



East Longmeadow DPW Garage and Yard
84 Somers Road, East Longmeadow, MA

Stormwater Pollution Prevention Plan

Town of East Longmeadow, MA

June 2020

Tighe&Bond

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SECTION 1

Section 1

Introduction and Background

The United States Environmental Protection Agency (EPA) nationally regulates the discharge of stormwater runoff that is transported into local water bodies through Municipal Separate Storm Sewer Systems (MS4s) that are located in Urbanized Areas (also known as “regulated areas”). The Town of East Longmeadow is required to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) permit for its stormwater discharges from the MS4 in its Urbanized Area.

In Massachusetts, the EPA and the Massachusetts Department of Environmental Protection (MassDEP) jointly administer the municipal stormwater program, and East Longmeadow is authorized to discharge stormwater under the 2016 NPDES General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems, known as the “2016 Small MS4 General Permit”. Under this permit, the Town has developed and implemented a Stormwater Management Program (SWMP) to reduce the contamination of stormwater runoff.

According to the 2016 Small MS4 General Permit, the Town must develop and fully implement a site-specific Stormwater Pollution Prevention Plan (SWPPP) for Town-owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater within two years of the effective date of the permit. If facilities are located on the same property, one SWPPP may be developed for the entire property. Relevant sections of the 2016 Small MS4 General Permit are included in **Appendix A**.

This MS4 SWPPP should not be confused with the EPA regulatory definition of a SWPPP as it pertains to the NPDES Construction General Permit (CGP) or Multi-Sector General Permit (MSGP). However, if a facility has a previously developed SWPPP or a no exposure (NOE) certification under the MSGP or a different NPDES permit, a SWPPP does not need to be developed under the Small MS4 General Permit.

1.1 SWPPP Purpose and Scope

This SWPPP is a good housekeeping guidance document prepared for the East Longmeadow DPW Garage and Yard at 84 Somers Road in East Longmeadow, MA. The purpose of the SWPPP is to meet the following 2016 Small MS4 General Permit requirements to minimize pollution in stormwater runoff from the facility covered by the SWPPP:

- Create a pollution prevention team
- Identify pollutant sources
- Provide a set of best management practices (BMPs) for municipal operations and activities at the DPW Garage and Yard.

In accordance with Section 2.3.7.b.ii.4 of the 2016 Small MS4 General Permit, these BMPs include:

- Minimizing or preventing exposure
- Good housekeeping

- Preventative maintenance
- Spill prevention and response
- Erosion and sediment control
- Runoff management
- Preventing salt storage piles from impacting water resources
- Employee training
- Maintenance of control measures

EPA requires that the written SWPPP be developed and implemented within two years of the effective date of the permit (i.e., July 2020). However, Tighe & Bond recommends that the Town begin to implement the plan immediately.

The BMPs in Section 4 of this SWPPP were selected based on a review and inspection of the Town's DPW Garage and Yard. The BMPs are intended to provide straightforward and up-to-date procedures for personnel to follow while conducting day-to-day activities. The SWPPP should be reviewed periodically and revised whenever Town operations and/or facility activities change. When the SWPPP is updated, the Town should follow the instructions in Section 7.2.

1.2 Glossary of Terms

The following terms and definitions may be used to interpret and implement the SWPPP.

Activities: Practices that routinely occur at the DPW Garage and Yard.

Best Management Practices (BMPs): An activity, procedure, restraint, or structural improvement that helps reduce the quantity or improve quality of stormwater runoff.

Catch Basin: An underground structure used to collect runoff from the surface and divert it to the stormwater drainage system.

Clean Water Act (CWA): (33 U.S.C. 1251 et seq.) Requirements of the NPDES program are defined under Sections 307, 402, 318 and 405 of the CWA.

Discharge: A release or flow from a conduit, sewer, drain, outfall, pump, stack, tank or treatment process, or any emission, intentional or unintentional, including but not limited to, flow resulting from spilling, leaking, seeping, pumping, pouring, emitting, emptying, depositing, dumping, releasing, injecting, escaping, leaching, or infiltration whether direct or indirect.

Illicit Discharge: Any direct or indirect discharge to the stormwater drainage system prohibited by the Town's *Stormwater Management Bylaw* (Chapter XIV of the General Bylaws of the Town of East Longmeadow).

Municipal Separate Storm Sewer System (MS4): A conveyance or system of conveyances owned or operated by the Town designed or used for collecting or conveying stormwater, including any road with a drainage system. Street, gutter, curb, inlet, piped storm drain, pumping facility, retention or detention basin, natural or manmade or altered drainage channel, reservoir, and other drainage structure that together comprise the stormwater drainage system.

National Pollutant Discharge Elimination System (NPDES) Permit: A permit issued by the EPA, or jointly with the Commonwealth that authorizes the discharge of pollutants to waters of the United States.

Nonpoint Source Pollution: Pollution from many diffuse sources caused by rainfall or snowmelt moving over and/or through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into water resource areas.

Non-Stormwater Discharge: Discharge to the storm drain not comprised entirely of stormwater.

Oil/Water Separator: A receptacle designed to separate petroleum-based oil and grease from water. Also called a trap or interceptor.

Outfall: A point source where a MS4 discharges to a water body, wetland, or land surface. Culverts connection segments of the same stream and open conveyances connecting two MS4s are not considered outfalls. EPA regulations define "outfall" at 40 CFR 122.26(b)(9).

Point Source: Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, or container from which pollutants are or may be discharged. EPA regulations define "point source" at 40 CFR 122.2.

Pollutant: Any element or property of sewage, residential, agricultural, industrial, or commercial waste, runoff, leachate, heated effluent, or other matter whether originating at a point or non-point source, that is or may be introduced into any storm drain system, waters of the United States, and/or Commonwealth. Pollutants shall include without limitation:

1. paints, varnishes, solvents
2. oil, grease, antifreeze, other automotive fluids and/or products
3. non-hazardous liquid and solid wastes
4. refuse, garbage, litter, rubbish, yard wastes, or other discarded or abandoned objects, ordnances, accumulations and floatables
5. pesticides, herbicides, and fertilizers
6. hazardous materials and wastes
7. sewage
8. dissolved and particulate metals
9. metal objects or materials
10. animal wastes
11. rock, sand, salt, soils, or other products/materials that mobilize in surface water runoff
12. and construction wastes and/or residues.

Pollution Prevention: Practices and actions that reduce or eliminate the generation, or release, of pollutants.

Resource Area: Any area protected under, including without limitation, the Massachusetts Wetlands Protection Act (MAWPA), Massachusetts Rivers Protection Act, or Town of East Longmeadow Conservation Commission Bylaw.

Runoff: Water originating from rainfall, melted snow, or irrigation water, which is not absorbed into the ground. Instead, it flows over the land into streams, other surface water bodies, or stormwater management structures.

Run-on: Off-site stormwater surface flow or other surface flows which enters a site.

Sedimentation: The process of depositing soil particles, clays, sands, or other sediments that were picked up by runoff.

Sediments: Soil, sand, and minerals washed from land into water, usually after rain, that collect in reservoirs, rivers, and harbors, destroying fish nesting areas and clouding the water, thus preventing sunlight from reaching aquatic plants. Farming, mining, and building activities without proper implementation of BMPs will expose sediment materials to stormwater, allowing them to be washed off the land after rainfall.

Spill Prevention, Control, and Countermeasure (SPCC) Plan: SPCC Plans are required for any facility engaged in drilling, producing, gathering, storing, processing, refining, transferring or consuming oil and oil products. Due to the volume of oil stored on-site, the Town of East Longmeadow Department of Public Works garage at 84 Somers Road in East Longmeadow is subject to the regulatory requirements related to the development and implementation of an SPCC Plan. The SPCC Plan addresses the spill prevention, control, and countermeasures related to all oil storage at the facility.

Stormwater: Runoff from precipitation or snowmelt.

Toxic or Hazardous Material or Waste: Any material, which because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare or to the environment. Hazardous waste is regulated under the federal Resource Conservation and Recovery Act (RCRA). Toxic or hazardous material including without limitation:

1. any synthetic organic chemical
2. petroleum products
3. heavy metals
4. radioactive or infectious waste
5. acid and alkali substances
6. any substance defined as Toxic or Hazardous under M.G.L. Ch. 21C and Ch. 21E, and the regulations at 310 CMR 30.000 and 310 CMR 40.000
7. any substance listed as hazardous under 40 CFR 261

Waters of the Commonwealth: All waters within the jurisdiction of the Commonwealth, including, without limitation, rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters, and groundwater.

1.3 Maintenance and Availability of Plan

A complete master copy of this SWPPP is maintained at the DPW offices on the 2nd floor of the East Longmeadow Town Hall at 60 Center Square. A second copy of the SWPPP will be kept at the DPW Garage and Yard at 84 Somers Road for immediate access by DPW personnel. The SWPPP shall be made available to the Regional Administrator of the EPA, or his/her designee, if so required. This Plan is not required to be submitted to the EPA or to MassDEP unless requested.

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SECTION 2

Section 2 Pollution Prevention Team

Under Section 2.3.7.b.ii.1 of the 2016 Small MS4 General Permit, the Town shall:

“Identify the staff on the team, by name and title. If the position is unstaffed, the title of the position should be included and the SWPPP updated when the position is filled. The role of the team is to develop, implement, maintain, and revise, as necessary, the SWPPP for the facility.”

The Pollution Prevention Team for the East Longmeadow DPW Garage and their associated roles and responsibilities are summarized in **Table 2-1** below:

Table 2-1
East Longmeadow DPW Garage Pollution Prevention Team Roles and Responsibilities

| Primary SWPPP Coordinator / Emergency Contact | |
|---|--|
| Staff Name and Title | Bruce Fenney, DPW Superintendent |
| Contact Information | (413) 525-5400 ext. 1200 / Bruce.Fenney@EastLongmeadowMA.gov |
| Responsibilities | <p>Primary Coordinator: In charge of implementation of the SWPPP and supervision of DPW Employees. Responsibilities include oversight of good housekeeping and pollution prevention activities, coordination of employee training programs, record keeping and reporting, oversight of facility inspections, and plan revisions.</p> <p>Emergency Contact: Contacted in the event of a spill or release of a pollutant. Responsibilities include evaluating emergency situations and ensuring proper spill response procedures are being followed (refer to Section 4.6 for additional information on spill response procedures). The Emergency Contact will be notified in the event of a spill or release of a pollutant or hazardous waste in a location potentially exposed to stormwater runoff that cannot be easily remedied by the spill response procedure (see Section 4.6) or where the situation is potentially dangerous for DPW staff.</p> |
| SWPPP Inspections | |
| Staff Name and Title | Tom Christensen, DPW Deputy Superintendent |
| Contact Information | (413) 525-5400 ext. 1203 / Tom.Christensen@EastLongmeadowMA.gov |
| Responsibilities | SWPPP Inspector. Responsibilities include conducting the required facility inspections as described in Section 6 . |
| SWPPP Implementation | |
| Staff Name and Title | DPW Employees |
| Contact Information | (413) 525-5400 ext. 1200 |
| Responsibilities | SWPPP Implementation: Responsible for implementing the Best Management Practices (BMPs) and Standard Operating Procedures (SOPs) recommended in this SWPPP. All employees will be required to participate in the employee training program. DPW employees will be expected to report stormwater management issues and concerns to Bruce Fenney, the Primary Coordinator |

| Primary SPCC Plan Coordinator | |
|-------------------------------|---|
| Staff Name and Title | Darrell Keane, Highway Utility Manager |
| Contact Information | (413) 374-4254 (cell) / (413) 525-5400 (work) |
| Responsibilities | <p>Primary SPCC Plan Coordinator: The SPCC Plan Coordinator is responsible for the implementation and management of the SPCC Plan. The responsibilities include ensuring that the appropriate East Longmeadow DPW personnel are properly trained to implement this SPCC Plan and that personnel are familiar with and follow the procedures presented in the SPCC Plan. The SPCC Plan Coordinator ensures that the necessary cleanup equipment and supplies are maintained at the designated areas as described in the SPCC Plan.</p> <p>Supervision of Containment and Cleanup of a Release: The SPCC Plan Coordinator is the person authorized to supervise the containment and cleanup of a release. Specific responsibilities include supervising the containment and cleanup effort, assessing the spill to determine the appropriate action, instructing responding personnel on the methods to be employed for containing and cleaning up the spill, enlisting the assistance of outside contractors if it is determined that the spill cannot be managed by existing response personnel, ensuring that all response personnel attend annual training classes covering topics listed in the SPCC Plan, ensuring that all spill response personnel receive training in accordance with OSHA 1910.120 requirements for their level of response, and ensuring that the spill response personnel complete appropriate cleanup and response actions for individual spills, including internal notification.</p> |

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SECTION 3

Section 3

Facility Description

Under Section 2.3.7.b.ii.2 of the 2016 Small MS4 General Permit, the facility description shall:

"... include a map of the facility and a description of the activities that occur at the facility. The map shall show the location of the stormwater outfalls, receiving waters, and any structural controls. Identify all activities that occur at the facility and the potential pollutants associated with each activity including the location of any floor drains."

3.1 Maps of the Facility

The following figures in **Appendix B** show the location of the DPW Garage and Yard and activities that occur on-site and are described in this section:

- Figure 1: Site Location Map
- Figure 2: Priority Resource Map
- Figure 3: Aerial Photograph
- Figure 4: Site Plan
- Figure 5: Massachusetts Year 2014 Integrated List of Waters – East Longmeadow, MA

The site plan (Figure 4) for the DPW Garage and Yard includes information based on a site visit conducted on December 5, 2019. The Site Plan shows the location of:

- **Floor Drains:** floor drains in the DPW Garage connect to oil/water separators before discharging to the sewer
- **Structural Controls:** Stormwater on-site is collected via series of catch basins, which convey stormwater north of the sand/salt shed via a 30-inch diameter reinforced concrete pipe. The catch basins discharge to an oil/grit separator prior to entering the stormwater drainage system.
- **Stormwater Outfalls:** There is one known stormwater outfall discharging from the DPW Garage and Yard site. The drainage pipe that collects stormwater from the catch basins travels beneath the Massachusetts Electric Company parcel and discharges to a drainage swale before entering the Pecousic Brook (Outfall PB-095).
- **Receiving Waters:** Pecousic Brook is located approximately 2,800 feet east of the DPW Garage and Yard parcel. A priority resource map (Figure 2) and an integrated waters map (Figure 5) are included in **Appendix B**. The entire site is located within the Connecticut River Watershed. See Section 3.4 for more information.



Figure 3.1. East Longmeadow DPW Building entrance.

The site plan also shows the location of buildings, the salt and sand storage shed, material storage areas, and drainage infrastructure.

3.2 Facility Description

The DPW Garage and Yard is located at 84 Somers Road in East Longmeadow, Massachusetts, in a residentially zoned area. The property occupies approximately 2.64 acres of land on parcel ID 28-21-0. The DPW Garage and Yard parcel is bordered by private residences to the northwest and across Somers Road, the Greenlawn Cemetery and Massachusetts Electric Company/New England Power to the north, an electrical distribution line right-of-way to the east, and a pond and the Brownstone Gardens senior apartments complex on the far side of the electrical line right-of-way. **Appendix B** of this SWPPP includes a general location map (Figure 1), an aerial photograph (Figure 3), and a site plan (Figure 4) of the facility.

The facility consists of a main garage used for fleet vehicle maintenance and storage, a secondary garage used for highway department storage, a recycling center and a salt shed. The facility operates 7 days a week, 24 hours a day. The DPW office hours are Monday through Friday from 8:00 AM – 4:00 PM.

Materials are stored at several locations at the facility. There are several dumpsters located throughout the facility. A variety of items are stored adjacent to the salt and sand storage shed including materials dropped off by residents during hazardous waste days, sandbags, propane tanks, and tires. Some of these items are in containers and some are in exposed piles. Along the eastern boundary of the site, cold patch, loam, asphalt, catch basin cleanings, and gravel are stored on an unpaved surface.

The topography of the property is generally flat, with the elevations ranging from approximately 279 to 284 feet and sloping southwesterly towards Somers Road. The entire property is covered with impervious surface, including buildings, parking areas, gravel, and concrete.

Surface drainage is collected by the storm drain system, which consists of catch basins, detention basins, grassed swales and outfalls. In some areas runoff from the roadway discharging directly as sheet flow to the drainage ditch that runs through the property, particularly in the vicinity of the culvert crossing. Roof drainage from the Garage Building is captured by a leaching catch basin, with an overflow to the detention basin.

3.3 Facility Activities and Potential Pollutants

Table 3-1 lists all of the current activities that occur at the DPW Garage and Yard with the potential to impact stormwater runoff and the pollutants associated with each activity. The facility has no point source discharges located on the site.

Table 3-1
Facility Activities and Potential Pollutants

| Activity | Potential Pollutants |
|---------------------------------------|---|
| Stockpiled Material Storage & Loading | Sediment |
| Employee Parking Area | Oil and grease, heavy metals, salt, sediment, temperature |
| Sand & Salt Storage & Loading | Sediment, salt |

| Activity | Potential Pollutants |
|------------------------|--|
| Solid Waste Management | Pathogens, nutrients, metals, sediment |

Tighe & Bond assumes that the following activities will occur indoors or under a roof and will not be exposed to stormwater. Therefore, these activities are not addressed in this SWPPP.

- Vehicle Maintenance is conducted in the Garage Building
- Equipment and Vehicles are stored in the Garage Building
- All hazardous waste containers are stored within the Garage Building in accordance with MassDEP’s Hazardous Waste Regulations
- All waste oil containers and waste antifreeze containers are stored within the Garage Building.

3.4 Potential Impact on Water Quality

The Town must be continuously mindful that activities conducted at the DPW Garage and Yard have the potential to impact water quality. The impacts of the potential stormwater pollutants listed in Table 3-1 on water quality are described in Table 3-2.¹

The facility is located within the Pecousic Brook subwatershed of the Connecticut River, but is not directly proximate to and does not directly discharge to the Pecousic Brook. None of the waterbodies in East Longmeadow are identified in the Massachusetts Year 2016 Integrated List of Waters as impaired.²

Section 4 includes recommended BMPs intended to address the potential pollutants associated with the activities conducted at the DPW Garage and Yard.

Table 3-2
Pollutant Impacts on Water Quality

| | |
|---|--|
|  | <p style="text-align: center;">Sediment</p> <p>Sediment is a common component of stormwater, and can be a pollutant. Sediment can be detrimental to aquatic life (primary producers, benthic invertebrates, and fish) by interfering with photosynthesis, respiration, growth, reproduction, and oxygen exchange in water bodies. Sediment can transport other pollutants, including nutrients, trace metals, and hydrocarbons. Sediment is the primary component of total suspended solids (TSS), a common water quality analytical parameter.</p> |
|  | <p style="text-align: center;">Nutrients</p> <p>Nutrients including nitrogen and phosphorous are the major plant nutrients used for fertilizing landscapes, and are often found in stormwater. These nutrients can result in excessive or accelerated growth of vegetation, such as algae, resulting in impaired use of water in lakes and other sources of water supply. In addition, un-ionized ammonia (one of the nitrogen forms) can be toxic to fish.</p> |

¹ Text included in this table is from the California Stormwater Quality Association Stormwater BMP Handbook for New Development and Redevelopment. URL: <https://www.casqa.org/resources/bmp-handbooks/new-development-redevelopment-bmp-handbook>

² <https://www.mass.gov/files/documents/2020/01/07/16ilwplist.pdf>

Table 3-2
Pollutant Impacts on Water Quality



Bacteria and Viruses

Bacteria and viruses are common contaminants of stormwater. For separate storm drain systems, sources of these contaminants include animal excrement and sanitary sewer overflow. High levels of indicator bacteria in stormwater have led to the closure of beaches, lakes, and rivers to contact recreation such as swimming.



Oil and Grease

Oil and grease includes a wide array of hydrocarbon compounds, some of which are toxic to aquatic organisms at low concentrations. Sources of oil and grease include leakage, spills, cleaning and sloughing associated with vehicle and equipment engines and suspensions, leaking and breaks in hydraulic systems, restaurants, and waste oil disposal.



Metals

Metals including lead, zinc, cadmium, copper, chromium, and nickel are commonly found in stormwater. Many of the artificial surfaces of the urban environment (e.g., galvanized metal, paint, automobiles, or preserved wood) contain metals, which enter stormwater as the surfaces corrode, flake, dissolve, decay, or leach. Over half the trace metal load carried in stormwater is associated with sediments. Metals are of concern because they are toxic to aquatic organisms, can bioaccumulate (accumulate to toxic levels in aquatic animals such as fish), and have the potential to contaminate drinking water supplies.



