Pollution Prevention

All waste oil containers should be properly labeled and stored with secondary containment. Containers should be regularly inspected for rust, leaks, or other signs of deterioration. Defective containers should be promptly removed and replaced. A spill response kit should be located wherever waste oil is stored. Facility personnel should know where the spill kit is located and be familiar with the procedures outlined in SOP 4 "Spill Response and Cleanup Procedures" in Appendix A. Used oil filters should also be properly disposed.

Care should be taken when transferring used oil to and from storage containers. For additional information see SOP 7 "Fuel and Oil Handling Procedures" found in Appendix A.

Waste oil should be stored indoors or under a covered structure to prevent exposure to precipitation. Floor drain in waste oil storage areas should drain to an oil/water separator rather than the storm drain system. See SOP 11 "Oil/Water Separator Maintenance" in Appendix A for further information.

When possible, steps should be taken to recycle waste oil or reduce the amount generated.

2.8 VEHICLE AND EQUIPMENT INVENTORY

Vehicles and major equipment stored and maintained at the facility are shown in Table 2.

Table 2: Vehicle Inventory

Vehicle Type	Number on Site
CDL Class Dump Trucks	14
Non-CDL Class Dump Trucks	8
Pickups/Vans	5
Backhoes	2
Front End Loaders	2
Tracked Dozers	2
Trackless MulitTractors	3

2.9 LOCATION OF LEAK AND SPILL CLEANUP MATERIALS

Leak and spill cleanup materials are stored at Highway Garage at the southwest corner of the building in order to facilitate rapid response. Locations and types of leak and spill cleanup materials are identified in Table 3.

Table 3: Leak and Spill Cleanup Materials

Building or Area	Location	Materials Available
Highway Garage	Southwest Corner	1//2 Pallet Speedy Dry
Highway Garage	Southwest Corner	24x24 Absorbent pads
Highway Garage	Southwest Corner	Absorbent booms

2.10 ALLOWABLE NON-STORMWATER DISCHARGES

A non-stormwater discharge is defined as any discharge or flow to the engineered storm drain system that is not composed entirely of stormwater runoff.

Allowable non-stormwater discharges that occur at this facility include:

- Water line flushing
- Rising ground water
- Uncontaminated ground water infiltration (as defined at 40 CFR § 35.2005(20))
- Uncontaminated pumped ground water
- Discharge from potable water sources
- Foundation drains
- Air conditioning condensation
- Water from crawl space pumps
- Footing drains
- Street wash waters

It has been determined that the above non-stormwater discharges at the Highway Garage do not represent a significant contribution of pollution to the MS4 or the waters of the United States. Therefore, these are considered to be authorized under the current MS4 permit.

2.11 EXISTING STORMWATER MONITORING DATA

Records for any stormwater monitoring data collected from the Highway Garage shall be properly documented in Table 4, below and kept on file at the Highway Garage and DPW Office.

Table 4: Existing Stormwater Monitoring Data
Highway Garage

Building or Area	Location	Type of Monitoring

2.12 SIGNIFICANT MATERIAL INVENTORY

Materials stored include those specified in SECTION 2.7, "Site Activities". An inventory of these materials at the Highway Garage is included in Table 5. The Town will fill in the information for each item, including: the likelihood for each identified material to come in contact with stormwater; the type of container; the type of material i.e., oil, gasoline, and other petroleum-based materials are listed separately in the table.

Table 5: Significant Material Inventory
Highway Garage

Material	Storage Location	Quantity	Potential Pollutant	Covered (C) or Enclosed (E)	Likelihood of Contact with Water
Petroleum-Based Compounds					
Diesel fuel	UST	10,000 gal	Petroleum hydrocarbons		
Gasoline	UST	10,000 gal	Petroleum hydrocarbons		
Hydraulic Fluid	Indoor	110 gal	Petroleum hydrocarbons		
Motor Oil	Indoor	275 gal	Petroleum hydrocarbons		
Lubricants	Indoor	Small quantity	Petroleum hydrocarbons		
Transmission Fluid	Indoor	Small quantity	Petroleum hydrocarbons		
Waste Oil	Indoor	275-500 gal	Petroleum hydrocarbons		
Other:					
Total Volume of Oil at Facility =					
Non-Petroleum Significant Materials					
Antifreeze	Indoor	12 gal	Ethylene glycol; potential source of BOD		
Spray Lubricant	Indoor	Small quantity	Petroleum hydrocarbons		
Adhesives and sealants	Indoor	Small quantity	Volatile and semivolatile organic compounds		
Aggregates	Outdoor	69 cyds	Sediments		
Asphalt (cold patch)	Indoor	10-12 cyds	Sediments		
Brake Fluid	Indoor	2 gal	Volatile organic compounds; non-petroleum based oil		
Coolant (new or used)	SEE ANTIFREEZE		Volatile organic compounds		

Material	Storage Location	Quantity	Potential Pollutant	Covered (C) or Enclosed (E)	Likelihood of Contact with Water
Deicer- Magnesium Chloride (liquid)	Outdoor	8,000 gal	Chlorides		
Deicer- Road Salt	Salt Shed	1,500 tons	Chlorides		
Detergents	Indoor	Small Quantity	Surfactants		
Paint, Latex	Indoor	20 gal	Petroleum constituents, including volatile and semivolatile organic compounds		
Paint, Oil-Based	Indoor	10 gal	Petroleum constituents, including volatile and semivolatile organic compounds		
Paint, Spray	Indoor	Small Quantity	Petroleum constituents, including volatile and semivolatile organic compounds		
Sand	Outdoor	10 cyds	Sediments		
Solvent – parts washer	Indoor	Safety Kleen	Volatile organic compounds		
Spill response material (Speedy Dry or similar)	Indoor	1/2 Palet	Particulate matter, solids, residual oil.		

2.13 APPLICABILITY OF SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) REQUIREMENTS

Under federal regulations 40 CFR Part 112 (and Amendments), a Spill Prevention, Control, and Countermeasure (SPCC) Plan is required when a facility has an aboveground oil storage capacity greater than 1,320 gallons, when including containers with a capacity of 55 gallons or more. The Hightway Garage does not have aboveground oil storage capacity that exceeds 1,320 gallons.

2.14 DESCRIPTION OF SIGNIFICANT MATERIAL STORAGE AREAS

Many activities at the Highway Garage that involve the materials included in Table 5 occur within contained garages or bays. These activities may include minor equipment/vehicle repair, oil changes, repainting, lubrication, and parts replacement.

Fueling of all Town of Hanover vehicles occurs at the Fuel Island located at the Highway Garage. All bulk delivery of fuel to the Fuel Island is monitored by a Town of Hanover employee.

The Hightway Garage emergency generator is fueled with diesel. The fuel is stored in an accessory tanks that holds 200 gallons of diesel. There is a block containment around the diesel storage tank. All bulk delivery of fuel to the emergency generator is monitored by a Town of Hanover employee.

Waste oil and other used motor fluids are stored in the Highway Garage. Waste oil is stored in tanks and drums also located within the Highway Garage, all of which have internal containment or are located on appropriate containment pallets. All delivery of waste oil to the facility occurs within the Highway Garage and is monitored by a Hanover DPW employee. The Highway Garage has a small Safety-Kleen parts washer.

Magnesium chloride, for winter road maintenance is stored outside of the salt shed inside an AST and fully contained. Delivery of all chemicals to the Highway Garage is monitored by a DPW employee.

Within the salt shed, deicing materials including road salt are stored. Delivery of deicing materials to the salt shed is monitored by a Hanover DPW employee.

2.15 LIST OF SIGNIFICANT LEAKS OR SPILLS

No significant leaks or spills have occurred at the Highway Garage in the last three years. Significant spills should be updated in Table 6, below.

Table 6: Significant Leaks or Spills
Highway Garage

Building or Area	Location	Type of Monitoring

Forms included in Appendix B will be used to document any spill or leak that occurs at the facility in the future.

2.16 STRUCTURAL BMPS

Structural BMPs include onsite constructed systems that provide pretreatment or treatment of stormwater flows. Structural BMPs are not identified at the Highway Garage. A vegetated swale is identified to the east of the Highway Garage, at the Town Operations Building to retain runoff from the parking lot.

2.16.1 Pretreatment Structural BMPs

- Deep sump catch basins
- Oil/Grit Separators
- Proprietary Separators

- Vortex Separators/ Hydrodynamic devices
- Sediment Forebays
- Vegetated Filter strip
- Infiltration trench
- Level Spreader

2.16.2 Treatment Structural BMPs

- Rain Garden/Bioretention Area
- Constructed wetland
- Pervious (Porous) pavement
- Media Filter/ Subsurface Infiltration Bed
- Sand & Organic Filter
- Extended Wet Basin
- Dry well
- Vegetated swale
- Infiltration berm & retentive grading
- Vegetated Roof
- Dry extended detention basin

2.16.3 Other Structural BMPs

- Riparian buffer restoration
- Landscape restoration
- Soil amendment and restoration
- Floodplain restoration

2.17 SEDIMENT AND EROSION CONTROL

Site topography at the Highway Garage and Storage Yard slopes towards a small stream to the north, Torrey Brook to the south, and Drinkwater River to the west. The Town is evaluating BMPs to address sediment and erosion control.