Organics

Organics may be found in stormwater at low concentrations. Often synthetic organic compounds (adhesives, cleaners, sealants, solvents, etc.) are widely applied and may be improperly stored and disposed. In addition, deliberate dumping of these chemicals into storm drains and inlets causes environmental harm to waterways.



Pesticides, Herbicides, and Insecticides

Pesticides, herbicides, and insecticides (including fungicides and rodenticides) have been repeatedly detected in stormwater at toxic levels, even when they have been applied in accordance with label instructions. As their use has increased, so too have concerns about adverse effects on the environment and human health. Accumulation of these compounds in simple aquatic organisms, such as plankton, provides an avenue for biomagnification through the food web, potentially resulting in elevated levels of toxins in organisms that feed on them, such as fish and birds.



Gross Pollutants

Gross Pollutants (trash, debris and floatables) may include heavy metals, pesticides, and bacteria in stormwater. Typically resulting from an urban environment, industrial sites and construction sites, trash and floatables may create an aesthetic "eye sore" in waterways. Gross pollutants also include plant debris (such as leaves and lawn-clippings from landscape maintenance), animal excrement, street litter, and other organic matter, which may harbor bacteria, viruses, vectors, and depress the dissolved oxygen levels in streams, lakes and estuaries, sometimes causing fish kills.



Vector Production

Vector production (e.g., mosquitoes, flies, and rodents) is frequently associated with sheltered habitats and standing water. Unless designed and maintained properly, standing water may occur in treatment control BMP's for 72 hours or more, thus providing a source for vector habitat and reproduction.

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SECTION 4

Section 4

Best Management Practices

Under Section 2.3.7.b.ii.4 of the 2016 Small MS4 General Permit, the SWPPP shall include the following management practices. Permit language for each management practice is included in italicized text.

Minimize or Prevent Exposure: The permittee shall to the extent practicable either locate materials and activities inside or protect them with storm-resistant coverings in order to prevent exposure to rain, snow, snowmelt and runoff (although significant enlargement of impervious surface area is not recommended). Materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged directly or indirectly to receiving waters or to the MS4 or if discharges are authorized under another NPDES permit.

Good Housekeeping: The permittee shall keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals. Ensure that trash containers are closed when not in use, keep storage areas well swept and free from leaking or damaged containers; and store leaking vehicles needing repair indoors.

Preventative Maintenance: The permittee shall regularly inspect, test, maintain, and repair all equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater to receiving waters. Inspections shall occur at a minimum once per quarter.

Erosion and Sediment Control: The permittee shall use structural and non-structural control measures at the facility to stabilize and contain runoff from exposed areas and to minimize or eliminate onsite erosion and sedimentation. Efforts to achieve this may include the use of flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion.

Management of Runoff: The permittee shall manage stormwater runoff from the facility to prevent or reduce the discharge of pollutants. This may include management practices which divert runoff from areas that are potential sources of pollutants, contain runoff in such areas, or reuse, infiltrate or treat stormwater to reduce the discharge of pollutants.

This section describes how these management practices will be implemented (as applicable) for each activity conducted at the DPW Garage and Yard. Three other required management practices, Spill Prevention and Response, Employee Training, and Maintenance of Control Measures, are applicable site-wide and are addressed in Sections 4.6, 4.7, and 5.

4.1 Stockpiled Material Storage and Loading

Stockpile management procedures and practices are designed to reduce or eliminate stormwater pollution from stockpiles of bulk materials. 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 basins, rendering the drainage system ineffective. This section excludes salt storage, which is specifically addressed in Section 4.4.

4.1.1 Facility Description

Stockpiled bulk material storage is kept in multiple locations around the DPW Garage and Yard. Along the eastern and northern portion of the site, near the salt and sand storage shed, cold patch, loam, asphalt, catch basin cleanings, and gravel are located on paved areas (as shown in Figure 4.1). Drainage from this area flows as sheet flow to the drainage ditch intersecting the facility specifically along the northeast and northwest sides of the culvert headwall where erosion has cut a channel into the ditch bank. Additionally, road material, rip rap, and gravel are stored along the northwestern portion of the site. Tires and other construction debris are stored uncovered, behind the salt and sand storage shed.



Figure 4.1: Storage of gravel and sand adjacent to the salt shed and storage of construction materials.

4.1.2 Suggested Best Management Practices

General Practices

- Locate stockpiles a minimum of 50 feet away from concentrated flows of stormwater, drainage courses, and inlets.
- Implement wind erosion control practices as appropriate on all stockpiled material.
- Place bagged materials on pallets and under cover, not directly on the ground.
- Stockpiles should be located in a relatively level site away from slopes and water features.
- Refer to the MassDEP guidance document for Reuse & Disposal of Street Sweepings and Management of Catch Basin Cleanings, included in **Appendix C**.

Minimize or Prevent Exposure

- Cover and contain the stockpiles of raw materials. The covers must be in place at all times when work with the stockpiles is not occurring (applicable to small stockpiles only). Non-active 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 is recommended for dust control.
- See Erosion and Sediment Control for additional information.

Good Housekeeping

- Sweep paved storage areas regularly for collection and disposal of loose solid materials. Do not hose down the area to a storm drain or conveyance ditch.
- Clean nearby catch basins as necessary, at least annually.

Preventative Maintenance

- Frequently inspect and verify that BMPs are in place and functioning properly.
- Repair and/or replace perimeter controls and covers as needed.

Erosion and Sediment Control

- If the stockpiles are so large that they cannot feasibly be covered and contained, implement erosion control practices at the perimeter of the DPW Garage and Yard and at any catch basins to prevent erosion of the stockpiled materials off site.
- Ensuring that the storage area is regularly swept and kept clean is an important good housekeeping practice.

Management of Runoff

- Protect all stockpiles from stormwater run-on using a temporary perimeter sediment barrier such as berms, dikes, fiber rolls, silt fences, sandbags, or gravel bags.

4.2 Parking Area

Parking areas can contribute substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through stormwater runoff.

4.2.1 Facility Description

At the DPW Garage and Yard, there is a parking area for employees and visitors in the front of and to the side of the Garage Building. (Figure 4.2).



Figure 4.2: Parking area for employees (left) and visitors (right) at DPW Garage Yard.

4.2.2 Suggested Best Management Practices

General Practices

- Keep the parking area clean and free of trash and debris.

Minimize or Prevent Exposure

- Not applicable for this parking area.

Good Housekeeping

- Provide trash receptacles in parking areas or just inside of the facility to discourage litter.
- Sweep parking areas annually at a minimum.
- Clean nearby catch basins as necessary.

Erosion and Sediment Control

- Sediment control will be achieved through routine sweeping in the parking area.
- Additional Erosion and Sediment Controls will be necessary for major repairs, repaving, and/or re-grading the parking area.

Management of Runoff

- Allow sheet runoff to flow into biofilters (vegetated strip and swale) or an infiltration area.

4.3 Solid Waste Management

Solid waste production and storage locations can contaminate stormwater runoff with pathogens such as bacteria and viruses, nutrients such as phosphorus and nitrogen, metals, and sediment. Solid waste may be classified as both hazardous and non-hazardous. At the DPW Garage and Yard, storage of all hazardous material is within the Garage Building where it is not exposed to precipitation and therefore greatly reduces the risk of stormwater pollution.

4.3.1 Facility Description

At the DPW Garage and Yard, there are trash dumpsters located to the north of the Garage Building. Other solid wastes and hazardous materials are stored inside the Garage Building.



Figure 4.3: Dumpsters are located north of the Garage Building and hazardous materials are stored inside the Garage Building.

4.3.2 Suggested Best Management Practices

General Practices

- Utilize waste storage containers to keep the parking area and facility clean and free of trash and debris.
- Keep waste collection areas clean, especially those located near catch basins and wetland resource areas.
- Solid waste containers should be located as far away from wetland resource areas as practicable.

Minimize or Prevent Exposure

- Secure solid waste containers. Containers must be closed tightly when not in use.
- Place waste containers under cover if possible.
- Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc. may not be disposed of in solid waste containers.
- Do not mix wastes; this can cause chemical reactions, make recycling impossible, and complicate disposal.

Good Housekeeping

- 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 knowledgeable of the potential hazards associated with solid waste handling and storage.
- Each waste storage location shall be properly labeled, and all significant sources of pollution shall be kept in a secure, covered, and contained area.
- Schedule regular waste collection to prevent the containers from overflowing.

Preventative Maintenance

- Inspect solid waste containers for structural damage or leaks regularly. Repair or replace damaged containers as necessary.
- Repair or replace any leaking or defective containers and replace labels as necessary.
- Maintain caps and/or covers on containers.

Erosion and Sediment Control

- Sediment control will be achieved through routine sweeping in the parking area and a regular waste collection schedule.

Management of Runoff

See Minimize or Prevent Exposure for more information.

4.4 Salt Storage and Loading

The 2016 Small MS4 General Permit provides specific requirements for "Salt Storage Piles or Piles Containing Salt," as follows:

"For storage piles of salt or piles containing salt used for de-icing or other purposes (including maintenance of paved surfaces) for which the discharge during precipitation

events discharges to the permittee's MS4, any other storm sewer system, or to a Water of the US, the permittee shall prevent exposure of the storage pile to precipitation by enclosing or covering the storage piles. Such piles shall be enclosed or covered within two (2) years of the permit effective date. The permittee shall implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. The permittee is encouraged to store piles in such a manner as not to impact surface water resources, ground water resources, recharge areas, and wells."

Salts are very soluble – once in contact with water there is no way to remove salt. The major reasons for keeping sand and salt covered are that these materials kill vegetation and aquatic life, corrode infrastructure, block storm drains and swales, increase sedimentation to streams and rivers, and small quantities (5% road salt) contain phosphorous, nitrogen, copper, and cyanide.

4.4.1 Facility Description

There is a large salt storage building on the site to prevent exposure of the stockpiles to precipitation. The Town currently treats roads with salt and magnesium chloride. The salt pile is contained within the salt storage building and only accessed during winter months. The liquid magnesium chloride is stored in a tank next to the Salt Storage building. See Figure 4-4. Additionally, there is a small sand storage shed on site as well. Materials stored in the Salt Storage Building and sand shed are not exposed to precipitation.



Figure 4.4: Salt shed building located on the north end of the yard at the DPW Service Building.

4.4.2 Suggested Best Management Practices

Minimize or Prevent Exposure

- Sand and salt must be stored properly to prevent exposure to precipitation. East Longmeadow's storage shed has the following key elements: covered structure on impervious surface; drainage is diverted away from the storage facilities; and salt handling is conducted within the storage facility.

Good Housekeeping

- Sweep the surrounding area regularly for collection and disposal of loose materials.
- Do not hose down the area to a storm drain or conveyance ditch.

Preventative Maintenance

- Keep the storage building in good condition (e.g., maintain or repair the roof and pavement) to limit releases to runoff. Problems should be identified and reported as part of routine inspections, described in Section 6, Inspections.

Erosion and Sediment Control

- Sediment control will be achieved through routine sweeping of adjacent areas.

Management of Runoff

- See Minimize or Prevent Exposure for additional information.

4.5 Vehicle and Equipment Washing

Wash water from vehicle and equipment cleaning activities performed outdoors or in areas where wash water flows onto the ground can contribute hydrocarbons and other organic compounds, oils and greases, nutrients, detergents, heavy metals, and suspended solids to stormwater runoff. The EPA and MassDEP regulations prohibit the direct discharge of pollutants to waters of the United States without a permit.

4.5.1 Facility Description

Vehicles are occasionally rinsed outside the Garage Building on the asphalt adjacent to the concrete maintenance pad. When rinsed outside, the rinse water sheet flows across the pavement. Vehicles may also be rinsed or washed inside the Garage Building or at an off-site commercial car wash facility.

4.5.2 Suggested Best Management Practices

General Practices

- Use biodegradable, phosphate-free detergents for washing vehicles.
- Use hoses with spring loaded nozzles that automatically turn off when let go of.
- Train employees on proper cleaning procedures and proper maintenance measures for the wash area. See Section 4.7, Employee Training.

Minimize or Prevent Exposure

- When washing vehicles indoors where floor drains lead to a municipal sewer through an oil/water separator, minimize use of detergents and do not use high-pressure hoses, as detergents can cause oil and grease to emulsify, and high flows overwhelm the ability of the oil/water separator to separate out materials.
- If using degreasers, use quick-break degreasers.
- It is recommended to wash vehicles and equipment at an off-site commercial car wash, have them washed by a mobile vehicle washing business that collects wastewater, or wash in an area that drains to a MassDEP-approved, certified tight tank that is pumped out on a regular basis by a licensed hauler.
- If necessary, perform pressure cleaning and steam cleaning off-site to avoid generating runoff with high pollutant concentrations.

Good Housekeeping

- Mark the vehicle washing and rinsing areas clearly.
- Post signs stating that rinsing and washing of vehicles is only allowed in the designated areas and that discharges to the storm drain are prohibited.
- Provide a trash container in the wash and rinse areas.
- Clean nearby catch basins as necessary, at least annually.

Preventative Maintenance

- Sweep rinsing areas frequently to remove solid debris.

Management of Runoff

- Outdoor rinsing of vehicles without soap should be conducted where water discharges to vegetated swales for pretreatment.

4.6 Spill Prevention and Response

Under Section 2.3.7.b.ii.4.d of the 2016 Small MS4 General Permit:

"Spill Prevention and Response: The permittee shall minimize the potential for leaks, spills, and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, the permittee shall have procedures that include:

- Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling.*
- Response procedures that include notification of appropriate facility personnel, emergency agencies, and regulatory agencies, and procedures for stopping, containing, and cleaning up leaks, spills and other releases. Measures for cleaning up hazardous material spills or leaks shall be consistent with applicable Resource Conservation and Recovery Act (RCRA) regulations at 40 CFR section 264 and 40 CFR section 265. Employees who may cause, detect, or respond to a spill or leak shall be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the Pollution Prevention Team; and*
- Contact information for individuals and agencies that shall be notified in the event of a leak, spill, or other release. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under 40 CFR section 110, 40 CFR section 117, or 40 CFR section 302, occurs during a 24-hour period, the permittee shall notify the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR section 110, 40 CFR section 117, and 40 CFR section 302 as soon as the permittee has knowledge of the discharge. State or local requirements may necessitate reporting spills or discharges to local emergency, public health or drinking water supply agencies, and owners of public drinking water supplies. Contact information shall be in locations that are readily accessible and available."*

Currently, no fueling of equipment or vehicles is done on site and all hazardous materials and petroleum-based products are stored inside the Garage Building and therefore are not exposed to stormwater. According to facility personnel, there have been no known discharges subject to SPCC reporting requirements at the facility within the past 3 years.

Waste oil and virgin oil are used and stored in tanks and drums, at various locations around the facility, for facility heating, routine equipment maintenance, and lubrication. Waste oil is generated from East Longmeadow DPW vehicles, as well as resident drop-off. The DPW utilizes the majority of their above ground storage of petroleum products for heat in their used oil furnace. However, the facility also generates waste petroleum products from fleet vehicle fueling and vehicle maintenance.

The DPW Garage and Yard has an SPCC Plan in place that addresses the spill prevention, control, and countermeasures related to all oil storage at the facility. The SPCC Plan outlines policies and procedures adopted by East Longmeadow DPW to prevent the discharge of oil into navigable waters on the United States including, the groundwater table and adjacent water bodies. The SPCC Plan also summarizes procedures to be implemented by East Longmeadow DPW personnel in the event of a release and

documents management's commitment to provide the necessary resources to implement the Plan. These procedures are intended to minimize threat to public health and safety, and/or the environment and meet the requirements of 40 CFR 109 and 112, USEPA Regulations, "Oil Pollution Prevention", STI SP001, and 527 CMR 1.00, 502 CMR 5.00.

A copy of the SPCC Plan is kept at the facility in the DPW Superintendent's office. Personnel and organizations to be contacted in the event of a spill are identified in Section 6.2 and the Contingency Flow Chart in Appendix D of the SPCC Plan.

4.7 Employee Training

Under Section 2.3.7.b.ii.4.h of the 2016 Small MS4 General Permit:

"The permittee shall regularly train employees who work in areas where materials or activities are exposed to stormwater, or who are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team. Training shall cover both the specific components and scope of the SWPPP and the control measures required under this part, including spill response, good housekeeping, material management practices, any best management practice operation and maintenance, etc. EPA recommends annual training. The permittee shall document the following information for each training:

- *The training date, title and training duration;*
- *List of municipal attendees;*
- *Subjects covered during training"*

The East Longmeadow DPW is responsible for stormwater management training for employees. Employee training will be conducted upon hiring and on an annual basis thereafter to inform personnel responsible for implementing the activities described in this Plan, or otherwise responsible for stormwater management, of the components and goals of this Plan. Personnel will be trained in the proper operation and maintenance of equipment as well as in procedures to follow during an emergency. The purpose of the training is to ensure that discharges are prevented, and spill response procedures are reviewed.

Training will consist of classroom and/or hands-on sessions and will be arranged by the Primary SWPPP Coordinator. At a minimum, annual training will cover the following topics:

- Applicable stormwater regulations
- Stormwater pollution prevention concepts
- The goals of this SWPPP
- Structural controls and nonstructural controls (BMPs), including spill prevention and response, inspection, reporting, and general good housekeeping practices.

The SWPPP training can be periodically combined with other required training topics, such as the Illicit Discharge Detection and Elimination (IDDE) training. Documentation of training, including dates held, topics covered, and a list of attendees, shall be retained on-site. An example training record is included in **Appendix D**.

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SECTION 5

Section 5

Maintenance of Stormwater Controls

As described in Section 2.3.7.b.ii.3 of the 2016 Small MS4 General Permit, the Town is required to implement and maintain stormwater controls at the SWPPP facility:

"The permittee shall select, design, install, and implement the control measures detailed in paragraph iv below to prevent or reduce the discharge of pollutants from the permittee owned facility.

The selection, design, installation, and implementation of the control measures shall be in accordance with good engineering practices and manufacturer's specifications. The permittee shall also take all reasonable steps to control or address the quality of discharges from the site that may not originate at the facility.

If the discharge from the facility is to a water quality limited water and the facility has the potential to discharge the pollutant identified as causing the water quality limitation, the permittee shall identify the control measures that will be used to address this pollutant at the facility so that the discharge does not cause or contribute to a violation of a water quality standard."

Also, under Section 2.3.7.b.ii.4.i of the 2016 Small MS4 General Permit:

"Maintenance of Control Measures: The permittee shall maintain all control measures, required by this permit in effective operating condition. The permittee shall keep documentation onsite that describes procedures and a regular schedule for preventative maintenance of all control measures and discussions of back-up practices in place should a runoff event occur while a control measure is off-line. Nonstructural control measures shall also be diligently maintained (e.g., spill response supplies available, personnel trained)."

5.1 Operations and Maintenance

The DPW shall maintain all structural and non-structural control measures in effective operating condition. Non-structural control measures shall be diligently maintained (e.g., spill response supplies available, personnel trained).

As shown in Figure 4 in **Appendix B**, there are several structural controls on site: an oil/water separator, a grass swale, five catch basins and two connected dry detention basins. These stormwater BMPs provide pretreatment of stormwater primarily from the paved areas from the water intake building north to the Garage Building, prior to discharge to the wetland resource areas. The catch basin on Boston Road collects stormwater from the parking areas and northern driveway for discharge into the drainage ditch. The catch basin on the southern driveway collects stormwater from the roads south of the Garage Building for discharge to a small wetland.

The drainage system and stormwater BMPs should be inspected according to Sections 5.1, 5.2, and 6 and maintained as follows:

- To aid the Town in implementing the SWPPP and determining the need for additional controls to minimize the discharge of pollutants from the site, the Town should label catch basins within the facility boundary, by paint/stencil (or

- equivalent), to indicate whether they flow directly to a sewer system, or to a storm drain.
- Avoid disposing of snow on top of storm drain catch basins or in stormwater drainage swales or ditches. Snow combined with sand and debris may block a storm drainage system, causing localized flooding. A high volume of sand, sediment, and litter released from melting snow also may be quickly transported through the system into surface water. Additional information about selecting a location and best practices for snow removal and stockpiling are in MassDEP's Snow Disposal Guidance in **Appendix C**.
 - The drainage system and stormwater BMPs onsite, including catch basins, pipes, swales, detention basins, must be maintained according to the Massachusetts Stormwater Handbook, Volume 2. SOPs and inspection forms are provided **Appendix C**.
 - The oil/water separator should be maintained according to the procedures described in SOP 9 in **Appendix C**.