SECTION 3 NON-STRUCTURAL CONTROLS

3.1 GOOD HOUSEKEEPING

Good housekeeping practices are activities, often conducted daily, that help maintain a clean facility and prevent stormwater pollution problems. The following is a list of good housekeeping measures that are practiced at the facility:

- All washing of vehicles is performed within the designated vehicle wash bay.
- All fluid products and wastes are kept indoors.
- Fueling of small equipment is completed indoors.
- All floor drains present within garage bays drain to an oil/water separator.
- Spill materials and cleanup kits are maintained at all locations where oil materials are used, stored, or may be present, including at Fuel Islands.
- Used spill cleanup materials are disposed of properly.
- Materials are stored indoors or in covered areas to minimize exposure to stormwater.
- No fertilizers, herbicides, or pesticides are stored or used at the facility.
- Lead-acid batteries are stored indoors and within secondary containment.
- Hazardous materials storage lockers with spill containment are used. Storage areas are located away from vehicle and equipment paths to reduce the potential of accident related leaks and spills.
- Storage drums and containers are not located close to storm drain inlets.
- All hazardous material storage areas and containers have proper signage, labels, restricted access, locks, inventory control, overhead coverage, and secondary containment.
- All materials, waste oil storage containers, and gas cans are properly labeled.
- Oil/water separators and catch basins are maintained regularly and properly.
- Speedi Dri (or similar absorbent) is readily available and used for appropriate spills.
- Spill kits are located in areas where fluids are stored or where activities may result in a spill.
- Tools and materials are returned to designated storage areas after use.
- Waste materials are properly collected and disposed of.
- Different types of wastes are separated as appropriate.
- Regular waste disposal is arranged.
- Work areas are clean and organized.
- Work areas are regularly swept or vacuumed to collect metal, wood, and other particulates and materials.
- Obtain only the amount of materials required to complete a job.
- Materials are recycled when possible.
- Staff is familiar with manufacturer directions for proper use of materials and associated Safety Data Sheets (SDSs).
- Staff is familiar with proper use of equipment.
- Bollards, berms, and containment features are in place around areas and structures where fluids are stored.
- Drip pans are used for maintenance operations involving fluids and under leaking vehicles and equipment waiting repair.

The facility maintains a supply of spill cleanup materials at many buildings on site, and will maintain this inventory. An inventory of spill containment, control, and cleanup materials and spill kits maintained at the Highway Garage was shown in Table 3.

3.2 PREVENTATIVE MAINTENANCE

Preventative Maintenance can minimize the occurrence of stormwater pollution by addressing issues before they become problems. Vehicles and equipment should be regularly inspected to prevent leaks of fuel, oil, and other liquids. Structural stormwater controls should be regularly maintained to prevent inadequate performance during storm events.

The following is a list of preventative maintenance procedures practiced at the facility

- All staff members are aware of spill prevention and response procedures.
- All staff members have received formal spill prevention and response procedure training.
- All equipment fueling procedures are completed by qualified personnel trained in spill response procedures.
- Hydraulic equipment is kept in good repair to prevent leaks.
- Vehicle storage areas are inspected frequently for evidence of leaking oil.
- Material storage tanks and containers are regularly inspected for leaks.
- All material and bulk deliveries are monitored by facility employees.
- All waste oil is fully contained and the containers are inspected regularly.

3.3 BEST MANAGEMENT PRACTICES

In a SWPPP, existing and planned BMPs are identified that will prevent or reduce the discharge of pollutants in stormwater runoff for each area of concern listed in SECTION 2.

To prevent or reduce the potential of stormwater contamination from petroleum products, the following BMPs shall continue to be followed:

1. Follow Standard Operating Procedures (s) during delivery of waste oil to the equipment/waste oil storage bay. These SOPs are included in Appendix A.
2. Follow Standard Operating Procedures during delivery of bulk oil to the emergency generator and bulk fuel to the Fuel Island. These SOPs are included in Appendix A.
3. Minimize the volume of gasoline stored within the buildings and on the site.
4. Clean up any oil spills observed in the parking lot, garages, or other surfaces in a timely manner.
5. Monitor all material deliveries.
6. Inspect all storage tanks prior to filling activities for spills, leaks and corrosion.

3.4 SPILL PREVENTION AND RESPONSE

The following procedures apply to the facility:

- All personnel are instructed in location, use, and disposal of spill response equipment and supplies maintained at the site such as oil absorbent materials.

- The Pollution Prevention Team leader will be advised immediately of all spills of hazardous materials or regulated materials, regardless of quantity.
- Spills will be evaluated to determine the necessary response. If there is a health hazard, fire or explosion potential, 911 will be called. If a spill exceeds five gallons or threatens surface waters, including the storm drain system, state or federal emergency response agencies will be called.
- Spills will be contained as close to the source as possible with oil-absorbent materials. Additional materials or oil-absorbent socks will be utilized to protect adjacent catch basins.

SECTION 4 PLAN IMPLEMENTATION

4.1 EMPLOYEE TRAINING

Regular employee training is required for employees who work in areas where materials or activities are exposed to stormwater, or who are responsible for implementing activities identified in the SWPPP, including all members of the Pollution Prevention Team.

The Department of Public Works is responsible for stormwater management training for the Highway Garage employees. This position coordinates training related to stormwater management on at least an annual basis to review specific responsibilities for implementing this SWPPP, what and how to accomplish those responsibilities, including BMP implementation.

Additionally, general awareness training is provided regularly (preferably annually) to all employees whose actives may impact stormwater discharges. The purpose of this training is to educate workers on activities that can impact stormwater discharges and to help implement BMPs.

All employees responsible for the fueling or lubrication of vehicles or equipment stored at the facility will be trained regularly (preferably annually). The topics below will be covered at employee training sessions.

1. Spill prevention and response.
2. Good housekeeping.
3. Materials management practices

Pollution Prevention Team members will meet at least twice a year to discuss the effectiveness of and improvement to the SWPPP. Appendix C contains copies of training documentation from these training activities including attendance sheets, instructor name and affiliation, date, time, and location of the training.

4.2 SITE INSPECTION REQUIREMENTS

It is required that the entire Highway Garage and Storage Yard be inspected at least once each calendar quarter when the facility is in operation (at least one inspection must be conducted during a period when stormwater discharge is occurring). The Stormwater Pollution Prevention Team Leader is responsible for ensuring that inspections are performed. The Highway Garage Foreman is responsible for completing the quarterly inspection.

The inspection must check for evidence of pollution, evaluate non-structural controls in place at the site, and inspect equipment. The site inspection report must include:

- The inspection date and time
- The name of the inspector
- Weather information and a description of any discharge occurring at the time of the inspection
- Identification of any previously unidentified discharges from the site
- Any control measures needing maintenance or repair

- Any failed control measures that need replacement
- Any SWPPP changes required as a result of the inspection
- Signed certification statement.

The inspection form for these inspections, and copies of completed inspection forms, are included in Appendix D.

Corrective actions may be required based on evidence of past stormwater pollution or the high potential for future stormwater pollution to occur. Information about any issues and the respective corrective actions must be included in a Compliance Evaluation report. The permittee must repair or replace control measures in need of repair or replacement before the next anticipated storm event if possible, or as soon as practicable. In the interim, the permittee shall have back-up measures in place. The Compliance Evaluation report must be kept with the SWPPP and must state the problem, the solution, and when the solution was implemented.

4.3 RECORDKEEPING AND REPORTING

The permittee must keep a written record (hardcopy or electronic) of all activities required by the SWPPP including but not limited to maintenance, inspections, and training for a period of at least five years.

This SWPPP shall be kept at the DPW Facility on Pond Street and shall be updated if any of the conditions in SECTION 2.21 occur. The SWPPP and records shall be made available to state or federal inspectors and the general public upon request.

The 2016 Massachusetts MS4 Permit requires that each permittee report on the findings from Site Inspections in the annual report to USEPA and MassDEP.

Inspections of the Highway Garage and Storage Yard should be performed at least quarterly (at least one during stormwater discharge) and described in the Annual Report, including any corrective actions taken, to demonstrate that operation of the Highway Garage and Storage Yard is in compliance with the 2016 Massachusetts MS4 Permit.

4.4 TRIGGERS FOR SWPPP REVISIONS

The Town of Hanover shall review this SWPPP regularly to determine if any update or revision is required. Changes that may trigger revision include:

- An increase in the quantity of any potential pollutant stored at the facility;
- The addition of any new potential pollutant (not already addressed in this SWPPP) to the list of materials stored or used at the facility;
- Physical changes to the facility that expose any potential pollutant (not presently exposed) to stormwater;
- Presence of a new authorized non-stormwater discharge at the facility; or
- Addition of an activity that introduces a new potential pollutant.

Changes in activity may include an expansion of operations, or changes in any significant material handling or storage practices which could impact stormwater.

The amended SWPPP will describe the new activities that could contribute to increased pollution, as well as control measures that have been implemented to minimize the potential for pollution.

This SWPPP will be amended if a state or federal inspector determines that it is not effective in controlling stormwater pollutants discharged to waterways.