The East Longmeadow DPW Garage and Yard is located within the Connecticut River watershed, which is part of the drainage basin of the Long Island Sound. The Long Island Sound has an approved Total Maximum Daily Load (TMDL) for nitrogen, which establishes both in-basin nitrogen reductions and out-of-basin (north of Connecticut) nitrogen reductions necessary to achieve water quality standards for Dissolved Oxygen in Long Island Sound. Per section 2.2.1(c)(i)(1) of the 2016 Small MS4 General Permit, the Town of East Longmeadow must comply with the requirements of Appendix F part B.I with respect to nitrogen discharges. Per Appendix F part B.I.1.a.i.3., enhanced Good Housekeeping BMPs required to be implemented by East Longmeadow include establishing procedures to properly manage grass cuttings and leaf litter on permittee property. Proper management of grass cuttings, stockpiled compost and other organic material at the DPW Garage and Yard addresses this permit requirement.

It may be necessary in the future for the Town to make additional site improvements and implement structural controls beyond the BMPs described in Section 4. For example, to further limit the migration of sediment and stockpiled materials into the bordering wetland resource areas, the Town may consider moving the stockpiles to a less environmentally sensitive area on the site, away from wetland resources and the drainage ditch, and graded toward a structural BMP to treat runoff.

Records for all maintenance activities may be kept in **Appendix D** of this plan or electronically.

5.2 Outfall Monitoring Program

As part of the Illicit Discharge Detection & Elimination Program required in the 2016 Small MS4 General Permit, the Town will be required to visually inspect the outfall discharging from the DPW Garage and Yard. PB-095 is a 40" RCP that passes under the Mass Electric parcel on the north side of the site, as shown on the site plan in **Appendix B**. The outfall should be inspected as part of the quarterly site inspection as described on the quarterly inspection form provided in **Appendix D**. The Town should look for signs that materials present onsite are migrating through the drainage system to the wetlands or nearby water resources according to EPA's requirements under the Small MS4 Program.

5.3 Site Inspections

As described in Section 6, the Town will perform regular site inspections to monitor compliance with this SWPPP. If the following conditions are observed, corrective measures must be taken.

- Migration of materials (sediment, bulk materials, debris) and visible pollutants (oil sheen) to the surrounding wetlands or storm drain outfall; and/or
- Erosion or other damage to vegetated areas around the site perimeter.

If these conditions are recurring, it may be necessary for the Town to make additional site improvements and install or improve structural controls at the DPW Garage and Yard.

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SECTION 6

Section 6

Inspections

Per Section 2.3.7.b.iii of the 2016 Small MS4 General Permit:

"Inspect all areas that are exposed to stormwater and all stormwater control measures. Inspections shall be conducted at least once each calendar quarter. More frequent inspections may be required if significant activities are exposed to stormwater. Inspections shall be performed when the facility is in operation. At least one of the quarterly inspections shall occur during a period when a stormwater discharge is occurring."

The Town is required to conduct quarterly facility inspections, as described in this section and in the 2016 Small MS4 General Permit. Tom Christensen, the East Longmeadow DPW Deputy Superintendent, will be responsible for conducting all site inspections and preparing the necessary documentation.

6.1 Routine Facility Inspections

Inspect all areas that are exposed to stormwater and all stormwater control measures. Inspections shall be conducted at least quarterly (i.e., once each calendar quarter) and may follow the following schedule to coincide with the Fiscal Year and Permit Year:

- Q1: July through September
- Q2: October through December
- Q3: January through March
- Q4: April through June

As described in the 2016 General Permit, the facility must be in operation during all inspections, and **at least one of the quarterly inspections must occur while a stormwater discharge is actively occurring.**

Document the following information for each routine facility inspection:

- 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; and
- Any SWPPP changes required as a result of the inspection.

Quarterly inspections should be documented in the Quarterly Inspection Form included in **Appendix D**.

6.2 Corrective Actions

If during the inspections, or any other event or observation, the SWPPP Inspector identifies control measures that need repair or are not operating effectively, the DPW is required to repair or replace them before the next anticipated storm event if possible, or as soon as practicable following that storm event. In the interim, back-up measures must be put in place to ensure that the quality of the stormwater discharge is not diminished. There is no grace period for making repairs to any control measures.

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SECTION 7

Section 7

Record Keeping and Reporting

7.1 SWPPP Records

Per Section 2.3.7.b.iv of the 2016 Small MS4 General Permit, the Town must keep a written record (either hard copy or electronic) of all activities associated with the development and implementation of the SWPPP. These activities include, but are not limited to, maintenance, inspections, and training. The Town shall maintain all records associated with the development and implementation of the SWPPP **for a period of at least five years**. These records shall be made available to State or Federal inspectors and the general public upon request.

The findings of all site inspections, as outlined in Section 6, must be included in the annual reports submitted to the EPA in accordance with Section 2.3.7.b.iii of the 2016 Small MS4 General Permit.

7.2 SWPPP Revisions

The Town may update or revise the SWPPP as needed. Changes that may trigger revision include, but are not limited to, the following:

- Physical changes to the facility that expose any potential pollutant, which is not presently exposed, to groundwater;
- Presence of a new authorized non-stormwater discharge at the facility; and/or
- Addition of an activity not previously addressed in this SWPPP, which introduces a new potential pollutant.

If it is necessary to modify or update the SWPPP, the DPW should follow this procedure to formalize the changes:

- Keep a log with a description of the modification, the date, and the name and signature of the person making it; and
- Re-sign and date the certification statement in Section 8 of this SWPPP.

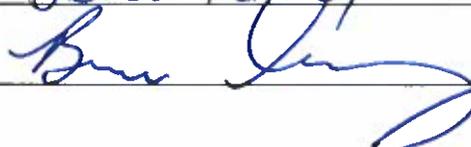
A SWPPP revision log and additional certification statements are located in **Appendix D**.

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SECTION 8

Section 8 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."

Name: BRUCE FENNEY Title: SUPERINTENDENT
Signature:  Date: 9/30/2020

J:\E\0714 East Longmeadow Engineering Services\041 - MS4 Services Year 2 Compliance\Reports\SWPPPs\DPW Garage\Draft\East Longmeadow DPW Garage SWPPP.docx

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APPENDIX A

Appendix A
MS4 Permit Excerpts

**United States Environmental Protection Agency (EPA)
National Pollutant Discharge Elimination System (NPDES)**

**GENERAL PERMITS FOR STORMWATER DISCHARGES FROM
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS
IN MASSACHUSETTS**

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act (CWA), as amended (33 U.S.C. §1251 *et seq.*), and the Massachusetts Clean Waters Act, as amended (M.G.L. Chap.21 §§ 26-53), any operator of a small municipal separate storm sewer system whose system:

- Is located in the areas described in part 1.1;
- Is eligible for coverage under part 1.2 and part 1.9; and
- Submits a complete and accurate Notice of Intent in accordance with part 1.7 of this permit and EPA issues a written authorization

is authorized to discharge in accordance with the conditions and the requirements set forth herein.

The following appendices are also included as part of these permits:

- Appendix A – Definitions, Abbreviations, and Acronyms;
- Appendix B – Standard permit conditions applicable to all authorized discharges;
- Appendix C – Endangered Species Act Eligibility Guidance;
- Appendix D – National Historic Preservation Act Eligibility Guidance;
- Appendix E – Information required for the Notice of Intent (NOI);
- Appendix F – Requirements for MA Small MS4s Subject to Approved TMDLs;
- Appendix G – Impaired Waters Monitoring Parameter Requirements;
- Appendix H – Requirements related to discharges to certain water quality limited waterbodies;

These permits become effective on **July 1, 2017**.

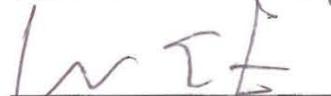
These permits and the authorization to discharge expire at midnight, **June 30, 2022**.

Signed this 4th day of April, 2016



Ken Moraff, Director
Office of Ecosystem Protection
United States Environmental Protection Agency
5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

Signed this 4th day of April 2016



Douglas E. Fine
Assistant Commissioner for Water
Resources
Department of Environmental Protection
One Winter Street
Boston, Massachusetts 02108

The assessment should indicate if the practices are allowed in the MS4 jurisdiction and under what circumstances are they allowed. If the practices are not allowed, the permittee shall determine what hinders the use of these practices, what changes in local regulations may be made to make them allowable, and provide a schedule for implementation of recommendations. The permittee shall implement all recommendations, in accordance with the schedules, contained in the assessment. The permittee shall report in each annual report on its findings and progress towards making the practices allowable. (Information available at:

<http://www.epa.gov/region1/npdes/stormwater/assets/pdf/AddressingBarrier2LID.pdf> and <http://www.mapc.org/resources/low-impact-dev-toolkit/local-codes-lid>)

- d. Four (4) years from the effective date of this permit, the permittee shall identify a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs designed to reduce the frequency, volume, and pollutant loads of stormwater discharges to and from its MS4 through the reduction of impervious area. Properties and infrastructure for consideration shall include those with the potential for reduction of on-site impervious area (IA) as well as those that could provide reduction of off-site IA. At a minimum, the permittee shall consider municipal properties with significant impervious cover (including parking lots, buildings, and maintenance yards) that could be modified or retrofitted. MS4 infrastructure to be considered includes existing street right-of-ways, outfalls and conventional stormwater conveyances and controls (including swales and detention practices) that could be readily modified or retrofitted to provide reduction in frequency, volume or pollutant loads of such discharges through reduction of impervious cover.

In determining the potential for modifying or retrofitting particular properties, the permittee shall consider factors such as access for maintenance purposes; subsurface geology; depth to water table; proximity to aquifers and subsurface infrastructure including sanitary sewers and septic systems; and opportunities for public use and education. In determining its priority ranking, the permittee shall consider factors such as schedules for planned capital improvements to storm and sanitary sewer infrastructure and paving projects; current storm sewer level of service; and control of discharges to water quality limited waters, first or second order streams, public swimming beaches, drinking water supply sources and shellfish growing areas.

Beginning with the fifth year annual report and in each subsequent annual report, the permittee shall identify additional permittee owned sites and infrastructure that could be retrofitted such that the permittee maintains a minimum of 5 sites in their inventory, until such a time as when the permittee has less than 5 sites remaining. In addition, the permittee shall report on all properties that have been modified or retrofitted with BMPs to mitigate IA that were inventoried in accordance with this part. The permittee may also include in its annual report non-MS4 owned property that has been modified or retrofitted with BMPs to mitigate IA.

2.3.7. Good House Keeping and Pollution Prevention for Permittee Owned Operations

Objective: The permittee shall implement an operations and maintenance program for permittee-owned operations that has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee-owned operations.

- a. Operations and Maintenance Programs
 - i. Within two (2) years from the effective date of the permit, the permittee shall develop, if not already developed, written (hardcopy or electronic) operations and maintenance procedures for the municipal activities listed below in part 2.3.7.a.ii. These written procedures shall be included as part of the SWMP.

waters. These materials should be managed in compliance with current MassDEP policies:

- For catch basins cleanings:
<http://www.mass.gov/eea/agencies/massdep/recycle/regulations/management-of-catch-basin-cleanings.html>
 - For street sweepings:
<http://www.mass.gov/eea/docs/dep/recycle/laws/stsweep.pdf>.
5. The permittee shall establish and implement procedures for winter road maintenance including the use and storage of salt and sand; minimize the use of sodium chloride and other salts, and evaluate opportunities for use of alternative materials; and ensure that snow disposal activities do not result in disposal of snow into waters of the United States. For purposes of this MS4 Permit, salt shall mean any chloride-containing material used to treat paved surfaces for deicing, including sodium chloride, calcium chloride, magnesium chloride, and brine solutions.
 6. The permittee shall establish and implement inspection and maintenance frequencies and procedures for all stormwater treatment structures such as water quality swales, retention/detention basins, infiltration structures, proprietary treatment devices or other similar structures. All permittee-owned stormwater treatment structures (excluding catch basins) shall be inspected annually at a minimum.
- iv. The permittee shall report in the annual report on the status of the inventory required by this part and any subsequent updates; the status of the O&M programs for the permittee-owned facilities and activities in part 2.3.7.a.ii; and the maintenance activities associated with each.
 - v. The permittee shall keep a written (hardcopy or electronic) record of all required activities including but not limited to maintenance activities, inspections and training required by part 2.3.7.a. The permittee shall maintain, consistent with part 4.2.a, all records associated with maintenance and inspection activities required by part 2.3.7.a.

b. Stormwater Pollution Prevention Plan (SWPPP)

The permittee shall 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. If facilities are located at the same property, the permittee may develop one SWPPP for the entire property. The SWPPP is a separate and different document from the SWMP required in part 1.10. A SWPPP does not need to be developed for a facility if the permittee has either developed a SWPPP or received a no exposure certification for the discharge under the Multi-Sector General Permit or the discharge is authorized under another NPDES permit.

- i. No later than two (2) years from the effective date of the permit, the permittee shall develop and implement a written (hardcopy or electronic) SWPPP for the facilities described above. The SWPPP shall be signed in accordance with the signatory requirements of Appendix B – Subparagraph 11.

ii. The SWPPP shall contain the following elements:

1. Pollution Prevention Team

Identify the staff on the team, by name and title. If the position is unstaffed, the title of the position should be included and the SWPPP updated when the position is filled. The role of the team is to develop, implement, maintain, and revise, as necessary, the SWPPP for the facility.

2. Description of the facility and identification of potential pollutant sources

The SWPPP shall include a map of the facility and a description of the activities that occur at the facility. The map shall show the location of the stormwater outfalls, receiving waters, and any structural controls. Identify all activities that occur at the facility and the potential pollutants associated with each activity including the location of any floor drains. These may be included as part of the inventory required by part 2.3.7.a.

3. Identification of stormwater controls

The permittee shall select, design, install, and implement the control measures detailed in paragraph iv below to prevent or reduce the discharge of pollutants from the permittee owned facility.

The selection, design, installation, and implementation of the control measures shall be in accordance with good engineering practices and manufacturer's specifications. The permittee shall also take all reasonable steps to control or address the quality of discharges from the site that may not originate at the facility.

If the discharge from the facility is to a water quality limited water and the facility has the potential to discharge the pollutant identified as causing the water quality limitation, the permittee shall identify the control measures that will be used to address this pollutant at the facility so that the discharge does not cause or contribute to a violation of a water quality standard.

4. The SWPPP shall include the following management practices:

- a) Minimize or Prevent Exposure: The permittee shall to the extent practicable either locate materials and activities inside, or protect them with storm-resistant coverings in order to prevent exposure to rain, snow, snowmelt and runoff (although significant enlargement of impervious surface area is not recommended). Materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged directly or indirectly to surface waters or to the MS4 or if discharges are authorized under another NPDES permit.
- b) Good Housekeeping: The permittee shall keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals. Ensure that trash containers are closed when not in use, keep storage areas well swept and free from leaking or damaged containers; and store leaking vehicles needing repair indoors.
- c) Preventative Maintenance: The permittee shall regularly inspect, test, maintain, and repair all equipment and systems to avoid situations that

may result in leaks, spills, and other releases of pollutants in stormwater to receiving waters. Inspections shall occur at a minimum once per quarter.

- d) Spill Prevention and Response: The permittee shall minimize the potential for leaks, spills, and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, the permittee shall have procedures that include:
- Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling.
 - Response procedures that include notification of appropriate facility personnel, emergency agencies, and regulatory agencies, and procedures for stopping, containing, and cleaning up leaks, spills and other releases. Measures for cleaning up hazardous material spills or leaks shall be consistent with applicable Resource Conservation and Recovery Act (RCRA) regulations at 40 CFR section 264 and 40 CFR section 265. Employees who may cause, detect, or respond to a spill or leak shall be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the Pollution Prevention Team; and
 - Contact information for individuals and agencies that shall be notified in the event of a leak, spill, or other release. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under 40 CFR section 110, 40 CFR section 117, or 40 CFR section 302, occurs during a 24-hour period, the permittee shall notify the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR section 110, 40 CFR section 117, and 40 CFR section 302 as soon as the permittee has knowledge of the discharge. State or local requirements may necessitate reporting spills or discharges to local emergency, public health or drinking water supply agencies, and owners of public drinking water supplies. Contact information shall be in locations that are readily accessible and available.
- e) Erosion and Sediment Control: The permittee shall use structural and non-structural control measures at the facility to stabilize and contain runoff from exposed areas and to minimize or eliminate onsite erosion and sedimentation. Efforts to achieve this may include the use of flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion.
- f) Management of Runoff: The permittee shall manage stormwater runoff from the facility to prevent or reduce the discharge of pollutants. This may include management practices which divert runoff from areas that

are potential sources of pollutants, contain runoff in such areas, or reuse, infiltrate or treat stormwater to reduce the discharge of pollutants.

- g) Salt Storage Piles or Piles Containing Salt: For storage piles of salt or piles containing salt used for deicing or other purposes (including maintenance of paved surfaces) for which the discharge during precipitation events discharges to the permittee's MS4, any other storm sewer system, or to a Water of the US, the permittee shall prevent exposure of the storage pile to precipitation by enclosing or covering the storage piles. Such piles shall be enclosed or covered within two (2) years of the permit effective date. The permittee shall implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. The permittee is encouraged to store piles in such a manner as not to impact surface water resources, ground water resources, recharge areas, and wells.
- h) Employee Training: The permittee shall regularly train employees who work in areas where materials or activities are exposed to stormwater, or who are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team. Training shall cover both the specific components and scope of the SWPPP and the control measures required under this part, including spill response, good housekeeping, material management practices, any best management practice operation and maintenance, etc. EPA recommends annual training.

The permittee shall document the following information for each training:

- The training date, title and training duration;
 - List of municipal attendees;
 - Subjects covered during training
- i) Maintenance of Control Measures: The permittee shall maintain all control measures, required by this permit in effective operating condition. The permittee shall keep documentation onsite that describes procedures and a regular schedule for preventative maintenance of all control measures and discussions of back-up practices in place should a runoff event occur while a control measure is off-line. Nonstructural control measures shall also be diligently maintained (e.g., spill response supplies available, personnel trained).

iii. The permittee shall conduct the following inspections:

1. Site Inspections: Inspect all areas that are exposed to stormwater and all stormwater control measures. Inspections shall be conducted at least once each calendar quarter. More frequent inspections may be required if significant activities are exposed to stormwater. Inspections shall be performed when the facility is in operation. At least one of the quarterly inspections shall occur during a period when a stormwater discharge is occurring.

The permittee shall document the following information for each facility inspection:

- 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.

If during the inspections, or any other time, the permittee identifies control measures that need repair or are not operating effectively, the permittee shall repair or replace them before the next anticipated storm event if possible, or as soon as practicable following that storm event. In the interim, the permittee shall have back-up measures in place.

The permittee shall report the findings from the Site Inspections in the annual report.

- iv. The permittee must keep a written (hardcopy or electronic) record of all required activities including but not limited to maintenance, inspections, and training required by part 2.3.7.b. The permittee shall maintain all records associated with the development and implementation of the SWPPP required by this part consistent with the requirements of part 4.2.

3.0. Additional Requirements for Discharges to Surface Drinking Water Supplies and Their Tributaries

- a. Permittees which discharge to public surface drinking water supply sources (Class A and Class B surface waters used for drinking water) or their tributaries should consider these waters a priority in the implementation of the SWMP.
- b. Permittees should provide pretreatment and spill control measures to stormwater discharges to public drinking water supply sources or their tributaries to the extent feasible.
- c. Direct discharges to Class A waters should be avoided to the extent feasible.