SECTION 5 SWPPP CERTIFICATION

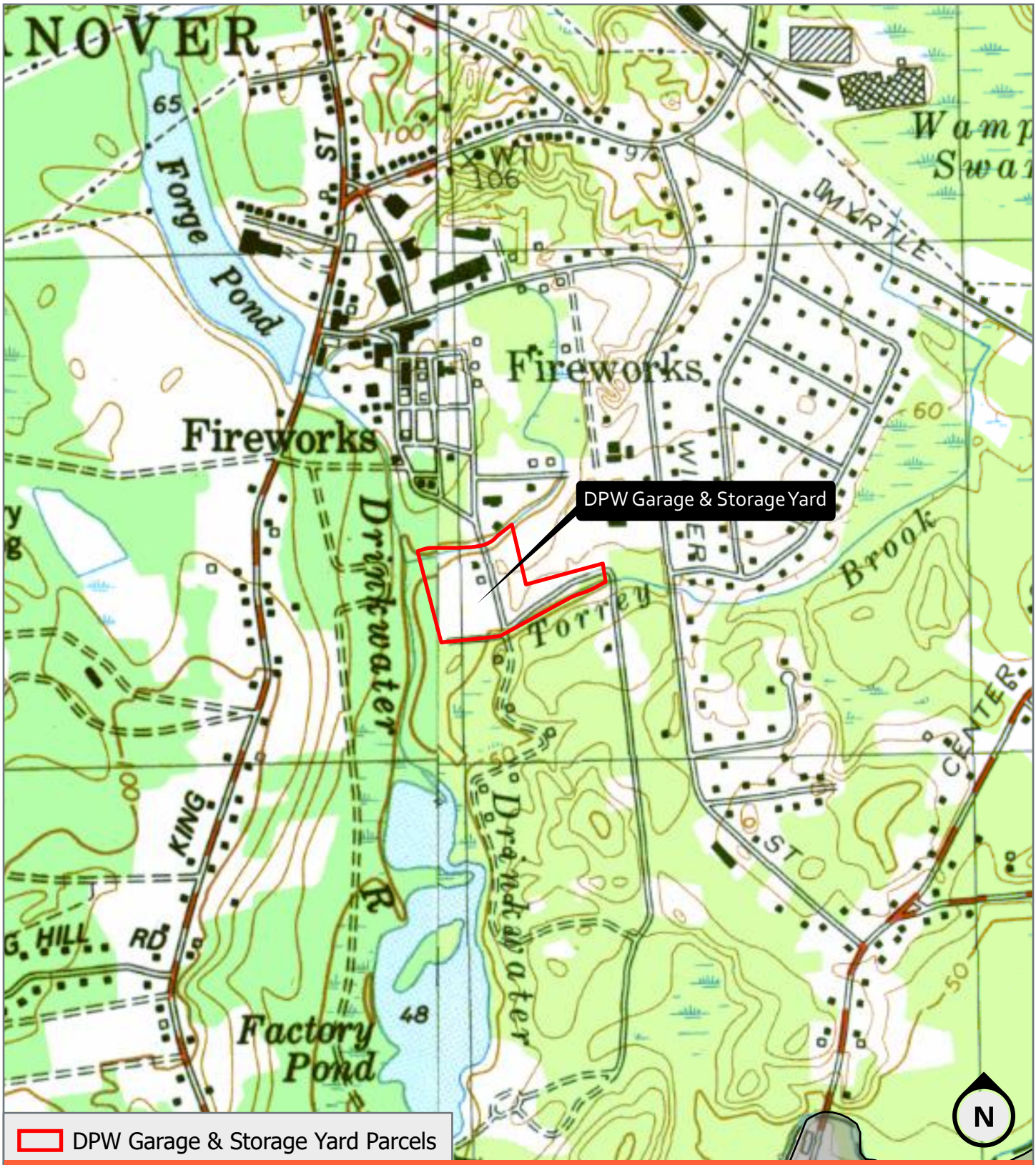
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage 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.

Authorized Official

Acting Town Manager
Title

9-23-2020
Date

FIGURES

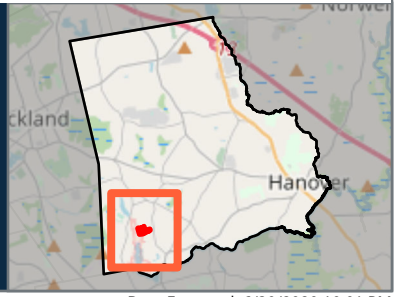


ENVIRONMENTAL PARTNERS

Figure 1: DPW Garage Locus Map

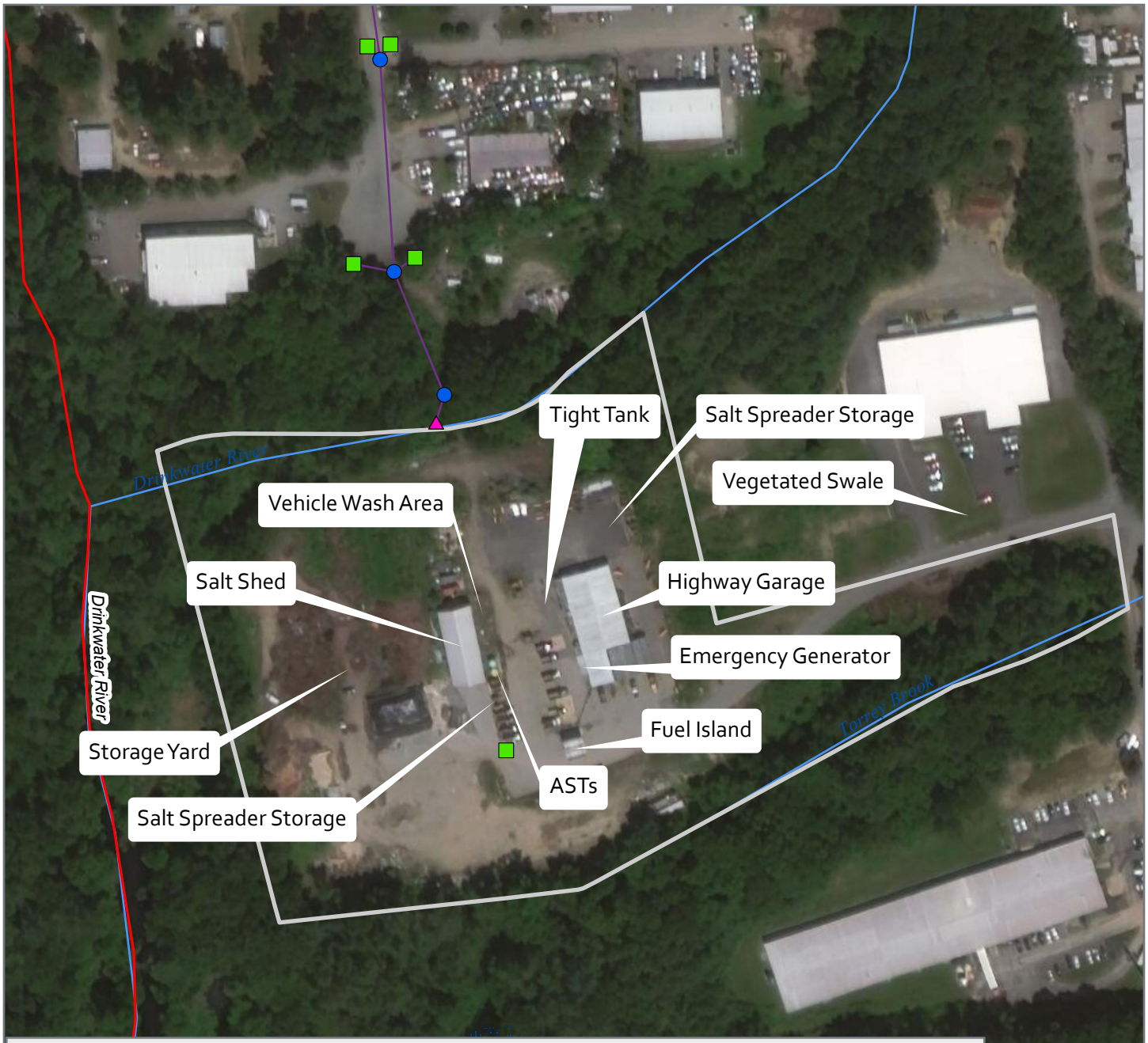
Hanover, Massachusetts

0 500 1,000 2,000 Feet



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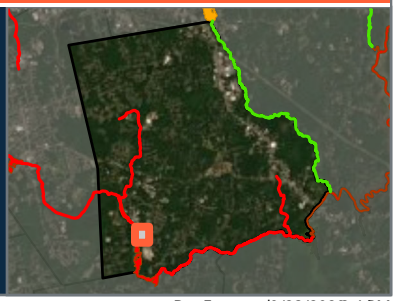
ENVIRONMENTAL PARTNERS

Figure 2: DPW Garage Site Map

Hanover, Massachusetts

0 80 160 320

Feet



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APPENDIX A

Standard Operating Procedures

ENVIRONMENTAL PARTNERS

STANDARD OPERATING PROCEDURE 3: CATCH BASIN INSPECTION AND CLEANING

Introduction

Catch basins help minimize flooding and protect water quality by removing trash, sediment, decaying debris, and other solids from stormwater runoff. These materials are retained in a sump below the invert of the outlet pipe. Catch basin cleaning reduces foul odors, prevents clogs in the storm drain system, and reduces the loading of suspended solids, nutrients, and bacteria to receiving waters.

During regular cleaning and inspection procedures, data can be gathered related to the condition of the physical basin structure and its frame and grate and the quality of stormwater conveyed by the structure. Observations such as the following can indicate sources of pollution within the storm drain system:

- Oil sheen
- Discoloration
- Trash and debris

Both bacteria and petroleum can create a sheen on the water surface. The source of the sheen can be differentiated by disturbing it, such as with a pole. A sheen caused by a oil will remain intact and move in a swirl pattern; a sheen caused by bacteria will separate and appear “blocky”. Bacterial sheen is not a pollutant but should be noted.

Observations such as the following can indicate a potential connection of a sanitary sewer to the storm drain system, which is an illicit discharge.

- Indications of sanitary sewage, including fecal matter or sewage odors
- Foaming, such as from detergent
- Optical enhancers, fluorescent dye added to laundry detergent

Each catch basin should be cleaned and inspected at least annually. Catch basins in high-use areas may require more frequent cleaning. Performing street sweeping on an appropriate schedule will reduce the amount of sediment, debris, and organic matter entering the catch basins, which will in turn reduce the frequency with which structures need to be cleaned.

Cleaning Procedure

Catch basin inspection cleaning procedures should address both the grate opening and the basin's sump. Document any and all observations about the condition of the catch basin structure and water quality on the Catch Basin Inspection Form (attached).

Catch basin inspection and cleaning procedures include the following:

1. Work upstream to downstream.
2. Clean sediment and trash off grate.
3. Visually inspect the outside of the grate.
4. Visually inspect the inside of the catch basin to determine cleaning needs.
5. Inspect catch basin for structural integrity.
6. Determine the most appropriate equipment and method for cleaning each catch basin.
    a. Manually use a shovel to remove accumulated sediments, or
    b. Use a bucket loader to remove accumulated sediments, or
    c. Use a high pressure washer to clean any remaining material out of catch basin while capturing the slurry with a vacuum.
    d. If necessary, after the catch basin is clean, use the rodder of the vacuum truck to clean downstream pipe and pull back sediment that might have entered downstream pipe.
7. If contamination is suspected, chemical analysis will be required to determine if the materials comply with the Massachusetts DEP Hazardous Waste Regulations, 310 CMR 30.000 (https://www.mass.gov/files/documents/2016/08/xl/310cmr30_7883_54357.pdf). Chemical analysis required will depend on suspected contaminants. Note the identification number of the catch basin on the sample label, and note sample collection on the Catch Basin Inspection Form.
8. Properly dispose of collected sediments. See following section for guidance.
9. If fluids collected during catch basin cleaning are not being handled and disposed of by a third party, dispose of these fluids to a sanitary sewer system, with permission of the system operator.
10. If illicit discharges are observed or suspected, notify the appropriate Department (see "SOP 10: Addressing Illicit Discharges").
11. At the end of each day, document location and number of catch basins cleaned, amount of waste collected, and disposal method for all screenings.
12. Report additional maintenance or repair needs to the appropriate Department.