4.0. Program Evaluation, Record Keeping, and Reporting

4.1. Program Evaluation

- a. The permittee shall annually self-evaluate its compliance with the terms and conditions of this permit and submit each self-evaluation in the Annual Report. The permittee shall also maintain the annual evaluation documentation as part of the SWMP.
- b. The permittee shall evaluate the appropriateness of the selected BMPs in achieving the objectives of each control measure and the defined measurable goals. Where a BMP is found to be ineffective the permittee shall change BMPs in accordance with the provisions below. In addition, permittees may augment or change BMPs at any time following the provisions below:

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APPENDIX B

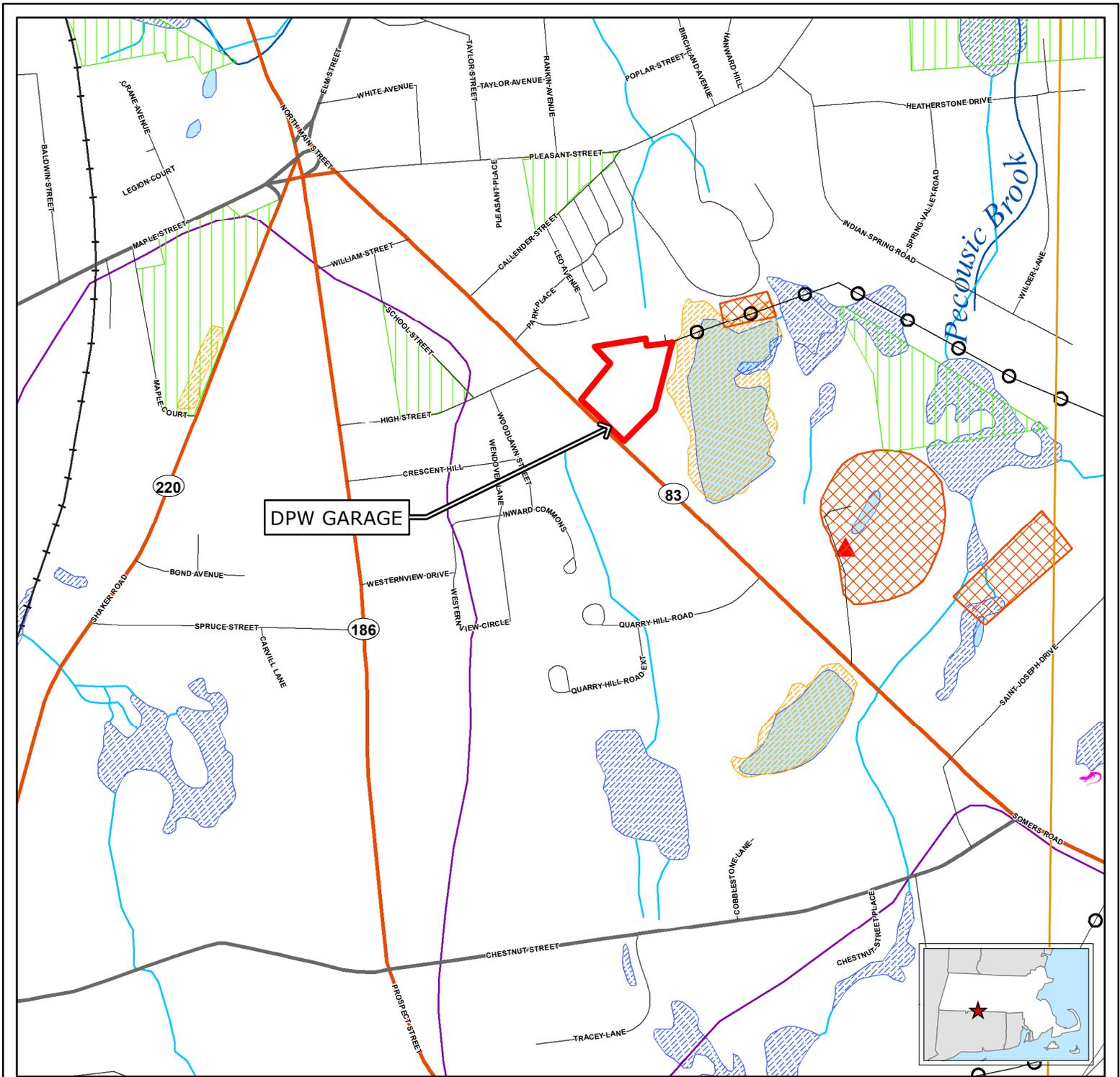
Appendix B

Figures and Plans



**FIGURE 1
SITE LOCATION**

DPW Garage SWPPP
East Longmeadow, Massachusetts



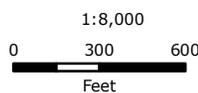
Legend

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> East Longmeadow DPW Garage NHESP Certified Vernal Pools NHESP Potential Vernal Pools Non-Landfill Solid Waste Sites Proposed Well Emergency Surface Water Community Public Water Supply - Surface Water Community Public Water Supply - Groundwater Non-Community Non-Transient Public Water Supply Non-Community Transient Public Water Supply Limited Access Highway Multi-Lane Highway, NOT Limited Access Other Numbered Highway Major Road - Collector Minor Street or Road | <ul style="list-style-type: none"> Aquaducts Hydrologic Connections Stream/Intermittent Stream Powerline Pipeline Track or Trail Trains Public Surface Water Supply Protection Area (Zone A) DEP Approved Wellhead Protection Area (Zone I) DEP Approved Wellhead Protection Area (Zone II) DEP Interim Wellhead Protection Area (IWPA) Protected and Recreational Open Space Solid Waste Landfill Area of Critical Environmental Concern (ACEC) NHESP Priority Habitats for Rare Species NHESP Estimated Habitats for Rare Wildlife EPA Designated Sole Source Aquifer Major Drainage Basin Sub Drainage Basin | <ul style="list-style-type: none"> MassDEP Open Water MassDEP Inland Wetlands MassDEP Coastal Wetlands MassDEP Not Interpreted Wetlands Public Surface Water Supply (PSWS) Water Bodies Non-Potential Drinking Water Source Area - High Yield Non-Potential Drinking Water Source Area - Medium Yield Potentially Productive Medium Yield Aquifer Potentially Productive High Yield Aquifer County Boundary Town Boundary USGS Quadrangle Sheet Boundary |
|---|---|--|

FIGURE 2
PRIORITY RESOURCES

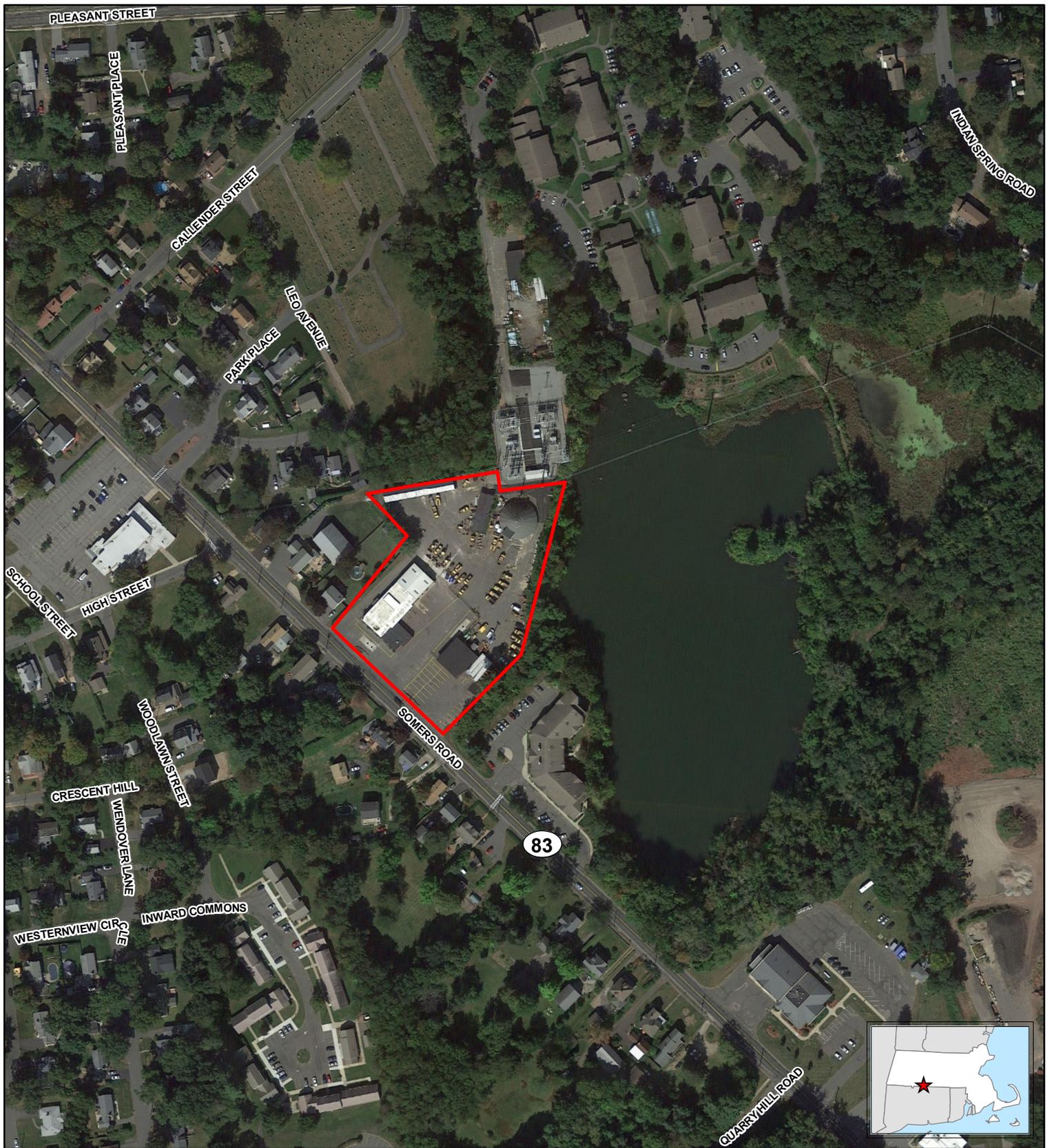
DPW Garage SWPPP
East Longmeadow, Massachusetts

Data source: Bureau of Geographic Information (MassGIS), Commonwealth of Massachusetts, Executive Office of Technology Data valid as of November 2019.



November 2019

Tighe & Bond
Engineers | Environmental Specialists

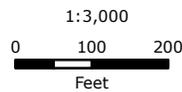


Legend

 East Longmeadow DPW Garage

Tighe & Bond
 Engineers | Environmental Specialists

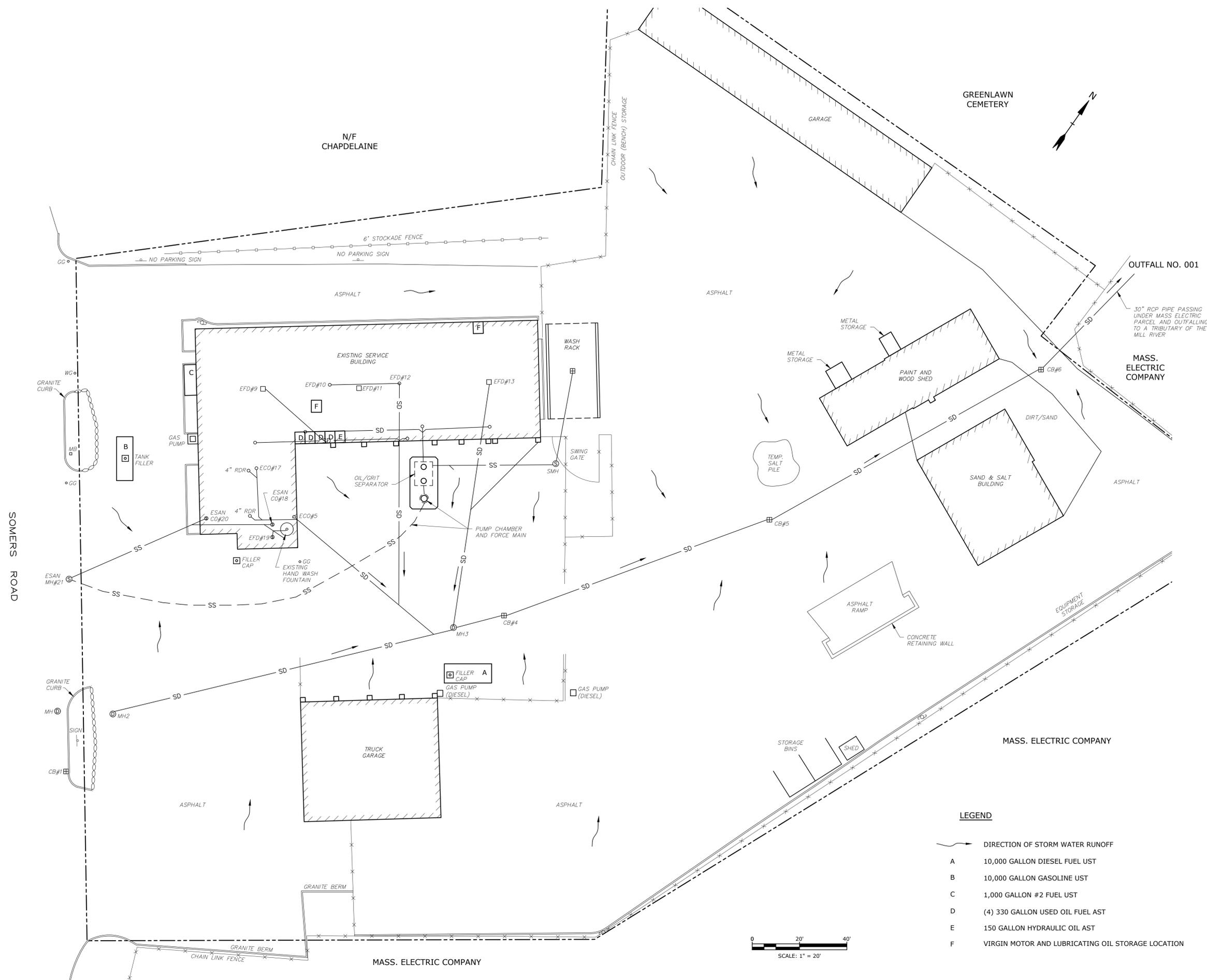
1. Based on MassGIS Color Orthophotography (2013)
 2. Data Source: Office of Geographic Information (MassGIS)
 Commonwealth of Massachusetts, MassIT Executive Office
 of Environmental Affairs. Data valid as of November 2019



**FIGURE 3
 AERIAL PHOTOGRAPH**

DPW Garage SWPPP
 East Longmeadow, Massachusetts

November 2019



- LEGEND**
- DIRECTION OF STORM WATER RUNOFF
 - A 10,000 GALLON DIESEL FUEL UST
 - B 10,000 GALLON GASOLINE UST
 - C 1,000 GALLON #2 FUEL UST
 - D (4) 330 GALLON USED OIL FUEL AST
 - E 150 GALLON HYDRAULIC OIL AST
 - F VIRGIN MOTOR AND LUBRICATING OIL STORAGE LOCATION

Department of Public Works

Garage and Yard

84 Somers Road
East Longmeadow,
Massachusetts

| MARK | DATE | DESCRIPTION |
|------|------|-------------|
| | | |
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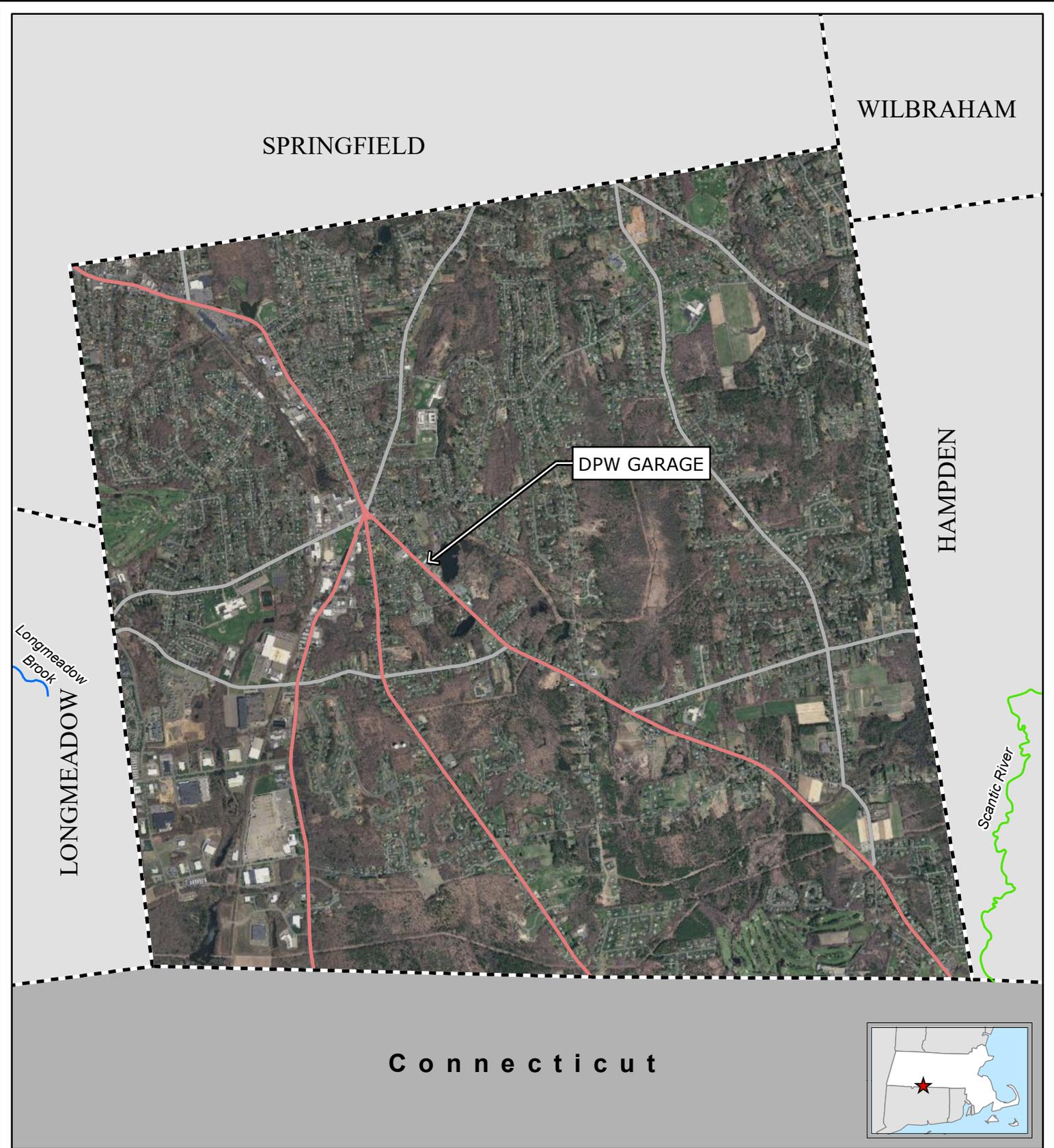
| | |
|--------------|---------------|
| PROJECT NO: | 140714/ |
| DATE: | 06/22/2020 |
| FILE: | STORMPLAN.dwg |
| DRAWN BY: | TMP |
| CHECKED BY: | TKK |
| APPROVED BY: | X |

SPCC SITE PLAN

SCALE: 1" = 20'

C-101
SHEET 1 OF 2

Last Saved: 6/23/2020 11:29am By: TMP
 Plotted On: Jun 23, 2020 11:29am By: TMP
 Tighe & Bond 23/EIC/274 East Longmeadow Engineering Services/041 - MSJ Services Year 2 Compliance Drawings - Figures/AutoCAD Sheets/STORMPLAN.dwg



Connecticut



Legend

| | | |
|---|---|--|
| <p>Water Body Segments - Rivers (arcs)</p> <p>Category</p> <ul style="list-style-type: none"> — 2 - Attaining some uses; other uses not assessed — 3 - No uses assessed — 4A - Impaired - TMDL is completed — 4C - Impairment not caused by a pollutant — 5 - Impaired - TMDL required | <p>Water Body Segments - Lakes, Estuaries (polygons)</p> <p>Category</p> <ul style="list-style-type: none"> ■ 2 - Attaining some uses; other uses not assessed ■ 3 - No uses assessed ■ 4A - Impaired - TMDL is completed ■ 4C - Impairment not caused by a pollutant ■ 5 - Impaired - TMDL required | <p>MassDOT Major Roads</p> <p>Road Type</p> <ul style="list-style-type: none"> — Limited Access Highway — Multi-lane Hwy, not limited access — Other Numbered Highway — Major Road, Collector Town Boundary Connecticut |
|---|---|--|

1. Based on MassGIS Color Orthophotography (2013)
 2. Data Source: Office of Geographic Information (MassGIS) Commonwealth of Massachusetts, MassIT Executive Office of Environmental Affairs. Data valid as of November 2019

0 1,500 3,000
 Feet

1:38,000

**FIGURE 5
 INTEGRATED LIST OF WATERS**

DPW Garage SWPPP
 East Longmeadow, Massachusetts

November 2019

Tighe&Bond

APPENDIX C

Appendix C
SOPs and MassDEP Guidelines

STANDARD OPERATING PROCEDURE 1: CATCH BASIN CLEANING
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



DESCRIPTION: Procedures for catch basin inspection and cleaning, and disposal of screenings. 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 (older catch basins may not have a sump). 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.

This SOP can also be used for inspection of catch basins or manholes for the purpose of conducting catchment investigations as part of East Longmeadow’s Illicit Discharge Detection and Elimination (IDDE) program.

TARGETED CONSTITUENTS:

- Sediment
- Nutrients
- Trash
- Metals
- Oil & Grease
- Organics

The Town of East Longmeadow Department of Public Works performs routine inspections, cleaning, and maintenance of the 3,798 catch basins that are located within the MS4 regulated area.

STRUCTURAL CONTROLS:

- Install hoods if catch basins do not have them.
- Repair damaged catch basins including outlet traps.
- Repair damaged catch basins timely manner.

CATCH BASIN CLEANING OPTIMIZATION PLAN

The Town has begun using a GIS-based tablet application to track catch basin cleaning and inspections, including percent full. Over the next few Permit Years, all Town-owned catch basins will be inspected at least once and tracking information including percent full will be recorded in GIS. In Permit Year 2, the Town is focusing cleaning efforts on catch basins that were more than 40% full in the previous cleaning. The data collected during catch basin inspections will be analyzed to determine which catch basins require more frequent cleaning, to help to prioritize cleaning locations, and to identify and address areas in Town that may experience excessive sediment or debris loading.

The catch basin cleaning optimization plan will be finalized and updated as the catch basin cleaning program is implemented throughout the Permit Term.

OPERATIONAL BEST MANAGEMENT PRACTICES:

- Each catch basin should be cleaned and inspected at least annually. Target cleaning for early Spring or late Fall.
- Street sweeping performed 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 they need to be swept.
- Inspect catch basins, grates, and ditches at least once per year. Inspections should be incorporated during routine cleaning, as part of reconstruction contracts, after significant storm events, and through requests made by residents or other Town departments.
- Prioritize inspection and maintenance of catch basins near construction sites (roadway construction, residential, commercial, or industrial development or redevelopment) or high-use areas. Catch basins that accumulate a significant amount of sediment should be prioritized for more frequent inspection and cleaning.
- Catch basins should be cleaned to ensure that they are no more than 50% full at any time.

STANDARD OPERATING PROCEDURE 1: CATCH BASIN CLEANING

TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- If a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events, document the findings, investigate the contributing drainage area for sources of excessive sediment loading, and to the extent practicable, abate contributing sources. If no contributing sources are found, increase the inspection and cleaning frequencies of the sump.
- Describe any actions taken relevant to investigating and abating areas of high sediment loading in the stormwater annual report.
- Note problem areas accumulating heavy loads of leaf litter, trash or pet waste bags that may warrant targeted educational outreach or enforcement efforts.
- Properly dispose of catch basin material or store until contractor picks up cleanings (Massachusetts DEP and EPA requires chemical analysis to determine if substance is hazardous waste).
- Inform employees that catch basins are part of the stormwater drainage system and not the sanitary sewer system.
- Maintain a log of cleaning activities. Information should include the amount of cleanings removed and areas with heavily filled basins.
- Maintain a log of cleaning activities carried out in parking lots. Information should include the amount of cleanings removed, heavily filled catch basins, and dates cleaned.

DATA GATHERING

Catch basin inspection and cleaning procedures should address both the grate opening and the catch basin structure, including the sump and any inlet and outlet pipes. Document any and all observations about the condition of the catch basin structure and water quality (an inspection form and log of catch basins cleaned or inspected are included in the attachments). 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 oil and bacteria can create a sheen on the surface of the water. The source of the sheen can be differentiated by disturbing it, such as with a pole. A sheen caused by oil will remain intact and move in a swirl pattern; a sheen caused by bacteria will separate and appear “blocky”. Bacterial sheen is caused by naturally occurring iron bacteria and is not considered a pollutant, but its presence should be noted. Other types of bacteria, such as fecal bacteria, are considered pollutants and their discovery should be recorded.

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

STANDARD OPERATING PROCEDURE 1: CATCH BASIN CLEANING

TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



CLEANING PROCEDURE

In general, adhere to the following procedures when inspecting and cleaning catch basins. Record the findings in the log in the attachments:

1. Implement appropriate traffic safety procedures (e.g., traffic cones) prior to and during the catch basin inspection and cleaning process.
2. Work upstream to downstream in a given drainage network.
3. Clean sediment and trash off of the grate.
4. Visually inspect the outside of the grate.
5. Remove the grate and visually inspect the inside of the catch basin to determine cleaning needs.
6. Inspect catch basin for structural integrity.
7. 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 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.
8. If contamination is suspected, chemical analysis will be required to determine if the materials comply with the Massachusetts Department of Environmental Protection (MassDEP) Hazardous Waste Regulations, 310 CMR 30.000. 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.
9. Properly dispose of collected sediments and catch basin cleanings (solid material, such as leaves, sand, and twigs removed from the stormwater collection system during cleaning operations). See following section for guidance.
10. 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.
11. If illicit discharges are observed or suspected, notify the DPW Director.
12. At the end of each day, document location and number of catch basins cleaned, amount of waste collected, and disposal method for all screenings (see Documentation and Record Keeping section for additional information).
13. Report additional maintenance or repair needs to the appropriate Department.

DISPOSAL OF CATCH BASIN CLEANINGS/SCREENINGS

- Catch basin cleanings from stormwater-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 (e.g., by a spill).
- 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.

STANDARD OPERATING PROCEDURE 1: CATCH BASIN CLEANING
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- Catch basin cleanings must be handled and disposed of in accordance with the attached MassDEP Policy Document, *Management of Catch Basin Cleanings*.

DOCUMENTATION AND RECORD KEEPING

- Records are kept at the **DPW Office** at **Town Hall, 2nd floor, 60 Center Square in East Longmeadow, MA.**
- Records shall include a log of catch basins cleaned or inspected, the total number of catch basins, number inspected, number cleaned, and the total volume or mass of material removed from all catch basins.
- Include catch basin records in the municipality's annual report – use the catch basin inspection log provided in the attachments to document the information to include in the report.

TRAINING

Employees are trained **once per year** on this procedure and the proper operation of equipment. Employees are also trained on stormwater pollution prevention, spill and response, and illicit discharge detection and elimination procedures.

REVISING THE SOP

These procedures are reviewed **once per year** and updated as needed.

ATTACHMENTS

- Catch Basin Inspection Form and Cleaning Log
- Mass DEP Policy document, *Management of Catch Basin Cleanings*
- Catch Basin Cleaning Optimization Plan and Schedule



Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Management of Catch Basin Cleanings

Catch basin cleanings - solid materials such as leaves, sand and twigs removed from storm water collection systems during cleaning operations - are typically classified as a solid waste by the Department of Environmental Protection (MassDEP). Catch basin cleanings must be handled and disposed in accordance with the agency's applicable regulations, policies and guidance.

Handling & Disposal

Except as explained below, 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 storm water 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. Contaminated catch basin cleanings must be evaluated in accordance with [310 CR 30.000: Hazardous Waste Regulations](#) and handled as hazardous waste if appropriate.

Systems that collect storm water run-off into sanitary sewers are called "combined sewers." MassDEP may require cleanings from combined sewer catch basins to be tested before disposal.

Landfill Restrictions

The MassDEP [310 CMR 19.000: Solid Waste Management Facility Regulations](#) (specifically see Section 19.130(7)) prohibit Massachusetts landfills from accepting materials that contain free draining liquids. When there is no free water in a truck used to transport catch basin cleanings, the agency will generally be satisfied that the material is sufficiently dry. Otherwise, the material will need to undergo a Paint Filter Liquids Test.

One way to remove liquids is to use a hydraulic lift truck during catch basin cleaning operations so that the material can be decanted at the site. After material from several catch basins along the same system is loaded, the truck may be elevated so that any free draining liquid is allowed to flow back into the drainage structure.

MassDEP may approve catch basin cleanings for use as grading and shaping material at landfills undergoing closure (see the agency's Revised Guidelines for Determining Closure Activities at Inactive Unlined Landfill Sites for additional information). Catch basin cleanings may be used as daily cover or grading material at active landfills only with specific MassDEP approval of the proposed use.

Consult with the Solid Waste Section Chief in the appropriate MassDEP Regional Office for information about applying for an approval and/or a Beneficial Use Determination (see Section 19.060 for other uses, including non-landfill uses).

STANDARD OPERATING PROCEDURE 2: SWEEPING STREETS AND PARKING LOTS
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



DESCRIPTION: Procedures for the operation and maintenance of street sweepers, frequency of sweeping, disposal of debris, and recordkeeping to prevent coarse particles, leaves, and trash from entering the stormwater sewer system. Sweeping is most effective for removing coarse particles, leaves, and trash. Regularly sweeping reduces catch basin cleaning.

The Town owns a mechanical broom sweeper. The Town sweeps all Town-owned streets within the MS4 regulated area between the months of **April** and **May** in the spring and **September** and **November** in the fall as required by the Nitrogen TMDL enhanced BMP requirements described in Appendix F of the 2016 Massachusetts Small MS4 General Permit. A list of streets and parking lots to be swept is kept at the **DPW Office at Town Hall, 2nd Floor, 60 Center Square in East Longmeadow, MA.**

TARGETED CONSTITUENTS:

- Sediment
- Nutrients
- Salt
- Organics
- Trash
- Metals
- Oil & Grease

STRUCTURAL CONTROLS:

- Maintain cleaning equipment in good working condition.
- When purchasing replacement equipment (as needed), purchase equipment with sweepers that maximize pollutant removal (i.e., regenerative air sweepers) and maintain cleaning equipment in good working condition. Routinely inspect and perform maintenance on sweeping equipment to reduce the potential for leaks.
- Stabilize exposed soil areas on unpaved roads to prevent soil from eroding during rain events.

OPERATIONAL BEST MANAGEMENT PRACTICES:

- Adhere to the Town’s cleaning schedule – every roadway within the swept twice annually, prioritizing main roads. Perform additional sweeping as needed.
- Sweep as soon as possible after snow melt and following winter activities such as sanding to capture sand and debris before it is washed into the storm drainage system.
- Town parking lots should be checked regularly by DPW personnel and swept when needed, and at a minimum annually.
- Consider more frequent sweeping for targeted areas based on pollutant load reduction potential, inspections, pollutant loads, catch basin cleaning or inspection results, land use, impaired waters, or other factors.
- Street sweeping should be conducted in dry weather. Sweeping should not be conducted during or immediately after rain storms.
- Avoid wet cleaning or flushing of street- utilize dry methods where possible, with the exception of very fine water spray for dust control.
- Before sweeping, manually rake sand from any turf areas on surfaces to be swept.
- Sweep in pattern to keep spilled material from being pushed into catch basins.
- Use hand-held tools to assist with mechanical equipment.
- When necessary, enact parking bans to facilitate sweeping on busy streets.
- After sweeping is finished, properly dispose of or reuse sweeper wastes.

STANDARD OPERATING PROCEDURE 2: SWEEPING STREETS AND PARKING LOTS TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- Any visible sediment should be swept up (including sand/salt mixtures and granular material).
- Keep accurate logs of the number of curb-miles swept and the amount of waste collected, and note heavily sedimented areas.
- Continue Fall leaf pickup and composting.

TARGETED SWEEPING PLAN

Identify streets and parking lots for prioritized sweeping – areas where there are high amounts of debris accumulation, like locations where large amounts of sand are used in the winter, high traffic areas, streets with considerable leaf fall, downward sloping areas where debris accumulates.

STORAGE AND DISPOSAL OF SWEEPINGS

- Temporary storage of solid sweeping debris is on an impervious surface or in a truck/dumpster that is protected from runoff. The temporary storage location is at the **Somers Road Transfer Station in East Longmeadow, MA.**
- Solid sweeping debris will be reused following the MassDEP Reuse and Disposal of Street Sweepings Policy (attached) as shoulder grading material. Street sweepings to be reused should be properly filtered to remove solid waste, such as paper or trash, in accordance with their intended reuse.
- Sweepings intended for reuse can be stored for up to one year in approved temporary storage areas. Storage areas should be protected to prevent erosion and runoff and should be located away from wetland resource areas and buffer zones, surface water, or groundwater.
- Decant water is returned to the catch basin of origin.
- Sweepings are classified as solid waste. If not reused, they should be disposed of at solid waste disposal sites.

TRAINING

Employees are trained **once per year** on this procedure and the proper operation of equipment. Employees are also trained on stormwater pollution prevention, spill and response, and illicit discharge detection and elimination procedures.

RECORD KEEPING

- Records are kept at the **DPW Office at Town Hall, 2nd Floor, 60 Center Square in East Longmeadow, MA.**
- The number of curb miles swept is calculated **per sweeping event.**
- A list of employees implementing the SOP and the completion of their training(s) can be found at the **DPW Office at Town Hall, 2nd Floor, 60 Center Square in East Longmeadow, MA.**

REVISING THE SOP

These procedures are reviewed **once per year** and updated as needed.

ATTACHMENTS

1. Street and Parking Lot Sweeping Log
2. MassDEP Guidance Document, *Reuse and Disposal of Street Sweepings, Department of Environmental Protection Policy #BAW-18-001* (May 14, 2018).



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker
Governor

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Lieutenant Governor

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Secretary

Martin Suuberg
Commissioner

REUSE AND DISPOSAL OF STREET SWEEPINGS

DEPARTMENT OF ENVIRONMENTAL PROTECTION

POLICY # BAW-18-001

(SUPERSEDES POLICY # BWP-94-092)

This Policy provides guidance to the regulated community about the Department of Environmental Protection's requirements, standards, and approvals for handling reuse or disposal of street sweepings. This Policy supersedes Department Policy BWP-94-092.

5/14/18

Date

Christine Kirby
Assistant Commissioner

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.
TTY# MassRelay Service 1-800-439-2370

MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper

**POLICY #BAW-18-001
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1. Policy Statement and Scope

This Policy explains MassDEP requirements for managing Street Sweepings. Street Sweepings are “solid waste” subject to the Massachusetts solid waste regulations. The options for managing Street Sweepings are as follows.

- Use the Street Sweepings in accordance with the preapproved uses described in Section 4 of this policy.
- Use the Street Sweepings for a beneficial use not included in the list of preapproved uses after obtaining a permit from MassDEP under the provisions of the solid waste regulations, 310 CMR 19.060, Beneficial Use of Solid Wastes.
- Dispose of Street Sweepings at a permitted solid waste landfill.

2. Applicability

This policy applies to the reuse or disposal of Street Sweepings that are generated in the ordinary and customary cleaning of roadways and parking lots. This policy does not apply to catch basin cleanings or Street Sweepings mixed with catch basin cleanings or any other type of wastes. The disposal and reuse of catch basin cleanings is discussed in the “Management of Catch Basin Cleanings” Fact Sheet issued by the MassDEP (<https://www.mass.gov/lists/massdep-solid-waste-policies-guidance-fact-sheets>).

This policy does not apply to the material generated as the result of the clean-up of an oil or hazardous material spill. However, Street Sweepings that are generated in the ordinary and customary maintenance of roadways and parking lots are not exempt from the Hazardous Waste Regulations, 310 CMR 30.000, and must be handled as hazardous waste when they exhibit any of the characteristics of a hazardous waste. If there is no evidence of unusual contamination, MassDEP does not require Street Sweepings to be routinely tested, but, as is the case with any waste, the generator has the ultimate responsibility for determining whether the waste is a hazardous waste.

Although Street Sweepings are not considered soil, they may be managed under Policy #COMM-97-001, “Reuse and Disposal of Contaminated Soil at Massachusetts Landfills”, in accordance with Section 5.5 of this policy.

3. Definitions

This section contains definitions of the important terms used in this Policy.

Department or MassDEP means the Massachusetts Department of Environmental Protection.

Parking lots mean publicly or privately owned paved areas that provide access for the general public to park their car while patronizing retail or service businesses. Parking lots also include the paved areas used by the employees at office parks and businesses.

Private way means the strip of land over and under a privately owned, paved road or highway.

Public way means the strip of land over and under a publicly owned, paved road or highway and includes the publicly owned land adjacent to the road or highway.

Street Sweepings means materials consisting primarily of sand and soil generated during the routine cleaning of roadways or parking lots but may also contain some leaves and other miscellaneous solid wastes collected during street sweeping. Street Sweepings do not include the material generated during the clean-up of a spill or material from other structures associated with a roadway such as catch basins.

Urban center roads mean local roads in central commercial and retail business districts and industrial and manufacturing areas.

4. Handling

4.1 Collection of Street Sweepings

Although MassDEP does not regulate the collection of Street Sweepings, collection practices should be compatible with intended uses. Keeping sweepings from Urban Center Roads separate from sweepings from other areas will provide the generator of the Street Sweepings with the most options under this policy.

This policy does not cover sweepings known to be contaminated by spills, and such sweepings should be collected separately and kept segregated. Depending on the contamination and circumstances, the handling of contaminated sweepings may be governed by the Massachusetts Contingency Plan, 310 CMR 40.0000, the Massachusetts Hazardous Waste Regulations, 310 CMR 30.000, the Massachusetts Site Assignment Regulations for Solid Waste Facilities, 310 CMR 16.00 or the Massachusetts Solid Waste Management Facility Regulations, 310 CMR 19.000.

4.2 Storage

Street Sweepings shall be temporarily stored prior to use, only when the following conditions are satisfied:

- Storage must be:
 - at the site where the sweepings are generated (e.g. at a parking area that was swept);
 - at a location, such as a Department of Public Works (DPW) yard, that is under the control of the governmental entity doing the sweeping or has contracted for the sweeping; or,

- at other locations with prior written approval from the appropriate MassDEP Regional Office.
- The Street Sweepings shall be protected from wind and rain to the extent necessary to prevent dust, erosion, and off-site migration;
- The Street Sweepings shall not be stored within the 100 foot buffer zone of a wetland or within wetland resource areas including bordering vegetative wetlands and riverfront areas;
- The Street Sweepings shall not be stored within 500 feet of a ground or surface drinking water supply;
- Storage of the Street Sweepings shall incorporate good management practice and result in no public nuisance; and
- Storage of the Street Sweepings must be temporary. Street Sweepings shall be used within one year of collection unless the MassDEP Regional Office where the Street Sweepings are stored grants a written extension. An extension may be granted when it is demonstrated that all storage conditions will continue to be satisfied and the stored Street Sweepings will be put to a specific identified use prior to the expiration of the extension period.

4.3 Preparation Prior to Use

Solid waste, such as paper, auto parts and other trash, shall be removed from all Street Sweepings prior to use. Solid waste screened from the Street Sweepings shall be disposed of at a permitted solid waste facility. Leaves, twigs and other organic matter should also be removed when good engineering practice indicates this is necessary to produce a material that is suitable for the intended use.

5. Approved Uses, Restrictions & Conditions-No Prior Approval Needed from MassDEP

This policy allows Street Sweepings to be used in several applications. An approval from MassDEP is not required when the restrictions and conditions are adhered to as identified in this policy. However, Street Sweepings shall not be used unless prior approval is obtained from the owner of the location where the sweepings are to be used.

5.1 Use at Landfills

Street Sweepings may be used for daily cover at permitted lined solid waste landfills and need no prior MassDEP approval if the Street Sweepings satisfy the requirements for daily cover material specified at 310 CMR 19.130(15). A list of active permitted solid waste landfills can be found on the MassDEP website.

5.2 Use as Fill in Public or Private Ways and Parking Lots

Street Sweepings may be used for fill in public and private ways and parking lots without prior approval from MassDEP only when the following additional restrictions and conditions are observed:

- The Street Sweepings have not been collected from Urban Center Roads (see definition);
- Any collection, storage, or preparation for use of the Street Sweepings shall be in accordance with Sections 4.1 and 4.2 of this policy.
- The Street sweepings have been screened to remove all debris and solid waste and all debris/solid waste screened from the sweepings shall be disposed at a permitted solid waste facility (see Section 8);
- The Street Sweepings are kept above the level of the groundwater;
- The Street Sweepings are not used in designated "No Salt Areas";

- The Street Sweepings are not used within the 100 foot buffer zone of a wetland or within wetland resource areas including bordering vegetative wetlands and riverfront areas;
- The Street Sweepings are not used within 500 feet of a ground or surface drinking water supply;
- In public ways the Street Sweepings are used under the paved road surface or, except in residential areas, as fill along the side of the road within the public way;
- In private roadways or in residential areas the Street Sweepings are used only under the paved road surface; and
- In parking lots the Street Sweepings are used only under the paved parking surface.