Disposal of Screenings

Catch basin cleanings from storm water-only drainage systems may be disposed at any landfill that is permitted by MassDEP to accept solid waste. MassDEP does not routinely require stormwater-only catch basin cleanings to be tested before disposal, unless there is evidence that they have been contaminated by a spill or some other means.

Screenings may need to be placed in a drying bed to allow water to evaporate before proper disposal. In this case, ensure that the screenings are managed to prevent pollution.

Attachments

1. Catch Basin Inspection Form

Job No.: _____ **Town:** _____

Inspector: _____ **Date:** _____

ENVIRONMENTAL PARTNERS

CATCH BASIN INSPECTION FORM

Catch Basin I.D.	_____	**Final Discharge from Structure?** Yes ☐ No ☐ **If Yes, Discharge to Outfall No:**_____	
Catch Basin Label:	**Stencil** ☐ **Ground Inset** ☐ **Sign** ☐ **None** ☐ **Other**_____		
Basin Material:	Concrete ☐ Corrugated metal ☐ Stone ☐ Brick ☐ Other: _____ ☐	**Catch Basin Condition:**	Good ☐ Poor ☐ Fair ☐ Crumbling ☐
Pipe Material:	Concrete ☐ HDPE ☐ PVC ☐ Clay Tile ☐ Other:_____	**Pipe Measurements:**	Inlet Dia. (in): d= ____ Outlet Dia. (in): D= ____

Required Maintenance/ Problems (check all that apply):

- ☐ Tree Work Required
- ☐ New Grate is Required
- ☐ Pipe is Blocked
- ☐ Frame Maintenance is Required
- ☐ Remove Accumulated Sediment
- ☐ Pipe Maintenance is Required
- ☐ Basin Undermined or Bypassed
- ☐ Cannot Remove Cover
- ☐ Ditch Work
- ☐ Corrosion at Structure
- ☐ Erosion Around Structure
- ☐ Remove Trash & Debris
- ☐ Need Cement Around Grate

Other: _____

Catch Basin Grate Type :	**Sediment Buildup Depth :**	**Description of Flow:**	**Street Name/ Structure Location:**
Bar: ☐ Cascade: ☐ Other:_____ Properly Aligned: Yes ☐ No ☐	0-6 (in): ____ 6-12(in): ____ 12-18 (in): ____ 18-24 (in): ____ 24 + (in): ____	Heavy ☐ Moderate ☐ Slight ☐ Trickling ☐	

***If the outlet is submerged check yes and indicate approximate height of water above the outlet invert.** h above invert (in):___ Yes ☐ No ☐

☐ **Flow**
☐ **Standing Water**
(check one or both)

Observations:

Color:	
Odor:	

Weather Conditions : Dry > 24 hours ☐ Wet ☐

Sample of Screenings Collected for Analysis? Yes ☐ No ☐

Comments:

Circle those present:

Foam	Oil Sheen
Sanitary Waste	Bacterial Sheen
Orange Staining	Floatables
Excessive sediment	Pet Waste
Other:_____	Optical Enhancers

STANDARD OPERATING PROCEDURE 4:

SPILL RESPONSE AND CLEANUP PROCEDURES

Introduction

Municipalities are responsible for any contaminant spill or release that occurs on property they own or operate. Particular areas of concern include any facilities that use or store chemicals, fuel oil or hazardous waste, including schools, garages, DPW yards, and landfills. Implementation of proper spill response and cleanup procedures can help to mitigate the effects of a contaminant release.

Responding to a Spill

In the event of a spill, follow these spill response and cleanup procedures:

1. Notify a member of the facility's Pollution Prevention Team, the facility supervisor, and/or the facility safety officer.
2. Assess the contaminant release site for potential safety issues and for direction of flow.
3. With proper training and personal protective equipment, complete the following:
    a. Stop the contaminant release;
    b. Contain the contaminant release through the use of spill containment berms or absorbents;
    c. Protect all drains and/or catch basins with the use of absorbents, booms, berms or drain covers;
    d. Clean up the spill;
    e. Dispose of all contaminated products in accordance with applicable federal, state and local regulations.
        i. Products contaminated with petroleum shall be handled and disposed of as described in MassDEP policy WCS-94-400, Interim Remediation Waste Management Policy for Petroleum Contaminated Soils, http://www.mass.gov/dep/cleanup/laws/94-400.pdf.
        ii. Products saturated with petroleum products or other hazardous chemicals require special handling and disposal by licensed transporters. Licensed transporters will pick up spill contaminated materials for recycling or disposal. Save the shipping records for at least three years.
        iii. Waste oil contaminated products:
            1. Perform the "one drop" test to ensure absorbents do not contain enough oil to be considered hazardous. Wring absorbents through a paint filter. If doing so does not generate one drop of oil, the materials are not hazardous.
            2. If absorbents pass the "one drop" test they may be discarded in the trash, unless contaminated with another hazardous waste.
                a. It is acceptable to mix the following fluids and handle them as waste oil:
                    i. Waste Motor Oil;

ii. Hydraulic Fluid;
iii. Power Steering Fluid;
iv. Transmission Fluid;
v. Brake Fluid;
vi. Gear Oil.

a. Do not mix the following materials with waste oil, store each separately:
i. Gasoline;
ii. Antifreeze;
iii. Brake and Carburetor Cleaners;
iv. Cleaning Solvents;
v. Other Hazardous Wastes.

3. If absorbents do not pass the "one drop" test they should be placed in separate metal containers with tight fittings lids, labeled "Oily Waste Absorbents Only".
4. If you need assistance containing and/or cleaning up the spill, or preventing it from discharging to a surface water (or an engineered storm drain system), contact your local fire department using the number listed below, however in the case of an emergency call 911;
a. Auburn: (508)-832-7800
b. Charlton: (508)-248-2299
c. Dudley: (508)-949-8040
d. Holden: (508)-210-5650
e. Leicester: (508)-892-7022
f. Millbury: (508)-865-5328
g. Oxford: (508)-987-6012
h. Paxton: (508)-791-6600
i. Shrewsbury: (508)-841-8522
j. Spencer: (508)-885-3555
k. Sturbridge: (508)-347-2525
l. Webster: (508)-949-3876
m. West Boylston: (508)-835-3233
5. Contact the MassDEP 24-hour spill reporting notification line, toll-free at (888)-3104-1133;
n. The following scenarios are exempt from MassDEP reporting requirements:
i. Spills of less than 10 gallons of petroleum and do not impact a water body;
ii. Spills of less than one pound of hazardous chemicals and do not present an imminent health or safety hazard;
iii. Spills from passenger vehicle accidents;
iv. Spills within a vault or building with a watertight floor and walls that completely contain all released chemicals.

Procedures for Reporting Spill Response

When contacting emergency response personnel or a regulatory agency, or when reporting the contaminant release, be prepared to provide the following information:

1. Your name and the phone number you are calling from.
2. The exact address and location of the contaminant release.
3. Specifics of release, including:
    a. What was released;
    b. How much was released, which may include:
        i. Pounds;
        ii. Gallons;
        iii. Number of containers.
4. Where was the release sent/what was contaminated, addressing:
    a. a. Pavement;
    b. b. Soil;
    c. c. Drains;
    d. d. Catch Basins;
    e. e. Water Bodies;
    f. f. Public Street; and
    g. g. Public Sidewalk.
5. The concentration of the released contaminant.
6. What/who caused the released contaminant.
7. Is the release being contained and/or cleaned up, or is the response complete.
8. Type and amount of petroleum stored on site, if any.
9. Characteristics of contaminant container, including
    a. Tanks;
    b. Pipes;
    c. Valves.

Maintenance and Prevention Guide

Prevention of spills is preferable to even the best response and cleanup. To mitigate the effects of a contaminant release, provide proper maintenance and inspection at each facility.

To protect against contaminant release adhere to the following guidance:

1. Ensure all employees are properly trained to respond in the case of a spill, understand the nature and properties of the contaminant and understand the spill control materials and personnel safety equipment. Maintain training records of current personnel on site and retain training records of former personnel for at least three years from the date last worked at the facility;
2. Provide yearly maintenance and inspection at all municipal facilities, paying particular attention to underground storage tanks. Maintain maintenance and inspection records on site;
3. Implement good management practices where chemicals and hazardous wastes are stored;
    d. Ensure storage in closed containers inside a building and on an impervious surface;

   e. If storage cannot be provided inside, ensure secondary containment for 110 percent of the maximum volume of the storage container;
   f. Locate storage areas near maintenance areas to decrease the distance required for transfer;
   g. Provide accurate labels, MSDS information and warnings for all stored materials;
   a. Regularly inspect storage areas for leaks;
   b. Ensure secure storage locations, preventing access by untrained or unauthorized persons;
   c. Maintain accurate records of stored materials.
4. Replace traditional hazardous materials such as pesticides and cleansers with non-hazardous products such as bio-lubricants which can reduce response costs in the case of a spill;
5. Maintain a oil and grease spill response kit with the following materials, at a minimum, at each facility:
   a. 6.5 gallon bucket with screw top lid and handle
   b. 10 gallons of sand
   c. 200 pounds of Speedi Dry absorbent
   d. Drain covers
   e. Spill containment berms
   f. (4) 3’ absorbent socks
   g. (16) 16” x 18” absorbent pads
   h. Goggles
   i. Nitrile gloves
   j. Disposable bags to dispose of used materials
   k. Laminated contacts list shall include the following names and numbers:
      i. Safety Officer;
      ii. Facility Supervisor;
      iii. Local Fire Department;
      iv. MassDEP spill report notification line;
      v. MassDEP Regional Office;
      vi. Hazardous Waste Compliance Assistance Line;
      vii. Household Hazardous Products Hotline;
      viii. Massachusetts Department of Fire Services;
      ix. Licensed Site Professionals Information.