5.3 Use As an Additive to Restricted Use Compost

Street Sweepings may be used as an additive to compost without prior written approval from MassDEP only when the following additional restrictions and conditions are observed:

- The Street Sweepings have not been collected from Urban Center Roads (see definition);
- Any collection, storage, or preparation for use of the Street Sweepings shall be in accordance with Sections 4.1 and 4.2 of this policy.
- The Street Sweepings have been screened to remove all debris and solid waste and all debris and solid waste screened from the sweepings is disposed at a permitted solid waste facility (see Section 8);
- The compost is used only along public ways and parking lot areas;
- The compost is not used in residential areas;
- The compost is kept above the level of the groundwater;
- The compost is not used in designated "No Salt Areas";
- The compost is not used within the 100 foot buffer zone of a wetland or within wetland resource areas including bordering vegetative wetlands and riverfront areas; and
- The compost is not used within 500 feet of a ground or surface drinking water supply.

5.4 Reuse as Anti-Skid Material

Street Sweepings may be used as a component to anti-skid material (e.g. street sanding material) without prior written approval from MassDEP only when the following additional restrictions and conditions are observed:

- The Street Sweepings have not been collected from Urban Center Roads (see definition);
- Any collection, storage, or preparation for use of the Street Sweepings shall be in accordance with Sections 4.1 and 4.2 of this policy;
- The Street Sweepings have been screened to remove all debris and solid waste and all debris and solid waste screened from the Street Sweepings is disposed at a permitted solid waste facility (see Sections 8);
- The anti-skid material/Street Sweepings are not used in designated "No Salt Areas";
- The anti-skid material/Street Sweepings are not used within the 100 foot buffer zone of a wetland or within wetland resource areas including bordering vegetative wetlands and riverfront areas; and
- The anti-skid material/Street Sweepings are not used within 500 feet of a ground or surface drinking water supply.

The use of Street Sweepings as anti-skid material in accordance with this policy is not a determination of the efficacy of the material for this purpose. Proper engineering review should be done to ensure the material works as intended.

5.5 Reuse at Landfills Regulated Under MassDEP Policy #COMM-97-001

Street Sweepings may be reused at a permitted Massachusetts landfill and need no prior written MassDEP approval if the sweepings have been adequately characterized pursuant to the MassDEP Policy #COMM-97-001 and the Street Sweepings have been screened to remove debris and solid waste.

All screened debris and solid waste removed from Street Sweepings shall be disposed of at a permitted solid waste facility. Street Sweepings for use at the landfill may contain only incidental, randomly dispersed, de minimis quantities of ash and/or Solid Waste as defined in 310 CMR 16.000 and 310 CMR 19.000, which collectively shall comprise less than 1% by volume of the Street Sweeping materials, as determined by visual inspections. Any Street Sweeping materials approved and brought onto the landfill property for use at the landfill shall contain no more than 5% (by volume) of Asphalt Pavement, Brick, and Concrete (“ABC”) material (as defined in 310 CMR 19.000), as determined by visual inspection. Any such material must measure less than 6 inches in any dimension.

Persons who wish to send Street Sweepings to a landfill must comply with MassDEP Policy #COMM-97-001 which requires sampling of the Street Sweepings to demonstrate that the Street Sweepings meet the standards listed in the Policy.

5.6 Use at Reclamation Soil Facilities Regulated Under MassDEP Policy # COMM-15-01

Street Sweepings may be used for fill at a permitted Reclamation Soil Facility (the Facility) and need no prior written MassDEP approval if the Street Sweepings have been adequately characterized pursuant to the Facility-specific Soil/Fill Management Plan and the Street Sweepings have been screened to remove debris and solid waste.

All screened debris and solid waste removed from Street Sweepings shall be disposed of at a permitted solid waste facility. Street Sweepings for use at the Facility may contain only incidental, randomly dispersed, de minimis quantities of ash and/or Solid Waste as defined in 310 CMR 16.000 and 310 CMR 19.000, which collectively shall comprise less than 1% by volume of the Street Sweeping materials, as determined by visual inspections. Any Street Sweeping materials approved and brought onto the property for use at the Facility shall contain no more than 5% (by volume) of ABC material, as determined by visual inspection. Any such material must measure less than 6 inches in any dimension.

Pursuant to Policy # COMM-15-01, persons who wish to send Street Sweepings to a Facility must sample and analyze the Street Sweepings as required by the Facility’s Soil/Fill Management Plan and demonstrate that the Street Sweepings meets the Facility’s acceptance criteria. Unless specifically addressed in a Facility’s Soil/Fill Management Plan, a minimum sampling frequency of 1 sample per 100 cubic yards is required for characterization of Street Sweepings originating from Urban Center Roads. Street Sweepings originating from non-Urban Center Roads may be sampled at a minimum of 1 sample per 500 cubic yards. Regardless of its point of origin, if the total quantity of Street Sweepings is less than 100 cubic yards, a minimum of one composite sample is required for characterization of the material. A list of active permitted Reclamation Soil facilities may be found at <https://www.mass.gov/soil-transport-re-use-and-disposal>.

6. Approved Use, Restrictions & Conditions- Prior Approval Needed from MassDEP

This policy allows Street Sweepings to be used in several applications. Prior written approval from MassDEP is required when using the Street Sweepings as identified in this section of the policy. In addition, Street Sweepings shall not be used at a location until prior written approval is obtained from the owner of the location where the Street Sweepings are to be used.

6.1 Use as a Bulking Agent for Wastewater Sludge or Septage Disposal

Street Sweepings may be used as a bulking material for wastewater treatment plant sludge or septage when the mixed material will be disposed in a permitted lined or unlined sludge or septage landfill in compliance with MGL Chapter 21, Sections 26-53 and MGL Chapter 83 Sections 6 & 7 provided that the appropriate MassDEP Regional Office's Bureau of Water Resources has granted prior written approval.

7. Other Uses

Any use not approved in this policy requires a MassDEP permit under the Beneficial Use provisions of the Solid Waste Management Facility Regulations at 310 CMR 19.060. A "Beneficial Use Determination" (BUD) can be issued only after the submission of an application characterizing the waste and describing the proposed beneficial use.

8. Disposal

While the beneficial use of Street Sweepings is strongly encouraged, MassDEP does not prohibit the disposal of Street Sweepings. Street Sweepings may be disposed in permitted solid waste landfills without prior approval from the Department.

9. Record Keeping

Any entity using Street Sweeping for any use listed under sections 5.3 or 5.4 shall keep records for a period of three years of the source of the sweepings, the location of use and the amount of sweepings used.

10. Additional Information

For additional copies of this policy, permit application forms or other MassDEP documents, call any MassDEP Regional Office and ask for the Service Center or visit <http://www.mass.gov/dep>. The permit application numbers for Beneficial Use Determinations are BWP SW 39, 40, 41 and 42.

Copies of all Massachusetts regulations, including the solid waste regulations, are available at the MassDEP website and may also be purchased from the State House Bookstore at 617-727-2834. The solid waste regulations are:

- 310 CMR 16.000, Site Assignment Regulations for Solid Waste Facilities: and,
- 310 CMR 19.000, Solid Waste Management Facility Regulations.

If you have technical questions about the policy, please call any MassDEP Regional Office and ask to speak with a staff member in the solid waste program

STANDARD OPERATING PROCEDURE 3: APPLICATION AND STORAGE OF ROAD SALT AND SAND

TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



DESCRIPTION: Procedures for the proper storage, use, and disposal of salt and sand/salt mixtures during de-icing activities, and procedures for proper snow management in order to prevent or minimize runoff and pollutant loading impacts.

On an annual basis, the *Town of East Longmeadow DPW* uses a mixture of coarse salt and sand in de-icing operations. The Town currently stores salt and sand in a covered structure at a storage shed in the *DPW Garage and Yard, 84 Somers Road, East Longmeadow, MA*. Spreaders are calibrated every fall.

Proper road salt and sand applications and storage are necessary to prevent contamination to surface and groundwater supplies. Salts are very soluble—once in contact with water there is no way to remove salt. The major reasons for keeping salt covered and controlling use are that salt:

- Kills vegetation
- Corrodes infrastructure
- Blocks storm drains and swales
- Increases sedimentation to streams and rivers
- Some salts contain phosphorus, nitrogen, copper, and cyanide

TARGETED CONSTITUENTS:

- Salt
- Sediment
- Nutrients
- Metals
- Trash
- Oil & grease
- Organics
- Low Dissolved Oxygen

STRUCTURAL CONTROLS:

Prevent exposure of deicing product (salt, sand, or alternative products) storage piles to precipitation by enclosing or covering the storage piles. Implement good housekeeping, diversions, containment or other measures to minimize exposure resulting from adding to or removing materials from the pile. Store piles in such a manner as not to impact surface water resources, groundwater resources, recharge areas, and wells.

- Store materials under covered or enclosed areas and on impervious surfaces.
- Ensure that there are adequate drainage controls in storage areas to prevent runoff from entering the stormwater system.
- Follow appropriate loading and unloading procedures.
- Frequently sweep near the storage/loading areas to reduce the amount of salt, sand, or other materials that is tracked out.
- For liquid deicing chemicals, provide secondary storage containment.
- Do not store road salt near drinking water supplies, surface water resources, groundwater resources, recharge areas, and wells. Follow proper storage guidelines from MassDEP.

OPERATIONAL BEST MANAGEMENT PRACTICES:

- Establish a low salt area near any water bodies or water supply areas.
- Educate and train operators on hazards of over-salting to roads and environment at the beginning of the snow season as part of meetings with supervisors and drivers.
- Regulate the amount of road salt applied to prevent over-salting of motorways and increasing runoff concentrations.
- Calibrate equipment to reduce and optimize salt use and ensure deicing agents are being used efficiently. Provide employee training on proper calibration procedures.

STANDARD OPERATING PROCEDURE 3: APPLICATION AND STORAGE OF ROAD SALT AND SAND

TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- Do not overfill trucks with deicing materials as it may lead to spills.
- Consider using automated application equipment like zero velocity spreaders, or retrofitting vehicles to include equipment such as on-board application regulators, temperature sensors for air and pavement, and anti-icing and pre-wetting equipment.
- When using deicers, use pre-wetting agents (e.g., salt brine) to help them work more efficiently and to reduce road salt scatter and bounce.
- Salt brine solution used for anti-icing and pre-wetting can be stored for up to a year –concentration should be tested before use. If temperatures fall below 0° F, use a circulator pump to prevent the brine from freezing before deicing to reduce the need for road salt or other deicing chemicals.
- When possible, use anti-icing practices to prevent ice formation and reduce the need for deicers.
- Apply anti-icing agents 1-2 hours before winter weather events to ensure optimal performance (can be applied up to 24 hours prior).
- Only apply road salt when the pavement temperature is above 15° F.
- Minimize the use of and optimize the application of sodium chloride and salts (chloride-containing materials used to treat paved surfaces for deicing, including calcium chloride, magnesium chloride, and brine solutions) while maintaining public safety.
- Consider opportunities for the use of alternative deicing materials, such as calcium magnesium acetate.
- Avoid mixing road salt and sand. Doing so makes both the salt and sand work less efficiently and leads to over-application.
- Only apply enough deicer so that plows can remove the snow and ice. Adjust the application rate of deicers based on the type of storm, type of agent used, and anti-icing and pre-wetting techniques used.
- Perform unloading/loading of trucks on impervious surfaces whenever possible. These areas should be frequently cleaned and swept to reduce the tracking and runoff of salt and to capture any spills.
- Track the amount of deicer used and maintain records of the application of sand, anti-icing and/or de-icing chemicals to document the reduction of chemicals to meet established goals.
- Inspect salt storage shed for leaks on a regular basis including Fall and Spring – look for salt stains in ground near and around the salt storage shed, loading area, or downslope. Repair any salt leaks.
- Inspect salt regularly for lumping or water contamination.
- Wash equipment using proper procedures to prevent pollutants from entering the stormwater system. Dry clean-up procedures should be used when possible.

The major materials used in snow and ice control are coarse sand and coarse salt. These materials are stockpiled in advance of an event and are immediately available when needed and stocks are replenished between events.

Sand

Sand is used as an abrasive for traction on slick roadways. Approximately **40 - 50 cubic yards** are anticipated to be used per year. Sand is stored in the covered facility located at the **DPW Garage and Yard at 84 Somers Road in East Longmeadow, MA**. Sand use loading areas and yards are swept after every use to prevent sand build-up and run-off.

STANDARD OPERATING PROCEDURE 3: APPLICATION AND STORAGE OF ROAD SALT AND SAND

TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



Salt

Salt is used to expedite the melting of snow and ice from the street surface and also to keep the ice from forming a bond to the street surface. Approximately **1,200 tons** of salt are anticipated to be used per year. Salt is stored in the covered facility located at the **DPW Garage and Yard at 84 Somers Road in East Longmeadow, MA**. Loading areas and yards are swept after every use to prevent salt build-up and run-off.

PROCEDURES

Salt Application

1. Whenever conditions warrant, salt is applied to the roadway prior to accumulation of snow to prevent compacted snow from bonding to the roadway surface. The **DPW Superintendent** will instruct staff when salt application is appropriate.
2. Prior to salt application, equipment will be checked to ensure proper working order and ensure proper calibration of equipment. All fluid levels will be checked and filled to proper levels, all lights must be in working order. A visual walk-around inspection of the truck or equipment must be made. Any repairs must be made and reported to a supervisor or mechanic before leaving the yard.
3. Follow the prioritized route or schedule. This schedule is located at kept at the **DPW Office at Town Hall, 2nd Floor, 60 Center Square in East Longmeadow, MA**.
4. Before parking any truck or equipment after use, all fluid levels will be checked and filled. All minor repairs will be done by the operator. Any repairs the operator cannot perform will be written up on the proper forms and turned in to the **DPW Superintendent**. The **DPW Superintendent** will determine importance and will assign the repairs according to schedule. All deicing chemical will be washed from equipment at the wash bay or designated wash area.

Sand Application

1. Whenever conditions warrant, sand is applied to the roadway to increase traction. The **DPW Superintendent** will instruct staff when sand application is appropriate.
2. Prior to sand application, equipment will be checked to ensure proper working order and ensure proper calibration of equipment. All fluid levels will be checked and filled to proper levels, all lights must be in working order. A visual walk-around inspection of the truck or equipment must be made. Any repairs must be made and reported to a supervisor or mechanic before leaving the yard.
3. Follow the prioritized route or schedule. This schedule is located at the **DPW Office at Town Hall, 2nd Floor, 60 Center Square in East Longmeadow, MA**.
4. Before parking any truck or equipment after use, all fluid levels will be checked and filled. Blades or bolts, which need replacing, will be taken care of unless told to do otherwise. Chains that need repairs will be repaired. All minor repairs will be done by the operator. Any repairs the operator cannot perform will be written up on the proper forms and turned in to the **DPW Superintendent**. The **DPW Superintendent** will determine importance and will assign the repairs according to schedule.

TRAINING

Employees are trained once per year on this procedure and the proper operation of equipment. Employees are also trained on stormwater pollution prevention, spill and response, and illicit discharge detection and elimination procedures.

STANDARD OPERATING PROCEDURE 3: APPLICATION AND STORAGE OF ROAD SALT AND SAND

TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



RECORD KEEPING

1. Maintain a master schedule of prioritized snow and sanding routes and the miles or roads plowed or sanded at the ***DPW Office at Town Hall, 2nd Floor, 60 Center Square in East Longmeadow, MA.***
2. Keep copies of manufacturer's recommendations for equipment calibration, plowing speed and salt/sand application rates at the ***DPW Garage and Yard at 84 Somers Road in East Longmeadow, MA.***
3. Keep records of the amounts of salt, sand, and any liquid deicer or salt alternatives applied per season at the ***DPW Office at Town Hall, 2nd Floor, 60 Center Square in East Longmeadow, MA.***
4. Keep a list of all employees trained in the facility's Stormwater Pollution Prevention binder or computer file.

REVISING THE SOP

These procedures are reviewed ***once per year*** and updated as needed.

MASSDEP GUIDELINES

- MassDEP, *Guidelines on Road Salt Storage*, <https://www.mass.gov/guides/guidelines-on-road-salt-storage>

**STANDARD OPERATING PROCEDURE 4: SNOW REMOVAL AND STOCKPILING
TOWN OF EAST LONGMEADOW HIGHWAY DEPARTMENT**



DESCRIPTION: Procedures for proper snow management in order to prevent or minimize runoff and pollutant loading impacts. Proper snow management in terms of stockpiling and removal can prevent or minimize runoff and pollutant loading impacts. Snow piles can contain trash, nutrients, sediments, salt, sand, and vehicle pollutants (petroleum, antifreeze, and oil) that can directly be carried into surface waters during snowmelt.

The Town of East Longmeadow provides snow removal for **110 miles of roadways** as well as **municipal parking lots** for buildings including schools. When necessary, the **Town of East Longmeadow** stockpiles snow in **municipally-owned parking lot areas**.

TARGETED CONSTITUENTS:

- Salt
- Sediment
- Nutrients
- Trash
- Oil & grease

MassDEP has published Snow Disposal Guidance online with an interactive map to assist with designation of appropriate upland snow disposal sites: <https://www.mass.gov/guides/snow-disposal-guidance#snow-disposal-guidance>. MassDEP’s emergency contact phone number for inquiries and authorizations during declared statewide snow emergency events is **1-888-304-1133**. For non-emergency information about MassDEP’s Snow Disposal Guidance, the MassDEP Western Regional Office’s phone number is **1-413-755-2214**.

SNOW STOCKPILE SITE SELECTION:

Locate snow stockpile sites adjacent to or on pervious surfaces in upland areas or upland locations on impervious surfaces that have functioning and maintained storm water management systems away from water resources and drinking water wells. At these locations, the snow meltwater can filter in to the soil, leaving behind sand and debris which can be removed in the springtime.

- Avoid dumping of snow into any waterbody, including rivers, reservoirs, ponds, or wetlands.
- Avoid dumping snow in sanitary landfills and gravel pits. Snow meltwater will create more contaminated leachate in landfills posing a greater risk to groundwater, and in gravel pits, there is little opportunity for pollutants to be filtered out of the meltwater because groundwater is close to the land surface.
- Avoid disposing of snow on top of storm drain catch basins or in stormwater drainage swales or ditches. Snow combined with sand and debris may block a storm drainage system, causing localized flooding.
- Avoid storing snow in areas that are unstable, areas of potential erosion, or high points where snow may melt and collect debris as runoff before it enters the stormwater system.
- Consider sun exposure when storing snow. Snow in areas with higher sun exposure will melt faster but may require deicers if the snowmelt refreezes.

SNOW STOCKPILE SITE PREPARATION AND MAINTENANCE:

- Securely place a silt fence or equivalent barrier on the downgradient side of the snow disposal site. Consider using a living snow fence to contain snow piles and reduce snow drifting.
- To filter pollutants out of the meltwater, wherever possible maintain a 50-foot vegetative buffer strip -during the growth season between the disposal site and adjacent waterbodies.
- Debris should be cleared from the site prior to use for snow disposal.
- Debris should be cleared from the site and properly disposed of at the end of the snow season and no later than May 15.

**STANDARD OPERATING PROCEDURE 4: SNOW REMOVAL AND STOCKPILING
TOWN OF EAST LONGMEADOW HIGHWAY DEPARTMENT**



SNOW PLOWING PROCEDURES

1. As the storm develops and **2-3 inches** of snow has accumulated, all of the drivers and available equipment will begin to plow their assigned routes.
2. Prior to plowing operations, equipment will be checked to ensure proper working order. All fluid levels will be checked and filled to proper levels, all lights must be in working order. A visual walk-around inspection of the truck or equipment must be made. Any repairs must be made and reported to a supervisor or mechanic before leaving the yard.
3. Avoid plowing, pushing, blowing or storing excess snow, deicer, or other debris in or near creeks, watercourses or storm drainage systems.
4. Reduce plowing speed in sensitive areas (near creeks, wetlands or other water courses) to prevent snow and deicing materials from entering waterways.
5. Follow the prioritized route or schedule. This schedule is located at the **DPW Office at Town Hall, 2nd Floor, 60 Center Square** in **East Longmeadow, MA**.
6. Before parking any truck or equipment after use, all fluid levels will be checked and filled. Blades or bolts, which need replacing, will be taken care of unless told to do otherwise. Chains that need repairs will be repaired. All minor repairs will be done by the operator. Any repairs the operator cannot perform will be written up on the proper forms and turned in to the Highway Superintendent. The **DPW Superintendent** will determine importance and will assign the repairs according to schedule.