Attachments

1. Spill Response and Cleanup Contact List

SPILL RESPONSE AND CLEANUP CONTACT LIST

	Phone Number	Date and Time contacted
Safety Officer: _____		
Facility Supervisor: _____		
Fire Department: _____		
MassDEP 24-Hour Spill Reporting	(888)-304-1133	
MassDEP Regional Offices:		
Northeast Regional Office	(978) 694-3200	
Southeast Regional Office	(508) 946-2700	
Central Regional Office	(508) 792-7650	
Western Regional Office	(413) 784-1100	
Hazardous Waste Compliance Assistance Line	(617) 292-5898	
Household Hazardous Products Hotline	(800) 343-3420	
Massachusetts Department of Fire Services	(978) 567-3100 or (413) 587-3181	
Licensed Site Professionals Association (Wakefield, MA)	(781) 876-8915	
Licensed Site Professionals Board	(617) 556-1091	

STANDARD OPERATING PROCEDURE 6:

EROSION AND SEDIMENTATION CONTROL

Introduction

Erosion and sedimentation from land-disturbing human activities can be a significant source of stormwater pollution. This Standard Operating Procedure describes methods for reducing or eliminating pollutant loading from such activities.

Controlling Erosion and Sediment through Design and Planning

Prevention of erosion and sedimentation is preferable to installing treatment devices. Consistent application and implementation of the following guidelines during the design and review phases can prevent erosion and sedimentation:

2. Avoid sensitive areas, steep slopes, and highly erodible soils to the maximum extent possible when developing site plans.
3. Identify potential problem areas before the site plan is finalized and approved.
4. Plan to use sediment barriers along contour lines, with a focus on areas where short-circuiting (i.e., flow around the barrier) may occur.
5. Use berms at the top of a steep slopes to divert runoff away from the slope's edge.
6. Design trapezoidal or parabolic vegetated drainage channels, not triangular.
7. Use vegetated channels with rip rap check dams, instead of impervious pavement or concrete, to reduce the water velocity of the conveyance system.
8. Design a check dam or sediment forebay with level spreader at the exit of outfalls to reduce water velocity of the discharge and collect sediment.
9. Use turf reinforcement matting to stabilize vegetated channels, encourage vegetation establishment, and withstand flow velocities without scouring the base of the channel.
10. Plan open channels to follow land contours so natural drainage is not disrupted.
11. Use organic matting for temporary slope stabilization and synthetic matting for permanent stabilization.
12. Provide a stable channel, flume, or slope drain where it is necessary to carry water down slopes.

Controlling Erosion and Sediment on Construction Sites

During the construction phase, it is important to inspect active sites regularly to ensure that practices are consistent with approved site plans and the site's Stormwater Pollution Prevention Plan (SWPPP) or other document, as required by the municipality's legal authority. The following guidelines apply:

1. Erosion and sediment control features should be constructed before initiating activities that remove vegetated cover or otherwise disturb the site. These shall be installed consistent with the approved site plans and with manufacturer's instructions.
2. Erosion and sediment control devices shall be inspected by the contractor regularly, and maintained as needed to ensure function.
3. In the SWPPP or other document, the contractor shall clearly identify the party responsible for maintaining erosion and sediment control devices.
4. An inspection should be completed of active construction sites every month, at a minimum, to check the status of erosion and sedimentation controls. Refer to SOP 5, "Construction Site Inspection", for construction site stormwater inspection procedures.
5. Existing vegetation should be maintained on site as long as possible.
6. Construction should proceed progressively on the site in order to minimize exposed soil, and disturbed areas should be restored as soon as possible after work has been completed.
7. Stockpiles shall be stabilized by seeding or mulching if they are to remain for more than two weeks.
8. Disturbed areas shall be protected from stormwater runoff by using protective Best Management Practices (BMPs).
9. Clean water shall be diverted away from disturbed areas on construction sites to prevent erosion and sedimentation.
10. Sediment traps and sediment barriers should be cleaned out regularly to reduce clogging and maintain design function.
11. Vegetated and wooded buffers shall be protected.
12. Soils shall be stabilized by mulching and/or seeding when they would be exposed for more than one week during the dry season, or more than two days during the rainy season.
13. Vegetation shall be allowed to establish before introducing flows to channels.
14. Regular light watering shall be used for dust control, as this is more effective than infrequent heavy watering.
15. Excessive soil compaction with heavy machinery shall be avoided, to the extent possible.
16. Construction activities during months with higher runoff rates shall be limited, to the extent possible.

Controlling Erosion and Sediment by Proper Maintenance of Permanent BMPs

Many construction phase BMPs can be integrated into the final site design, but ongoing inspection and maintenance are required to ensure long-term function of any permanent BMP. Refer to SOP 9, "Inspection of Constructed Best Management Practices", for more information. The following guidelines summarize the requirements for long-term maintenance of permanent BMPs.

1. Responsibility for maintaining erosion and sediment control devices shall be clearly identified.
2. Erosion and sediment control devices shall be inspected following heavy rainfall events to ensure they are working properly.
3. Erosion control blankets shall be utilized when seeding slopes.
4. Vegetated and wooded buffers shall be protected, and left undisturbed to the extent possible.
5. Runoff shall not be diverted into a sensitive area unless this has been specifically approved.

6. Sedimentation basins shall be cleaned out once sediment reaches 50% of the basin's design capacity.
7. Snow shall not be plowed into, or stored within, retention basins, rain gardens, or other BMPs.
8. Easements and service routes shall be maintained, to enable maintenance equipment to access BMPs for regular cleaning.

STANDARD OPERATING PROCEDURE 7:

FUEL AND OIL HANDLING PROCEDURES

Introduction

Spills, leaks, and overfilling can occur during handling of fuels and petroleum-based materials, even in small volumes, representing a potential source of stormwater pollution. This Standard Operating Procedure addresses a variety of ways by which fuels and petroleum-based materials can be delivered, as well as steps to be taken when petroleum products (such as waste oil) are loaded onto vehicles for offsite disposal or recycling. Delivery, unloading, and loading of waste oils are hereafter referred to as “handling”.

For all manners of fuel and oil handling described below, a member of the facility’s Pollution Prevention Team (or another knowledgeable person familiar with the facility) shall be present during handling procedures. This person shall ensure that the following are observed:

1. There is no smoking while fuel handling is in process or underway.
2. Sources of flame are kept away while fuel handling is being completed. This includes smoking, lighting matches, carrying any flame, or carrying a lighted cigar, pipe, or cigarette.
3. The delivery vehicle’s hand brake is set and wheels are chocked while the activity is being completed.
4. Catch basins and drain manholes are adequately protected.
5. No tools are to be used that could damage fuel or oil containers or the delivery vehicle.
6. No flammable liquid shall be unloaded from any motor vehicle while the engine is operating, unless the engine of the motor vehicle is required to be used for the operation of a pump.
7. Local traffic does not interfere with fuel transfer operations.
8. The attending persons should watch for any leaks or spills
    a. Any small leaks or spills should be immediately stopped, and spilled materials absorbed and disposed of properly. Refer to SOP 4, “Spill Response and Cleanup Procedures”, for examples of spill cleanup and response materials.
    b. In the event of a large spill or one that discharges to surface waters or an engineered storm drain system, the facility representative shall activate the facility’s Stormwater Pollution Prevention Plan (SWPPP) and report the incident as specified within.

Delivery by Bulk (Tanker) Truck

Procedures for the delivery of bulk fuel shall include the following:

1. The truck driver shall check in with the facility upon arrival.
2. The facility representative shall ensure that the appropriate spill cleanup and response equipment and personal protective equipment are readily available and easily accessible.

Refer to SOP 4, “Spill Response and Cleanup Procedures”, for examples of spill cleanup and response materials.

3. The facility representative shall check to ensure that the amount of delivery does not exceed the available capacity of the tank.
    a. A level gauge can be used to verify the level in the tank.
    b. If a level gauge is not functioning or is not present on the tank, the tank should be stick tested prior to filling.
4. The truck driver and the facility representative shall both remain with the vehicle during the delivery process.
5. The truck driver and the facility representative shall inspect all visible lines, connections, and valves for leaks.
6. When delivery is complete and the hoses are removed, buckets should be placed underneath connection points to catch drippings.
7. The delivery vehicle shall be inspected prior to departure to ensure that the hose is disconnected from the tank.
8. The facility representative shall inspect the fuel tank to verify that no leaks have occurred, or that any leaked or spilled material has been cleaned and disposed of properly.
9. The facility representative shall gauge tank levels to ensure that the proper amount of fuel is delivered, and collect a receipt from the truck driver.

Delivery of Drummed Materials

Drummed materials may include motor oil, hydraulic fluid, transmission fluid, or waste oil from another facility (as approved). Procedures for the delivery of drummed materials shall include the following:

1. The truck driver shall check in with the facility upon arrival.
2. The facility representative shall ensure that the appropriate spill cleanup and response equipment and personal protective equipment are readily available and easily accessible. Refer to SOP 4, “Spill Response and Cleanup Procedures”, for examples of spill cleanup and response materials.
3. The facility representative shall closely examine the shipment for damaged drums.
    a. If damaged drums are found, they shall be closely inspected for leaks or punctures.
    b. Breached drums should be removed to a dry, well-ventilated area and the contents transferred to other suitable containers.
    c. Drums shall be disposed of in accordance with all applicable regulations.
4. Drummed materials shall not be unloaded outdoors during wet weather events.
5. The truck driver and the facility representative shall both remain with the vehicle during the delivery process.
6. Drums shall be handled and unloaded carefully to prevent damage.
7. Upon completion of unloading, the facility representative shall inspect the unloading point and the drums to verify that no leaks have occurred, that any leaked or spilled material has been cleaned up and disposed of properly, and that the unloaded drums are not leaking.
8. The facility representative shall check to ensure that the proper amount of fuel is delivered, and collect a receipt from the truck driver.