RECORD KEEPING

A master schedule of prioritized snow plowing routes and the miles or roads plowed is kept at the **DPW Office at Town Hall, 2nd Floor, 60 Center Square** in **East Longmeadow, MA**.

REVISING THE SOP

These procedures are reviewed once per year and updated as needed.

MASSDEP GUIDANCE

- MassDEP Snow Disposal Guidance, <https://www.mass.gov/guides/snow-disposal-guidance>

STANDARD OPERATING PROCEDURE 5: STRUCTURAL STORMWATER BEST MANAGEMENT PRACTICES INSPECTIONS AND MAINTENANCE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



DESCRIPTION: Procedures for inspecting and maintaining eight common types of constructed stormwater best management practices (BMPs). Constructed BMPs are permanent site features designed to treat stormwater before infiltrating it to the subsurface or discharging it to a surface water body.

This SOP is based on the Massachusetts Stormwater Handbook and is not intended to replace that document. This SOP is also not intended to replace the Stormwater BMP Operation and Maintenance (O&M) Plan required by the Massachusetts Wetlands Protection Act, Order of Conditions. Inspection forms for each BMP are attached.

TARGETED CONSTITUENTS:

- Sediment
- Nutrients
- Trash
- Invasive species

BIORETENTION AREAS AND RAIN GARDENS:

Description

Bioretention areas and rain gardens are shallow depressions filled with sandy soil, topped with a thick layer of mulch and planted with dense native vegetation. There are two types of bioretention cells:

1. Filtering bioretention area: Areas that are designed solely as an organic filter; and
2. Exfiltration bioretention area: Areas that are configured to recharge groundwater in addition to acting as a filter.

Inspection & Maintenance

Regular inspection and maintenance are important to prevent against premature failure of bioretention areas or rain gardens. Regular inspection and maintenance of pretreatment devices and bioretention cells for sediment buildup, structural damage and standing water can extend the life of the soil media.

When failure is discovered, excavate the bioretention area, scarify the bottom and sides, replace the filter fabric and soil, replant vegetation and mulch the surface.

Never store snow within a bioretention area or rain garden. This would prevent required water quality treatment and the recharge of groundwater.

Maintenance Schedule

| Activity | Time of Year | Frequency |
|--|--------------------------|-------------|
| Inspect for soil erosion and repair | Year round | Monthly |
| Inspect for invasive species and remove if present | Year round | Monthly |
| Remove trash | Year round | Monthly |
| Mulch Void Areas | Spring | Annually |
| Remove dead vegetation | Fall and Spring | Bi-Annually |
| Replace dead vegetation | Spring | Annually |
| Prune | Spring or Fall | Annually |
| Replace all media and vegetation | Late Spring/Early Summer | As Needed |

**STANDARD OPERATING PROCEDURE 5: STRUCTURAL STORMWATER BEST
MANAGEMENT PRACTICES INSPECTIONS AND MAINTENANCE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



CONSTRUCTED STORMWATER WETLANDS:

Description

Constructed stormwater wetlands maximize the pollutant removal from stormwater through the use of wetland vegetation uptake, retention and settling. Constructed storm water wetlands must be used in conjunction with other BMPs, such as sediment forebays.

Inspection & Maintenance

Regular inspection and maintenance are important for the health of constructed stormwater wetlands. Regular inspection and maintenance of pretreatment devices, such as forebays, should check for sediment buildup, structural damage and standing water. Inspection of the constructed wetlands should address the health of the vegetation, presence of invasive species, and identify the need to replace vegetation or media. Never store snow within a constructed stormwater wetland, as this would prevent required water quality treatment and the recharge of groundwater.

When failure is discovered, excavate the bioretention area, scarify the bottom and sides, replace the filter fabric and soil, replant vegetation and mulch the surface.

Maintenance Schedule – Years 0–3

| Activity | Time of Year | Frequency |
|---|--------------------------|-------------|
| Inspect for invasive species and remove if present | Year round | Monthly |
| Record and Map: | Year round | Annually |
| Types and distribution of dominant wetland plants | Year round | Bi-Annually |
| Presence and distribution of planted wetland species | Spring | Annually |
| Presence and distribution of invasive species | Fall and Spring | Bi-Annually |
| Indications other species are replacing planted wetland species | Spring | Annually |
| Percent of standing water that is not vegetated | Spring or Fall | Annually |
| Replace all media and vegetation | Late Spring/Early Summer | As Needed |
| Stability of original depth zones and micro-topographic features | | |
| Accumulation of sediment in the forebay and micropool and survival rate of plants | | |

Maintenance Schedule – Years 4+

| Activity | Time of Year | Frequency |
|--|--------------------------|---------------------|
| Inspect for invasive species and remove if present | Year round | Monthly |
| Clean forebays | Year round | Annually |
| Clean sediment in basin/wetland system | Year round | Once every 10 years |
| Mulch Void Areas | Spring | Annually |
| Remove dead vegetation | Fall and Spring | Bi-Annually |
| Replace dead vegetation | Spring | Annually |
| Prune | Spring or Fall | Annually |
| Replace all media and vegetation | Late Spring/Early Summer | As Needed |

**STANDARD OPERATING PROCEDURE 5: STRUCTURAL STORMWATER BEST
MANAGEMENT PRACTICES INSPECTIONS AND MAINTENANCE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



WET BASINS

Description

Wet basins are intended to treat stormwater quality through the removal of sediments and soluble pollutants. A permanent pool of water allows sediments to settle and removes the soluble pollutants, including some metals and nutrients. Additional dry storage is required to control peak discharges during large storm events, and if properly designed and maintained wet basins can add fire protection, wildlife habitat and aesthetic values to a property.

Inspection & Maintenance

To ensure proper operation, wet basin outfalls should be inspected for evidence of clogging or excessive outfall releases. Potential problems to investigate include erosion within the basin and banks, damage to the emergency spillway, tree growth on the embankment, sediment accumulation around the outlet and the emergence of invasive species. Should any of these problems be encountered, perform repairs immediately. An on-site sediment disposal area will reduce sediment removal costs.

Maintenance Schedule

| Activity | Time of Year | Frequency |
|---|---------------------|--|
| Inspect wet basins | Spring and/or Fall | Annually (Minimum) |
| Mow upper stage, side slopes, embankment and emergency spillway | Spring through Fall | Bi-Annually (Minimum) |
| Remove sediment, trash and debris | Spring through Fall | Bi-Annually (Minimum) |
| Remove sediment from basin | Year round | As required, minimum once every 10 years |

EXTENDED DRY DETENTION BASINS:

Description

Extended dry detention basins are designed to control both stormwater quantity and quality. These BMPs are designed to hold stormwater for at least 24 hours, allowing solids to settle and to reduce local and downstream flooding. Pretreatment is required to reduce the potential for overflow clogging. The outflow may be designed as either fixed or adjustable. Additional nutrient removal may be achieved by a micropool or shallow marsh.

Inspection & Maintenance

Annual inspection of extended dry detention basins is required to ensure that the basins are operating properly. Potential problems include: erosion within the basin and banks, tree growth on the embankment, damage to the emergency spillway and sediment accumulation around the outlet. Should any of these problems be encountered, necessary repairs should be made immediately.

Maintenance Schedule

| Activity | Time of Year | Frequency |
|--|---------------------|--|
| Inspect basins | Spring and Fall | Bi-Annually, and during and after major storms |
| Examine outlet structure for clogging or high outflow release velocities | Spring and Fall | Bi-Annually |
| Mow upper stage, side slopes, embankment and emergency spillway | Spring through Fall | Bi-Annually |
| Remove trash and debris | Spring | Bi-Annually |
| Remove sediment from basin | Year round | At least once every 5 years |

**STANDARD OPERATING PROCEDURE 5: STRUCTURAL STORMWATER BEST
MANAGEMENT PRACTICES INSPECTIONS AND MAINTENANCE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



INFILTRATION BASINS

Description

Infiltration basins are designed to contain stormwater quantity and provide groundwater recharge. Pollution prevention and pretreatment are required to ensure that contaminated stormwater is not infiltrated. Infiltration basins reduce local flooding and preserve the natural water balance of the site, however high failure rates often occur due to improper siting, inadequate pretreatment, poor design and lack of maintenance.

Inspection & Maintenance

Regular maintenance is required to prevent clogging, which results in infiltration basin failure. Clogging may be due to upland sediment erosion, excessive soil compaction or low spots.

Inspections should include:

- signs of differential settlement
- cracking
- erosion
- leakage in the embankments
- tree growth on the embankments
- rip-rap condition
- sediment accumulation
- turf health

Maintenance Schedule

| Activity | Time of Year | Frequency |
|--|-----------------|--|
| Preventative maintenance | Spring and Fall | Bi-Annually |
| Inspection | Spring and Fall | After every major storm for the first 3 months after construction completion. Bi-annually thereafter and discharges through the high outlet orifice. |
| Mow/rake buffer area, side slopes and basin bottom | Spring and Fall | Bi-Annually |
| Remove trash, debris and organic matter | Spring and Fall | Bi-Annually |

PROPRIETARY MEDIA FILTERS

Description

Media Filters are designed to reduce total suspended solids and other target pollutants, such as organics, heavy metals or nutrients, which are sorbed onto the filter media, which is contained in a concrete structure. The substrate used as filter media depends on the target pollutants, and may consist of leaf compost, pleated fabric, activated charcoal, perlite, amended sand in combination with perlite, and zeolite. Two types of Media Filters are manufactured: Dry Media Filters, which are designed to dewater within 72 hours; and Wet Media Filters, which maintain a permanent pool of water as part of the treatment system.

Inspection & Maintenance

Maintenance in accordance with the manufacturer's requirements is necessary to ensure stormwater treatment. Inspection or maintenance of the concrete structure may require OSHA confined space training. Dry Media Filters are required to dewater in 72 hours, thus preventing breeding of mosquitos and other insects. Proper maintenance is essential to prevent clogging. Wet Media Filters require tight fitting seals to keep mosquitoes and other insects from entering and breeding in the permanent pools. Required maintenance includes routine inspection and treatment.

**STANDARD OPERATING PROCEDURE 5: STRUCTURAL STORMWATER BEST
MANAGEMENT PRACTICES INSPECTIONS AND MAINTENANCE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



Maintenance Schedule

| Activity | Time of Year | Frequency |
|--|-----------------------------|-----------------------------|
| Inspect for standing water, trash, sediment and clogging | Per manufacturer's schedule | Bi-Annually (minimum) |
| Remove trash and debris | N/A | Each Inspection |
| Examine to determine if system drains in 72 hours | Spring, after large storm | Annually |
| Inspect filtering media for clogging | Per manufacturer's schedule | Per manufacturer's schedule |

SAND AND ORGANIC FILTERS

Description

Sand and organic filters, also known as filtration basins, are intended for quality control rather than quantity control. These filters improve water quality by removing pollutants through a filtering media and settling pollutants on top of the sand bed and/or in a pretreatment basin. Pretreatment is required to prevent filter media from clogging. Runoff from the filters is typically discharged to another BMP for additional treatment.

Inspection & Maintenance

If properly maintained, sand and organic filters have a long design life. Maintenance requirements include raking the sand and removing sediment, trash and debris from the surface of the BMP. Over time, fine sediments will penetrate deep into the sand requiring replacement of several inches or the entire sand layer. Discolored sand is an indicator of the presence of fine sediments, suggesting that replacement of the sand should be completed.

Maintenance Schedule

| Activity | Frequency |
|-----------------------------------|--|
| Inspect filters and remove debris | After every major storm for the first 3 months after construction completion. Every 6 months thereafter. |

DRY WELLS

Description

Dry wells are used to infiltrate uncontaminated runoff. These BMPs should never be used to infiltrate stormwater or runoff that has the potential to be contaminated with sediment and other pollutants. Dry wells provide groundwater recharge and can reduce the size and cost required of downstream BMPs or storm drains. However, they are only applicable in drainage areas of less than one acre and may experience high failure rates due to clogging.

Inspection & Maintenance

Proper dry well function depends on regular inspection. Clogging has the potential to cause high failure rates. The water depth in the observation well should be measured at 24- and 48-hour intervals after a storm and the clearance rate calculated. The clearance rate is calculated by dividing the drop in water level (inches) by the time elapsed (hours).

Maintenance Schedule

| Activity | Frequency |
|-------------------|--|
| Inspect dry wells | After every major storm for the first 3 months after construction completion. Annually thereafter. |

**STANDARD OPERATING PROCEDURE 5: STRUCTURAL STORMWATER BEST
MANAGEMENT PRACTICES INSPECTIONS AND MAINTENANCE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



TRAINING

Employees are trained once per year on this procedure and the proper operation of stormwater BMPs. Employees are also trained on stormwater pollution prevention, spill and response, and illicit discharge detection and elimination procedures.

If services are contracted, the contractor should be given a copy of this and any applicable SOPs to ensure compliance with MS4 regulations.

RECORD KEEPING

1. Records are kept at the *DPW Office* at *Town Hall, 2nd Floor, 60 Center Square* in *East Longmeadow, MA*.
2. Records shall include an inventory of municipally-owned stormwater treatment BMPs and inspection forms.

REVISING THE SOP

These procedures are reviewed once per year and updated as needed.



INSPECTION OF BIORETENTION AREAS / RAIN GARDENS

General Information

| | | | |
|--|---------------------------------|-------------------------|--|
| BMP Description | Bioretention Area / Rain Garden | | |
| BMP Location | | | |
| Inspector's Name | | | |
| Date of Inspection | | Date of Last Inspection | |
| Start Time | | End Time | |
| Type of Inspection: Regular <input type="checkbox"/> Pre-Storm Event <input type="checkbox"/> During Storm Event <input type="checkbox"/> Post-Storm Event <input type="checkbox"/> | | | |
| Describe the weather conditions at time of inspection | | | |

Specific Information

| Maintenance Activity | Maintenance Frequency | Is Status of BMP Satisfactory? | Corrective Action Needed |
|--|-----------------------|--|--------------------------|
| Inspect for soil erosion and repair | Monthly | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Inspect for invasive species and remove if present | Monthly | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Remove trash | Monthly | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Mulch void areas | Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Remove dead vegetation | Bi-Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Replace dead vegetation | Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Prune | Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Replace all media and vegetation | As Needed | Yes <input type="checkbox"/> No <input type="checkbox"/> | |



**INSPECTION OF CONSTRUCTED STORMWATER WETLANDS
 Years 0-3 of Operation**

General Information

| | | | |
|--|--------------------------------|-------------------------|--|
| BMP Description | Constructed Stormwater Wetland | | |
| BMP Location | | | |
| Inspector's Name | | | |
| Date of Inspection | | Date of Last Inspection | |
| Start Time | | End Time | |
| Type of Inspection: Regular <input type="checkbox"/> Pre-Storm Event <input type="checkbox"/> During Storm Event <input type="checkbox"/> Post-Storm Event <input type="checkbox"/> | | | |
| Describe the weather conditions at time of inspection | | | |

Specific Information

| Maintenance Activity | Maintenance Frequency | Is Status of BMP Satisfactory? | Corrective Action Needed |
|--|-----------------------|--|--------------------------|
| Inspect for invasive species and remove if present | Monthly | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Replace all media and vegetation | As Needed | Yes <input type="checkbox"/> No <input type="checkbox"/> | |

In addition, the following information should be recorded and mapped at least once per year:

- Types and distribution of dominant wetland plants
- Presence and distribution of planted wetland species
- Presence and distribution of invasive species
- Indications other species are replacing planted wetland species
- Percent of standing water that is not vegetated
- Replace all media and vegetation
- Stability of original depth zones and micro-topographic features
- Accumulation of sediment in the forebay and micropool and survival rate of plants



**INSPECTION OF CONSTRUCTED STORMWATER WETLANDS
 Year 4 - Lifetime of Operation**

General Information

| | | | |
|--|--------------------------------|-------------------------|--|
| BMP Description | Constructed Stormwater Wetland | | |
| BMP Location | | | |
| Inspector's Name | | | |
| Date of Inspection | | Date of Last Inspection | |
| Start Time | | End Time | |
| Type of Inspection: Regular <input type="checkbox"/> Pre-Storm Event <input type="checkbox"/> During Storm Event <input type="checkbox"/> Post-Storm Event <input type="checkbox"/> | | | |
| Describe the weather conditions at time of inspection | | | |

Specific Information

| Maintenance Activity | Maintenance Frequency | Is Status of BMP Satisfactory? | Corrective Action Needed |
|--|-----------------------|--|--------------------------|
| Inspect for invasive species and remove if present | Monthly | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Clean forebays | Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Clean sediment in basin/wetland system | Once every 10 years | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Mulch void areas | Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Remove dead vegetation | Bi-Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Replace dead vegetation | Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Prune | Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Replace all media and vegetation | As Needed | Yes <input type="checkbox"/> No <input type="checkbox"/> | |



INSPECTION OF EXTENDED DRY DETENTION BASINS

Inspections should be conducted bi-annually, and during and after major storm events.

General Information

| | | | |
|--|------------------------------|-------------------------|--|
| BMP Description | Extended Dry Detention Basin | | |
| BMP Location | | | |
| Inspector's Name | | | |
| Date of Inspection | | Date of Last Inspection | |
| Start Time | | End Time | |
| Type of Inspection: Regular <input type="checkbox"/> Pre-Storm Event <input type="checkbox"/> During Storm Event <input type="checkbox"/> Post-Storm Event <input type="checkbox"/> | | | |
| Describe the weather conditions at time of inspection | | | |

Specific Information

| Maintenance Activity | Maintenance Frequency | Is Status of BMP Satisfactory? | Corrective Action Needed |
|--|-----------------------------|--|--------------------------|
| Examine outlet structure for clogging or high outflow release velocities | Bi-Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Mow upper stage, side slopes, embankment and emergency spillway | Bi-Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Remove trash and debris | Bi-Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Remove sediment from basin | At least once every 5 years | Yes <input type="checkbox"/> No <input type="checkbox"/> | |



INSPECTION OF PROPRIETARY MEDIA FILTERS

General Information

| | | | |
|--|--------------|-------------------------|--|
| BMP Description | Media Filter | | |
| BMP Location | | | |
| Media Type | | | |
| Inspector's Name | | | |
| Date of Inspection | | Date of Last Inspection | |
| Start Time | | End Time | |
| Type of Inspection: Regular <input type="checkbox"/> Pre-Storm Event <input type="checkbox"/> During Storm Event <input type="checkbox"/> Post-Storm Event <input type="checkbox"/> | | | |
| Describe the weather conditions at time of inspection | | | |

Specific Information

| Maintenance Activity | Maintenance Frequency | Is Status of BMP Satisfactory? | Corrective Action Needed |
|--|-----------------------------|--|--------------------------|
| Inspect for standing water, trash, sediment and clogging | Bi-Annually (minimum) | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Remove trash and debris | Each Inspection | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Examine to determine if system drains in 72 hours | Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Inspect filtering media for clogging | Per manufacturer's schedule | Yes <input type="checkbox"/> No <input type="checkbox"/> | |



INSPECTION OF SAND AND ORGANIC FILTERS

Inspections should be conducted after every major storm event for the first 3 months following completion, then every 6 months thereafter.

General Information

| | | | |
|--|---------------------|-------------------------|--|
| BMP Description | Sand/Organic Filter | | |
| BMP Location | | | |
| Media Type | | | |
| Inspector's Name | | | |
| Date of Inspection | | Date of Last Inspection | |
| Start Time | | End Time | |
| Type of Inspection: Regular <input type="checkbox"/> Pre-Storm Event <input type="checkbox"/> During Storm Event <input type="checkbox"/> Post-Storm Event <input type="checkbox"/> | | | |
| Describe the weather conditions at time of inspection | | | |

Specific Information

| Maintenance Activity | Maintenance Frequency | Is Status of BMP Satisfactory? | Corrective Action Needed |
|------------------------------------|-----------------------|--|--------------------------|
| Remove sediment, trash, and debris | Every 6 months | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Rake sand | Every 6 months | Yes <input type="checkbox"/> No <input type="checkbox"/> | |



INSPECTION OF DRY WELLS

Regular inspections should be conducted after every major storm event for the first 3 months following completion, then annually thereafter.

General Information

| | | | |
|--|----------|-------------------------|--|
| BMP Description | Dry Well | | |
| BMP Location | | | |
| Inspector's Name | | | |
| Date of Inspection | | Date of Last Inspection | |
| Start Time | | End Time | |
| Type of Inspection: Regular <input type="checkbox"/> Pre-Storm Event <input type="checkbox"/> During Storm Event <input type="checkbox"/> Post-Storm Event <input type="checkbox"/> | | | |
| Describe the weather conditions at time of inspection | | | |
| Describe condition of dry well at time of inspection | | | |

After a major storm event, the water depth in the observation well should be measured at 24 and 48 hour intervals and the clearance rate calculated.