Delivery of Drummed Materials

When waste oil or similar oil products need to be removed from the premises, only haulers certified to transport waste oil should be utilized. Procedures for the draining of bulk oil tanks shall include the following:

1. The disposal truck driver shall check in with the facility upon arrival.
2. The facility representative shall ensure that the appropriate spill cleanup and response equipment and personal protective equipment are readily available and easily accessible. Refer to SOP 4, “Spill Response and Cleanup Procedures”, for examples of spill cleanup and response materials.
3. The facility representative shall verify that the volume of waste oil in the tank does not exceed the available capacity of the disposal hauler’s vehicle.
4. The truck driver and the facility representative shall both remain with the vehicle during the tank draining process.
6. When draining is complete and the hoses are removed, buckets should be placed underneath connection points to catch drippings.
7. The disposal hauler vehicle shall be inspected prior to departure to ensure that the hose is disconnected from the tank.
8. The facility representative shall inspect the loading point and the tank to verify that no leaks have occurred, or that any leaked or spilled material has been cleaned up and disposed of properly.
9. The facility representative shall collect a receipt from the truck driver.

Attachments

1. Fuel Delivery Checklist

STANDARD OPERATING PROCEDURE 11:

OIL/WATER SEPARATOR (OWS) MAINTENANCE

Introduction

Oil/water separators (OWS), also known as gas/oil separators, are structural devices intended to provide pretreatment of floor drain water from industrial and garage facilities. An OWS allows oils (and substances lighter than water) to be intercepted and be removed for disposal before entering the sanitary sewer system. Substances heavier than water settle into sludge at the bottom of the unit. The remaining water passes through the unit into the sanitary sewer system.

OWS units are generally required where petroleum-based products, wastes containing petroleum, or oily and/or flammable materials are used, produced, or stored. OWS units should not be used to manage stormwater or flow from vehicle washing facilities. High flow rates through an OWS will reduce the structure's ability to separate materials. Detergents and solvents can emulsify oil and grease, allowing the particles to enter the sewer, so these should not be disposed of in drains entering the OWS.

General OWS Maintenance Requirements

1. Each OWS at a facility may receive different materials in different quantities, so the cleanout schedule may not be the same for every OWS at a facility.
2. Employees performing inspections of an OWS must be properly trained and be familiar with the maintenance of that specific structure, since function can vary based on design. Third-party firms may be utilized to perform quarterly inspections.
3. Do not drain petroleum, oil, or lubricants directly to an OWS. The structures are designed to manage these materials at low and medium concentrations in sanitary sewage, not as slug loads.
4. Do not drain antifreeze, degreasers, detergents, fuels, alcohols, solvents, coolant, or paint to the OWS.
5. Separator compartment covers should be tightly sealed to ensure floor drainage only enters the first compartment of the OWS.
6. Drains should be kept free of debris and sediment to the maximum extent practicable.
7. Spill cleanup materials should be maintained in the area served by the OWS. For more information on spill cleanup and response materials, refer to SOP 4, "Spill Response and Cleanup Procedures".

OWS Inspection Procedures

Daily inspection of an OWS should include a visual examination of the area served by the OWS for evidence of spills or leaks.
Weekly inspections of an OWS should include the following:

1. Visually examine the area served by the OWS for evidence of spills or leaks.
2. Inspect the point of discharge (i.e., sewer manhole) for evidence of petroleum bypassing the OWS.
3. Inspect drains for any signs of unauthorized substances entering the OWS.
4. Examine the OWS for signs of leaks or any malfunction.

Quarterly inspections of an OWS should include the following:

1. Complete tasks noted as appropriate for daily and weekly inspection.
2. Complete the Quarterly OWS Inspection Checklist, attached, during the inspection.
3. Take the following measurements to benchmark function of the OWS:
    a. Distance from rim of access cover to bottom of structure
    b. Distance from rim of access cover to top of sludge layer
    c. Depth of sludge layer (c = a – b)
    d. Distance from rim of access cover to the oil/water interface
    e. Distance from rim of access cover to the top of the liquid surface
    f. Depth of oil layer (f = d – e)

OWS Cleaning Procedures

Cleaning of the OWS is required when there has been a spill to the OWS that exceeds ten gallons of oil, one gallon of detergent or solvent, or any material prohibited by the owner of the sanitary sewer. Cleaning is also required when the levels of accumulated sludge and/or oil meet the manufacturer's recommended levels for cleaning. This will vary based on the manufacturer of the OWS. If the manufacturer's recommendations are unknown, the following guidelines are appropriate for determining when to clean:

1. When sludge accumulates to 25% of the wetted height of the separator compartment; or
2. When oil accumulates to 5% of the wetted height of the separator compartment; or
3. When 75% of the retention capacity of the OWS is filled.

Cleaning should be performed a minimum of once per year. When cleaning is required, it shall be performed by licensed OWS maintenance companies. Materials removed from the OWS must be disposed of in accordance with Massachusetts Hazardous Waste Regulations, 310 CMR 30.00.

Documentation of Cleaning and Service

The operator of the premises where the OWS is located shall maintain a log describing the date and type of all inspections, service and maintenance performed in connection with the Separator. Documentation shall include the identity of the inspector (or the identity of the person or entity that performed the service and/or maintenance). Records shall also document the amount of residue removed from the OWS each time it was cleaned, and how removed materials were disposed. This documentation shall be maintained for a minimum of six years.

Attachments

1. Quarterly OWS Inspection Checklist

OIL/WATER SEPARATOR (OWS)
QUARTERLY INSPECTION CHECKLIST

Facility: _____

OWS Location: _____

Inspected By: _____

Date: _____

Visual Inspection	Are there any signs of spills or leaks in the general area?	**Yes** ☐ **No** ☐
	Is there any evidence of petroleum bypassing the OWS?	**Yes** ☐ **No** ☐
	Are there any unauthorized substances entering the OWS?	**Yes** ☐ **No** ☐
	Does the OWS exhibit any signs of leaks or malfunctions?	**Yes** ☐ **No** ☐

If you answered "Yes" to any of the above questions, further inspection, repair, and/or cleaning may be necessary.

Measurements	A	Distance from rim of access cover to bottom of structure	
	B	Distance from rim of access cover to top of sludge layer	
	C = A - B	Depth of sludge layer	
	D	Distance from rim of access cover to the oil/water interface	
	E	Distance from rim of access cover to the top of the liquid surface	
	F = D - E	Depth of oil layer	

If the values for "C" and/or "F" are greater than those in the manufacturer's recommendations, the OWS must be cleaned by a licensed OWS maintenance company.

STANDARD OPERATING PROCEDURE 12:

STORAGE AND USE OF PESTICIDES AND FERTILIZERS

Introduction

Use and improper storage of pesticides and fertilizers can contribute to loading of nutrients and toxic compounds to surface waters. This SOP addresses Best Management Practices for storing these materials, and guidelines for safe and appropriate application. In this SOP, the term “pesticide” includes products used as herbicides.

Storage of Pesticides and Fertilizers

Procedures for the storage of pesticides and fertilizers shall include the following, many of which are included on the Massachusetts Pesticide Safety Checklist, attached:

1. Store pesticides and fertilizers in high, dry locations in accordance with the manufacturer’s specifications.
2. Store in cool, well-ventilated, and insulated areas to protect against temperature extremes.
3. Store in an area which has been constructed in accordance with local fire codes for storing flammable or combustible materials.
    a. Flammable products shall be stored separately from non-flammable products, preferably in a fire-proof cabinet.
    b. Small quantities (less than 500 lbs or 220 gallons) of pesticides can be stored in cabinets constructed of double-walled 18-gauge sheet metal.
    c. Large quantities (greater than 500 lbs or 220 gallons) of pesticides can be stored in a prefabricated Hazardous Material Storage Building or in a purpose-built storage facility. It is not anticipated that many municipal facilities will store quantities in excess of 500 lbs or 220 gallons of pesticides.
    d. Building walls should have a two hour fire rating and be impervious to the stored materials.
    e. Floors should be water tight, impervious, and provide spill containment. Refer to SOP 4, “Spill Response and Cleanup Procedures”, for more information on spill cleanup.
4. Store materials in an enclosed area or in covered, impervious containment, such as a locked cabinet. The cabinet shall be located in a first story room or one which has direct access to the outdoors.
5. For pesticides, storage cabinets should be kept locked and the door to the storage area should contain a weather proof sign warning of the existence and danger of pesticides inside. The door should be kept locked. The sign should be visible at a distance of twenty five feet and should read as follows:

DANGER
PESTICIDE STORAGE
AREA
ALL UNAUTHORIZED
PERSONS KEEP OUT
KEEP DOORS LOCKED
WHEN NOT IN USE

The sign should be posted in both English and the language or languages understood by workers if this is not English.

6. Pesticides shall not be stored in the same place as ammonium nitrate fertilizer.
7. Separate pesticides and fertilizers from other chemical storage and other flammable materials.
8. Label all containers with date of purchase, and use the older materials first.
9. Clearly label all secondary containers.
10. Never leave unlabeled or unstable pesticides and fertilizers in uncontrolled locations.
11. Maintain a current written inventory of all pesticides and fertilizers at the storage site.
12. Order for delivery as close to time of use as possible to reduce the amount of chemical stored at the facility.
13. Order only the amount of materials needed in order to minimize excess or obsolete materials, which require storage and disposal.
14. Regularly inspect storage area for leaks and spills.
15. Storage area should be equipped with easily accessible spill cleanup materials and portable firefighting equipment.
16. Emergency eyewash stations and emergency drench showers should be located near the storage area.
17. Ensure that contaminated waste materials are kept in designated containers and stored in a labeled, designated, covered, and contained area.
18. Dispose of excess or obsolete pesticides/fertilizers and associated waste materials in accordance with the manufacturer's specifications and all applicable regulations.

Storage of Pesticides and Fertilizers

All fertilizer products manufactured or distributed in the State of Massachusetts must be registered with the Department of Agricultural Resources. There is no licensing or certification required for individuals in order to purchase or apply fertilizers.

Procedures for the use of fertilizers include the following:

1. Fertilizers should only be applied by properly trained personnel.
2. Perform soil testing before evaluating and choosing a fertilizer. The quantity of available nutrients already present in soil will determine the type and amount of fertilizer that is recommended. The soil test will also determine soil pH, humic matter and exchangeable acidity, which will indicate whether pH adjustment is required for a fertilizer to work efficiently. A soil test should be completed at each facility, as soil type and quality can vary

widely within a single community. Type of turf and turf use should also be considered in fertilizer selection.

3. Fertilizer selection shall take into account any surface waters within the watershed that are impaired for nutrients. Future regulatory actions may limit use of many fertilizers within these watersheds.
4. Calibrate application equipment regularly to ensure proper application and loading rates.
5. Never apply fertilizers in quantities exceeding the manufacturer's instructions.
6. Time fertilizer application periods for maximum plant uptake, usually in the fall and the spring.
7. Do not over-apply fertilizer in late fall to "use it up" before winter. The effectiveness of fertilizer will not reduce when stored.
8. Do not fertilize during a drought or when the soil is dry.
9. Never apply fertilizer to frozen ground.
10. Never apply fertilizer if it is raining or immediately before expected rain.
11. Mix fertilizers and clean application equipment under cover in an area where accidental spills will not enter surface water or groundwater and will not contaminate soil.
12. Do not hose down paved areas after fertilizer application if drainage will enter to an engineered storm drain system or drainage ditch.
13. Apply fertilizers in amounts appropriate for the type of vegetation to minimize losses to surface water and groundwater
14. Where applicable, till fertilizers into the soil rather than dumping or broadcasting (proper application techniques will depend on the types of soil and vegetation).
15. If phosphorous fertilizer is used when re-seeding, mix the phosphorous into root zone. Do not apply directly to the soil surface.
16. Use alternatives to chemical fertilizers, such as natural compost and organic fertilizers, which are beneficial to soil organisms.
17. Avoid combined products such as "weed and feed," which do not target specific problems at the appropriate time.
18. Use slow-release fertilizer for turf grass.

Storage of Pesticides and Fertilizers

The State of Massachusetts has a stringent program for registration of pesticides and certification of those authorized to apply them. Once a pesticide has been approved for use by the U.S. EPA, it must be registered by the Massachusetts Pesticide Board Subcommittee prior to being distributed, purchased, or used in Massachusetts. Pesticide classification in Massachusetts is based on the potential adverse effects the pesticide may have on humans or the environment. "Restricted Use" pesticides can only be sold by Licensed Dealers to Certified Applicators, while "State Limited Use" pesticides may be restricted to use by certain individuals or require written permission from the Department of Agricultural Resources prior to use.

Legal application of pesticides must be performed by an individual licensed or certified by the Massachusetts Department of Agricultural Resources. A Commercial Applicator License is required for applying general use pesticides, and a Commercial Applicator Certification is required for applying restricted and state limited use products.

Procedures for the use of pesticides include the following:

1. Pesticides should only be applied by licensed or certified applicators.
2. Calibrate application equipment regularly to ensure proper application and loading rates.
3. Ensure that pesticide application equipment is capable of immediate shutoff in case of emergency.
4. Conduct spray applications according to specific label directions and applicable local regulations.
5. Never apply pesticides in quantities exceeding the manufacturer's instructions.
6. Apply pesticides at the life stage when the pest is most vulnerable.
7. Never apply pesticides if it is raining or immediately before expected rain.
8. Do not apply pesticides within 100 feet of open waters or of drainage channels.
10. Establish setback distances from pavement, storm drains, and water bodies, which act as buffers from pesticide application with disease-resistant plants and minimal mowing.
11. Spot treat infected areas only instead of the entire location.
12. Mix pesticides and clean application equipment under cover in an area where accidental spills will not enter surface water or groundwater and will not contaminate soil.
13. Do not hose down paved areas after pesticide application to a storm drain or drainage ditch.
14. Recycle rinsate from equipment cleaning back into product.
15. Choose the least toxic pesticide that is still capable of reducing the infestation to acceptable levels.
16. Use alternatives to pesticides, such as manual weed control, biological controls, and Integrated Pest Management strategies (learn more at http://www.mass.gov/agr/pesticides/publications/docs/IPM_kit_for_bldg_mgrs.pdf).
17. For use of herbicides, reduce seed release of weeds by timing cutting and pesticide application at seed set. Select vegetation and landscaping that is low-maintenance, in order to tolerate low levels of weeds without interfering with aesthetics.

Attachments

1. Massachusetts Pesticide Safety Checklist

STANDARD OPERATING PROCEDURE 14:

MUNICIPAL VEHICLE WASHING PROCEDURES

Introduction

Vehicle washing activities can result in the discharge of nutrients, sediment, petroleum products, and other contaminants to a surface water body or to an engineered drainage system.

Consistent with the 2003 USEPA NPDES Phase II Small Municipal Separate Storm Sewer System (MS4) Permit, municipal vehicle washing activities should not discharge pollutants to the MS4 system.

Outdoor Vehicle Washing Procedures

Procedures for the storage of pesticides and fertilizers shall include the following, many of which are included on the Massachusetts Pesticide Safety Checklist, attached:

Outdoor washing of municipal vehicles should be avoided unless wash water is contained in a tight tank or similar structure. Where no alternate wash system is available, and full containment of wash water cannot be achieved, the following procedures shall be followed:

1. Avoid discharge of any wash water directly to a surface water (e.g., stream, pond, drainage swale, etc.)
2. Minimize use of water to the extent practical.
3. Where use of detergent cannot be avoided, use products that do not contain regulated contaminants. Use of a biodegradable, phosphate-free detergent is preferred.
4. Do not use solvents except in dedicated solvent parts washer systems or in areas not connected to a sanitary sewer.
5. Do not power wash, steam clean or perform engine cleaning or undercarriage cleaning.
6. Grassy and pervious (porous) surfaces may be used to promote direct infiltration of wash water, providing treatment before recharging groundwater and minimizing runoff to an adjacent stormwater system. Pervious surfaces or other infiltration-based systems shall not be used within wellhead protection areas or within other protected resources.
7. Impervious surfaces discharging to engineered storm drain systems shall not discharge directly to a surface water unless treatment is provided. Treatment can include a compost-filled sock designed specifically for removal of petroleum and nutrients, such as the Filtrexx™ FilterSoxx product, or equal. The treatment device shall be positioned such that all drainage must flow through the device, preventing bypassing or short-circuiting.
8. All adjacent engineered storm drain system catch basins shall have a sump. These structures shall be cleaned periodically (refer to SOP 3, “Catch Basin Inspection and Cleaning”).

9. Solids and particulate accumulation from the washing area shall be completed through periodic sweeping and/or cleaning.
10. Maintain absorbent pads and drip pans to capture and collect spills or noticeable leaks observed during washing activities. Clean up any spills using the procedures described in SOP 4, “Spill Response and Cleanup Procedures”.

Heavily soiled vehicles or vehicles dirtied from salting or snow removal efforts shall not be washed outside, without exception.

Indoor Vehicle Washing Procedures

Indoor vehicle washing procedures shall include the following:

1. Where use of detergent cannot be avoided, use products that do not contain regulated contaminants. Use of a biodegradable, phosphate-free detergent is preferred.
2. Detergents shall not be used in areas where oil/water separators provide pre-treatment of drainage (refer to SOP 11, “Oil/Water Separator Maintenance”, for more information).
3. Floor drains shall be connected to a sanitary sewer or tight tank. Floor drains discharging to adjacent surface water bodies or engineered storm drain systems shall be permanently plugged or otherwise abandoned before any vehicle wash activities are completed.
4. Designate separate areas for routine maintenance and vehicle cleaning. This helps prevent contamination of wash water by motor oils, hydraulic lubricants, greases, etc.
5. Dry clean-up methods, such as sweeping and vacuuming, are recommended within garage facilities. Do not wash down floors and work areas with water.
6. Bring smaller vehicles to commercial washing stations.
7. Maintain absorbent pads and drip pans to capture and collect spills or noticeable leaks observed during washing activities. Clean up any spills using the procedures described in SOP 4, “Spill Response and Cleanup Procedures”.

Heavy Equipment Washing Procedures

Heavy equipment washing procedures shall include the following:

1. Mud and heavy debris removal shall occur on impervious pavement or within a retention area.
2. Maintain these areas with frequent mechanical removal and proper disposal of spoils.
3. All adjacent engineered storm drain system components shall have a sump. These structures shall be cleaned periodically (refer to SOP 3, “Catch Basin Inspection and Cleaning”).
4. Impervious surfaces with engineered storm drain systems shall not discharge directly to a surface water.
5. Floor drains shall be connected to a sanitary sewer or tight tank. Floor drains discharging to adjacent surface water bodies or engineered storm drain systems shall be permanently plugged or otherwise abandoned before any vehicle wash activities are completed.
6. Where use of detergent cannot be avoided, use products that do not contain regulated contaminants. Use of a biodegradable, phosphate-free detergent is preferred.

7. Detergents shall not be used in areas where oil/water separators provide pre-treatment of drainage (refer to SOP 11, “Oil/Water Separator Maintenance”, for more information).
8. Maintain absorbent pads and drip pans to capture and collect spills or noticeable leaks observed during washing activities. Clean up any spills using the procedures described in SOP 4, “Spill Response and Cleanup Procedures”.

Engine Washing and Steam Procedures

Engine and steam washing procedures shall include the following:

1. Do not wash parts outdoors.
2. Maintain drip pans and smaller containers to contain motor oils, hydraulic lubricants, greases, etc. and to capture and collect spills or noticeable leaks observed during washing activities, to the extent practicable. Clean up any spills using the procedures described in SOP 4, “Spill Response and Cleanup Procedures”.
3. Where use of detergent cannot be avoided, use products that do not contain regulated contaminants. Use of a biodegradable, phosphate-free detergent is preferred.
4. Avoid cleaning with solvents except in dedicated solvent parts washer systems. Make use of pressure washing and steam cleaning.
5. Recycle clean solutions and rinse water to the extent practicable.
6. Wash water shall discharge to a tight tank or a sanitary sewer via an oil/water separator. Detergents shall not be used in areas where oil/water separators provide pre-treatment of drainage (refer to SOP 11, “Oil/Water Separator Maintenance”, for more information).

APPENDIX B

Spill Documentation Forms

Significant Spills, Leaks or Other Releases

Instructions:

- Include the descriptions and dates of any incidences of significant spills, leaks, or other releases that resulted in discharges of pollutants to waters of the U.S., through stormwater or otherwise; the circumstances leading to the release and actions taken in response to the release; and measures taken to prevent the recurrence of such releases .
- Provide information, as shown below, for each incident, and attach additional documentation (e.g., photos, spill cleanup records) as necessary. Repeat as necessary by copying and pasting the fields below.

Date of incident: Insert Date of Incident
Location of incident: Insert Location of Incident
Description of incident: Insert Description of Incident
Circumstances leading to release: Describe circumstances leading to release
Actions taken in response to release: Describe actions taken in response to release
Measures taken to prevent recurrence: Describe measures taken to prevent recurrence

Date of incident: Insert Date of Incident
Location of incident: Insert Location of Incident
Description of incident: Insert Description of Incident
Circumstances leading to release: Describe circumstances leading to release
Actions taken in response to release: Describe actions taken in response to release
Measures taken to prevent recurrence: Describe measures taken to prevent recurrence

Date of incident: Insert Date of Incident
Location of incident: Insert Location of Incident
Description of incident: Insert Description of Incident
Circumstances leading to release: Describe circumstances leading to release
Actions taken in response to release: Describe actions taken in response to release
Measures taken to prevent recurrence: Describe measures taken to prevent recurrence

Date of incident: Insert Date of Incident
Location of incident: Insert Location of Incident
Description of incident: Insert Description of Incident
Circumstances leading to release: Describe circumstances leading to release
Actions taken in response to release: Describe actions taken in response to release
Measures taken to prevent recurrence: Describe measures taken to prevent recurrence

APPENDIX C

Training Documentation and Attendance Sheets

Employee Training

Instructions:

- Keep records of employee training, including the date of the training.
- For in-person training, consider using the tables below to document your employee trainings. For computer-based or other types of training, keep similar records on who was trained and the type of training conducted.

Training Date: Insert Date of Training	
Training Description (including duration and subjects covered): Insert Description of Training	
Trainer: Insert Trainer(s) names	
Employee(s) trained	Employee signature
Insert Name	
Insert Name	
Insert Name	
Insert Name	
Insert Name	
Insert Name	

Training Date: Insert Date of Training	
Training Description (including duration and subjects covered): Insert Description of Training	
Trainer: Insert Trainer(s) names	
Employee(s) trained	Employee signature
Insert Name	
Insert Name	
Insert Name	
Insert Name	
Insert Name	
Insert Name	

Training Date: Insert Date of Training	
Training Description (including duration and subjects covered): Insert Description of Training	
Trainer: Insert Trainer(s) names	
Employee(s) trained	Employee signature
Insert Name	
Insert Name	
Insert Name	
Insert Name	
Insert Name	
Insert Name	

APPENDIX D

Facility Inspection Form

Site Inspection Reports

Instructions:

- Include in your records copies of all routine facility inspection reports completed for the facility.
- The sample inspection report is consistent with the requirements in the 2016 Massachusetts MS4 Permit relating to site inspections. If MassDEP provides you with an inspection report, use that form.

Using the Sample Site Inspection Report

- This inspection report is designed to be customized according to the specific control measures and activities at your facility. For ease of use, you should take a copy of your site plan and number all of the stormwater control measures and areas of industrial activity that will be inspected. A brief description of the control measures and areas that were inspected should then be listed in the site-specific section of the inspection report.
- You can complete the items in the "General Information" section that will remain constant, such as the facility name and inspector (if you only use one inspector). Print out multiple copies of this customized inspection report to use during your inspections.
- When conducting the inspection, walk the site by following your site map and numbered control measures/areas of industrial activity to be inspected. Also note whether the "Areas of Materials or Activities exposed to stormwater" have been addressed (customize this list according to the conditions at your facility). Note any required corrective actions and the date and responsible person for the correction.

Stormwater Site Inspection Report

General Information			
Facility Name	Insert Name		
Date of Inspection	Insert Date	**Start/End Time**	Insert Start/End Time
Inspector's Name(s)	Insert Name		
Inspector's Title(s)	Insert Title		
Inspector's Contact Information	Insert Contact Info		
Inspector's Qualifications	Insert qualifications or add reference to the SWPPP		

Weather Information

Weather at time of this inspection?
❑ Clear ❑Cloudy ❑ Rain ❑ Sleet ❑ Fog ❑ Snow ❑ High Winds
❑ Other: Temperature:

Have any previously unidentified discharges of pollutants occurred since the last inspection? ❑Yes ❑No
If yes, describe: Describe

Are there any discharges occurring at the time of inspection? ❑Yes ❑No
If yes, describe: Describe

Control Measures

- *Number the structural stormwater control measures identified in your SWPPP on your site map and list them below (add as many control measures as are implemented on-site). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required control measures at your facility.*
- *Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.*

	Structural Control Measure	**Control Measure is Operating Effectively?**	**If No, In Need of Maintenance, Repair, or Replacement?**	**Corrective Action Needed and Notes** (identify needed maintenance and repairs, or any failed control measures that need replacement)
1	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
2	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
3	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
4	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
5	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
6	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
7	Insert Control Measure	❑Yes ❑No	❑ Maintenance	Describe Corrective Actions

	Structural Control Measure	**Control Measure is Operating Effectively?**	**If No, In Need of Maintenance, Repair, or Replacement?**	**Corrective Action Needed and Notes** (identify needed maintenance and repairs, or any failed control measures that need replacement)
	Name		❑ Repair ❑ Replacement	
8	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
9	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions
10	Insert Control Measure Name	❑Yes ❑No	❑ Maintenance ❑ Repair ❑ Replacement	Describe Corrective Actions

Areas of Materials or Activities exposed to stormwater

Below are some general areas that should be assessed during routine inspections. Customize this list as needed for the specific types of materials or activities at your facility.

	Area/Activity	**Inspected?**	**Controls Adequate (appropriate, effective, and operating)?**	**Corrective Action Needed and Notes**
1	**Material loading/unloading and storage areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
2	**Equipment operations and maintenance areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
3	**Fueling areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
4	**Outdoor vehicle and equipment washing areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
5	**Waste handling and disposal areas**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
6	**Erodible areas/construction**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
7	**Non-stormwater/ illicit connections**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
8	**Salt storage piles or pile containing salt**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
9	**Dust generation and vehicle tracking**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
10	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions

	Area/Activity	Inspected?	Controls Adequate (appropriate, effective, and operating)?	Corrective Action Needed and Notes
11	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions
12	**(Other)**	❑Yes ❑No ❑ N/A	❑Yes ❑No	Describe Corrective Actions

Non-Compliance

Describe any incidents of non-compliance observed and not described above:
Describe Non-compliance

Additional Control Measures

Describe any additional control measures or changes to the SWPPP needed to comply with the permit requirements:
Describe Additional Controls Needed

Notes

Use this space for any additional notes or observations from the inspection: Additional Notes

Print inspector name and title:

_____

Signature:_____Date:_____

Quarterly Visual Assessment Reports – additional form when stormwater discharge is occurring

Instructions:

- Include in your records copies of all quarterly visual assessment reports completed for the facility. An example quarterly visual assessment report can be found on the following page.
- At least one quarterly inspection per year must occur while stormwater is discharging.

Quarterly Visual Assessment Form– additional form when stormwater discharge is occurring

(Complete a separate form for each outfall you assess)

Name of Facility: Name of Facility

Outfall Name: Name "Substantially Identical Outfall"? ☐ No ☐ Yes (identify substantially identical outfalls):

Person(s)/Title(s) collecting sample: Name/Title

Person(s)/Title(s) examining sample: Name/Title

Date & Time Discharge Began (approx.): Enter date and time

Date & Time Visual Sample Collected: Enter date and time

Date & Time Visual Sample Examined: Enter date and time

Nature of Discharge: ☐ Rainfall ☐ Snowmelt

Parameter							
Color	☐ None	☐ Other (describe):					
Odor	☐ None	☐ Musty	☐ Sewage	☐ Sulfur	☐ Sour	☐ Petroleum/Gas _____	
	☐ Solvents	☐ Other (describe):					
Clarity	☐ Clear	☐ Slightly Cloudy	☐ Cloudy	☐ Opaque	☐ Other		
Floating Solids	☐ No	☐ Yes (describe):					
Settled Solids*	☐ No	☐ Yes (describe):					
Suspended Solids	☐ No	☐ Yes (describe):					
Foam (gently shake sample)	☐ No	☐ Yes (describe):					
Oil Sheen	☐ None	☐ Flecks	☐ Globs	☐ Sheen	☐ Slick		
	☐ Other (describe):						
Other Obvious Indicators of Stormwater Pollution	☐ No	☐ Yes (describe):					

* Observe for settled solids after allowing the sample to sit for approximately one-half hour.

Detail any concerns, additional comments, descriptions of pictures taken, and any corrective actions taken below (attach additional sheets as necessary). Insert details

A. Name: B. Title:

C. Signature: D. Date Signed:

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