INSPECTION OF WET BASINS

Inspections should be conducted after every major storm event for the first 3 months following completion, then biannually thereafter.

General Information

| | | | |
|--|-----------|-------------------------|--|
| BMP Description | Wet Basin | | |
| BMP Location | | | |
| Inspector's Name | | | |
| Date of Inspection | | Date of Last Inspection | |
| Start Time | | End Time | |
| Type of Inspection: Regular <input type="checkbox"/> Pre-Storm Event <input type="checkbox"/> During Storm Event <input type="checkbox"/> Post-Storm Event <input type="checkbox"/> | | | |
| Describe the weather conditions at time of inspection | | | |
| Describe condition of wet basin at time of inspection | | | |

Specific Information

| Maintenance Activity | Maintenance Frequency | Is Status of BMP Satisfactory? | Corrective Action Needed |
|--|---|--|--------------------------|
| Preventative maintenance | Bi-Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Mow/rake buffer area, side slopes and basin bottom | Bi-Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Remove trash, debris and organic matter | Bi-Annually | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Inspect and clean pretreatment devices | Every other month and after every major storm event | Yes <input type="checkbox"/> No <input type="checkbox"/> | |



INSPECTION OF OTHER BMPs

General Information

| | | | |
|--|--|-------------------------|--|
| BMP Description | | | |
| BMP Location | | | |
| Inspector's Name | | | |
| Date of Inspection | | Date of Last Inspection | |
| Start Time | | End Time | |
| Type of Inspection: Regular <input type="checkbox"/> Pre-Storm Event <input type="checkbox"/> During Storm Event <input type="checkbox"/> Post-Storm Event <input type="checkbox"/> | | | |
| Describe the weather conditions at time of inspection | | | |

Specific Information

| Maintenance Activity | Maintenance Frequency | Is Status of BMP Satisfactory? | Corrective Action Needed |
|----------------------|-----------------------|--|--------------------------|
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| | | Yes <input type="checkbox"/> No <input type="checkbox"/> | |

STANDARD OPERATING PROCEDURE 7: FUEL AND OIL HANDLING
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



DESCRIPTION: 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”.

If services are contracted, the contractor should be given a copy of this and any applicable SOPs to ensure compliance with MS4 regulations.

TARGETED CONSTITUENTS:

- Metals
- Oil & Grease
- Hydrocarbons

OPERATIONAL BEST MANAGEMENT PRACTICES:

- 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.
- There shall be no smoking while fuel handling is in process or underway.
- Sources of flame shall be kept away while fuel handling is being completed. This includes smoking, lighting matches, carrying any flame, or carrying a lighted cigar, pipe, or cigarette.
- The delivery vehicle’s hand brake should be set and wheels chocked while the activity is being completed.
- Catch basins and drain manholes must be adequately protected during fueling.
- No tools are to be used that could damage fuel or oil containers or the delivery vehicle.
- 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.
- Ensure that local traffic does not interfere with fuel transfer operations.
- The attending persons should watch for any leaks or spills. Any small leaks or spills should be immediately stopped, and spilled materials absorbed and disposed of properly. 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

- The truck driver shall check in with the facility upon arrival.
- 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 13: Spill Prevention and Response Procedures for examples of spill cleanup and response materials.
- The facility representative shall check to ensure that the amount of delivery does not exceed the available capacity of the tank.
 - A level gauge can be used to verify the level in the tank.
 - If a level gauge is not functioning or is not present on the tank, the tank should be stick tested prior to filling.
- The truck driver and the facility representative shall both remain with the vehicle during the delivery process.

STANDARD OPERATING PROCEDURE 7: FUEL AND OIL HANDLING
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- The truck driver and the facility representative shall inspect all visible lines, connections, and valves for leaks.
- When delivery is complete and the hoses are removed, buckets should be placed underneath connection points to catch drippings.
- The delivery vehicle shall be inspected prior to departure to ensure that the hose is disconnected from the tank.
- 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.
- 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).

- The truck driver shall check in with the facility upon arrival.
- 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 13: Spill Prevention and Response Procedures for examples of spill cleanup and response materials.
- The facility representative shall closely examine the shipment for damaged drums.
- If damaged drums are found, they shall be closely inspected for leaks or punctures.
- Breached drums should be removed to a dry, well-ventilated area and the contents transferred to other suitable containers.
- Drums shall be disposed of in accordance with all applicable regulations.
- Drummed materials shall not be unloaded outdoors during wet weather events.
- The truck driver and the facility representative shall both remain with the vehicle during the delivery process.
- Drums shall be handled and unloaded carefully to prevent damage.
- 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.
- The facility representative shall check to ensure that the proper amount of fuel is delivered, and collect a receipt from the truck driver.

REMOVAL OF WASTE OIL FROM THE FACILITY

- When waste oil or similar oil products need to be removed from the premises, only haulers certified to transport waste oil should be utilized.
- The disposal truck driver shall check in with the facility upon arrival.
- The facility representative shall ensure that the appropriate spill cleanup and response equipment and personal protective equipment are readily available and easily accessible. to SOP 13: Spill Prevention and Response Procedures for examples of spill cleanup and response materials.

STANDARD OPERATING PROCEDURE 7: FUEL AND OIL HANDLING
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- 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.
- The truck driver and the facility representative shall both remain with the vehicle during the tank draining process.
- When draining is complete and the hoses are removed, buckets should be placed underneath connection points to catch drippings.
- The disposal hauler vehicle shall be inspected prior to departure to ensure that the hose is disconnected from the tank.
- 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.
- The facility representative shall collect a receipt from the truck driver.

TRAINING

Employees who handle or delivery fuel and/or oil are trained ***once per year*** on this procedure and the proper operation of equipment. Employees are also trained on stormwater pollution prevention, spill and response, and illicit discharge detection and elimination procedures.

REVISING THE SOP

These procedures are reviewed ***once per year*** and updated as needed.

ATTACHMENTS

- Fuel Delivery Form



Fuel Delivery Form
East Longmeadow, Massachusetts

| | | | |
|--|-------|-------------------------------------|--|
| Date | | Name of Town Employee | |
| Time of Arrival | _____ | Time of Departure | |
| Truck Number | | Name of Truck Driver | |
| Before Unloading - Checklist | | | |
| Is all spill response equipment and personal protective equipment in place? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| In the case of bulk fuel delivery, does tank capacity exceed the amount of delivery? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> N/A <input type="checkbox"/> |
| In the case of drum fuel delivery, are all drums free of leaks and punctures? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> N/A <input type="checkbox"/> |
| Commence unloading. Remain with vehicle at all times. | | | |
| Post-Unloading Checklist | | | |
| Have all fuel containers, including the vehicle, been inspected for leaks? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Has the ground at the unloading point been inspected for evidence of leaks? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| If there are any leaks or spills, has the material been properly cleaned? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> N/A <input type="checkbox"/> |
| Has the correct amount of fuel been delivered? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Has a receipt been collected? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Delivery is complete. | | | |

STANDARD OPERATING PROCEDURE 9: OIL/WATER SEPARATOR MAINTENANCE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



DESCRIPTION: Oil/water separators (OWS) 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 or a tight tank.

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 where detergents or high pressure hoses are used. 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.

TARGETED CONSTITUENTS:

- Oil & Grease

GENERAL OWS MAINTENANCE:

- Each OWS may receive different materials in different quantities, so the cleanout schedule may not be the same for every OWS.
- Employees performing inspections of an OWS must be properly trained and be familiar with the maintenance of that specific structure. Third-party firms may be utilized to perform quarterly inspections.
- 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.
- Do not drain antifreeze, degreasers, detergents, fuels, alcohols, solvents, coolant, or paint to the OWS.
- Separator compartment covers should be tightly sealed to ensure floor drainage only enters the first compartment of the OWS.
- Drains should be kept free of debris and sediment to the maximum extent practicable.
- 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 13: Spill Prevention and Response.

OWS INSPECTION PROCEDURES

Daily inspection should include a visual examination of the area served by the OWS for evidence of spills or leaks.

Weekly inspections should include the following:

- Visually examine the area served by the OWS for evidence of spills or leaks.
- Inspect the point of discharge (i.e., sewer manhole) for evidence of petroleum bypassing the OWS.
- Inspect drains for any signs of unauthorized substances entering the OWS.
- Identify which areas should be or are bermed to contain spills/leaks.
- Examine the OWS for signs of leaks or any malfunction.

Quarterly inspections should include the following:

- Complete tasks noted as appropriate for daily and weekly inspection.
- Complete the Quarterly OWS Inspection Checklist, attached, during the inspection.

STANDARD OPERATING PROCEDURE 9: OIL/WATER SEPARATOR MAINTENANCE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- 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 10 gallons of oil, 1 gallon of detergent or solvent, or any material prohibited by the Board of Health. Cleaning is also required when the levels of accumulated sludge and/or oil meet the manufacturer's recommended levels for cleaning, which will vary based on the manufacturer. If the manufacturer's recommendations are unknown, use the following guidelines for determining when to clean:

- When sludge accumulates to 25% of the wetted height of the separator compartment, or
- When oil accumulates to 5% of the wetted height of the separator compartment, or
- 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 AND RECORD KEEPING

- Records are kept at the **DPW Office at Town Hall, 2nd Floor, 60 Center Square in East Longmeadow, MA.**
- Records shall include a log describing the date and type of all inspections, service and maintenance performed in connection with the OWS.
- 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.
- Records shall be maintained for a minimum of six years.

TRAINING

Employees are trained **once per year** on this procedure and the proper operation of equipment. Employees are also trained on stormwater pollution prevention, spill, and response, and illicit discharge detection and elimination.

REVISING THE SOP

These procedures are reviewed **once per year** and updated as needed.

ATTACHMENTS

- Quarterly Oil/Water Separator Inspection Checklist



Quarterly Oil/Water Separator Inspection Form

East Longmeadow, Massachusetts

| | | | |
|--|--|------------------------------|-----------------------------|
| Date | | Name of Inspector | |
| Facility | | OWS Location | |
| Visual Inspection | | | |
| Are there any signs of spills or leaks in the general area? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Is there any evidence of petroleum bypassing the OWS? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Are there any unauthorized substances entering the OWS? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| Does the OWS exhibit any signs of leaks or malfunctions? | | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| <i>If you answered "yes" to any of the above questions, further inspection, repair, and/or cleaning may be necessary.</i> | | | |
| 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 layer | | |
| F = D - E | Depth of oil layer | | |
| <i>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.</i> | | | |

STANDARD OPERATING PROCEDURE 10: USE, STORAGE, AND DISPOSAL OF PESTICIDES, HERBICIDES, AND FERTILIZER
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



DESCRIPTION: Unwanted materials may enter the stormwater system during regular applications of fertilizers, herbicides and pesticides to the property. If fertilizers and pesticides are not used in accordance with relevant regulations and instructions, or if they are not applied by properly trained personnel, these chemical treatments can enter stormwater in large quantities. Runoff containing these materials can contribute pollutants that contaminate drinking water supplies and are toxic to both human and aquatic organisms.

The goal of this Standard Operating Procedure (SOP) is to provide guidance on municipal employees on proper handling and storage of pesticides, herbicides, and fertilizers to prevent the discharge of pollutants from the MS4.

East Longmeadow does not use pesticides, herbicides, or fertilizers on a regular basis, but information for all three are provided below.

If services are contracted, the contractor should be given a copy of this and any applicable SOPs to ensure compliance with MS4 regulations.

TARGETED CONSTITUENTS:

- Sediment
- Nutrients
- Trash
- Metals
- Oil & Grease
- Organics
- Bacteria
- Low Dissolved Oxygen

USE AND APPLICATION OF FERTILIZERS:

- Fertilizer use should be limited to the extent possible.
- Slow release fertilizers must be used when fertilizer is required on municipally-owned properties as required by the enhanced requirements of the Long Island Sound TMDL for Nitrogen described in Appendix F of the 2016 Small MS4 General Permit.
- All fertilizer products manufactured or distributed in the Commonwealth of Massachusetts must be registered with the Massachusetts Department of Agricultural Resources (MDAR).
- Perform soil testing before choosing a fertilizer. The quantity of available nutrients already present in the soil will determine the type and amount of fertilizer that is recommended. The soil test will also determine the soil pH, humic matter, texture, and exchangeable acidity, which will indicate whether pH adjustment is required for fertilizer to work efficiently. A soil test should be completed at each facility, as soil type can vary widely within a single community.
 - Soil tests are recommended every 3-4 years for turf and plantings (more frequently for problem or newly planted areas) and every year for soil where phosphorus-containing fertilizers are used. Soil pH tests should be conducted every year for all sites.
 - When collecting soil samples, take multiple samples for each target area at a four-inch depth; mix the samples together in a container and properly label the sample with property information and site use type. Separately sample areas that have discoloration, abnormal plant growth, or other problems. Take the sample at approximately the same time every year. If the area has been fertilized, wait eight weeks after fertilizing to test the soil to ensure nutrients have been absorbed.
- Calibrate fertilizer distributors regularly to avoid excessive application and ensure proper loading rates.
- Mix fertilizers using clean application equipment under cover in an area where accidental spills will not enter surface water or groundwater and will not contaminate the soil.
- Fertilizers should only be applied by properly trained personnel.

**STANDARD OPERATING PROCEDURE 10: USE, STORAGE, AND DISPOSAL OF
PESTICIDES, HERBICIDES, AND FERTILIZER
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



- Never apply fertilizers in quantities exceeding the manufacturer's instructions. Instead, apply small amounts throughout the growing season.
- Time fertilizer application methods for maximum plant uptake, usually in the fall and spring (e.g., between April 15 and October 15). When applying at the beginning and end of planting season, take into consideration the slower uptake rate of fertilizer by plants and adjust the fertilizer application accordingly.
- Never apply fertilizer during a drought, when the soil is dry or frozen, when it is raining, or immediately before expected rain.
- Fertilizer should be applied when the ground temperature is above 55° F.
- Apply fertilizers in amounts appropriate for the type of vegetation to minimize losses to surface water and groundwater. Use the results of the soil test to determine optimal fertilizer timing and application rates.
- Where applicable, till fertilizers into the soil rather than dumping or broadcasting (proper application techniques will depend on the type of soil and vegetation).
- Do not hose down paved areas after fertilizer application if drainage will enter into an engineered storm drain system or drainage ditch.
- Limit irrigation after fertilizer application to prevent runoff (approximately ½ inch of water per application for a week following application).
- Turn off irrigation systems during periods of adequate rainfall.
- Do not over-apply fertilizer in late fall to "use it up" before winter. The effectiveness of fertilizer does not reduce when stored.
- If phosphorus fertilizer is used when re-seeding, mix the phosphorus into the root zone. Do not apply directly to the soil surface.
- Avoid combined products such as "weed and feed," which do not target specific problems.

USE AND APPLICATION OF HERBICIDES AND PESTICIDES

The Commonwealth 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. Environmental Protection Agency, 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 MDAR. 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.

- Pesticides should only be applied by licensed or certified applicators.
- Calibrate application equipment regularly to ensure proper application and loading rates.
- Ensure that pesticide application equipment is capable of immediate shutoff in case of emergency.
- Conduct spray applications according to specific label directions and applicable local regulations.

STANDARD OPERATING PROCEDURE 10: USE, STORAGE, AND DISPOSAL OF PESTICIDES, HERBICIDES, AND FERTILIZER
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- Never apply pesticides in quantities exceeding the manufacturer's instructions.
- Apply pesticides at the life stage when the pest is most vulnerable.
- Never apply pesticides if it is raining or immediately before expected rain.
- Establish setback distances from pavement, storm drains, and waterbodies, which act as buffers from pesticide application, with disease-resistant plants and minimal mowing.
- Do not apply pesticides within 100 feet of open waters or of drainage channels.
- Spot treat infected areas instead of the entire location.
- 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.
- Do not hose down paved areas after pesticide application to a storm drain or drainage ditch.
- Recycle rinse water from equipment cleaning back into product.
- Choose the least toxic pesticide that is still capable of reducing the infestation to acceptable levels.
- Use alternatives to pesticides, such as manual weed control, biological controls, and Integrated Pest Management strategies (learn more at: <https://www.mass.gov/files/documents/2016/08/wk/ipm-kit-for-bldg-mgrs.pdf>).
- For the 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.

STORAGE

- Storage of pesticides, herbicides, and fertilizers should be indoors to prevent exposure to rainfall. Store off the floor, in dry, closed containers in accordance with manufacturer's specifications.
- Store in cool, well-ventilated, and insulated areas to protect against temperature extremes.
- Store in areas that have been constructed in accordance with local fire codes for storing flammable or combustible materials.
 - Flammable products should be stored separately from non-flammable products, preferably in a fire-proof cabinet.
 - Small quantities (less than 500 lbs. or 220 gallons) of pesticides can be stored in cabinets constructed of double-walled 18-gauge sheet metal.
 - 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.
 - Building walls should have a two-hour fire rating and be impervious to the stored materials.
 - Floors should be watertight, impervious, and provide spill containment.
- Store materials in an enclosed area or in covered, impervious containment, such as a locked cabinet. The cabinet should be located in a first story room or one that has direct access to the outdoors.

STANDARD OPERATING PROCEDURE 10: USE, STORAGE, AND DISPOSAL OF PESTICIDES, HERBICIDES, AND FERTILIZER
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- Storage areas should be equipped with easily accessible spill cleanup materials and portable firefighting equipment. Regularly inspect storage areas for leaks and spills. Emergency eyewash stations and emergency drench showers should be located near the storage area.
- For pesticides, storage cabinets should be kept locked and the door to the storage area should contain a weather proof sign that warns of the existence and danger of the pesticides inside. The door should be kept locked. The sign should be visible at a distance of 25 feet, should be posted in both English and any other language used by maintenance workers, and should read as follows:

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

- Pesticides should not be stored in the same place as ammonium nitrate fertilizer.
- Separate pesticides and fertilizers from other chemical storage and other flammable materials.
- Label all containers with date of purchase. Clearly label all secondary containers. Use older materials first.
- Order for delivery as close to the time of use as possible to reduce the amount of chemicals stored at the facility.
- Order only the amount of materials needed in order to minimize excess or obsolete materials, which require storage and disposal.
- Never leave unlabeled or unstable pesticides and fertilizers in uncontrolled locations.
- Maintain a current written inventory of all pesticides and fertilizers at the storage site.
- Ensure that contaminated waste materials are kept in designated containers and stored in labeled, designated, covered, and contained areas.
- Implement other storage requirements for pesticide products with guidance from MDAR (learn more at: <https://www.mass.gov/service-details/pesticide-storage-and-disposal>).

DISPOSAL

- Use up the products. Rinse containers, and use rinse water as a product. Dispose of empty containers according to the instructions on the container label. Empty containers are typically not recyclable.
- Dispose of unused pesticide as hazardous waste. The Massachusetts Department of Environmental Protection (MassDEP) regulates and provides guidance on hazardous waste disposal. The Massachusetts Department of Transportation (MassDOT) regulates the transport of hazardous materials.

TRAINING

Employees who handle pesticides, fertilizers, and herbicides are trained **once per year** on this procedure and the proper operation of equipment. Employees are also trained on stormwater pollution prevention, spill and response, and illicit discharge detection and elimination procedures.

REVISING THE SOP

These procedures are reviewed **once per year** and updated as needed.

**STANDARD OPERATING PROCEDURE 11: USE, STORAGE, AND DISPOSAL OF
PETROLEUM AND HAZARDOUS MATERIALS
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



DESCRIPTION: A hazardous material is any biological, chemical, or physical material with properties that make it dangerous or potentially harmful to human health or the environment. Hazardous materials can be released to the environment in a variety of ways. When hazardous materials come into contact with rain or snow, the pollutants are washed into the storm sewer system and to surface waterbodies and/or groundwater. Hazardous materials associated with municipal facilities and their operations include, but are not limited to, oil, gasoline, antifreeze, fertilizers, pesticides, and de-icing agents and additives.

Municipally owned or managed facilities where hazardous materials are commonly stores and handled include:

- Equipment storage and maintenance yards
- Hazardous waste disposal facilities
- Hazardous waste handling and transfer facilities
- Composting facilities
- Materials storage yards
- Municipal buildings and facilities (e.g., schools, libraries, police and fire departments, town offices, municipal pools, and parking garages)
- Public works yards
- Solid waste handling and transfer facilities
- Vehicle storage and maintenance yards

The goal of this written Standard Operating Procedure (SOP) is to provide guidance to municipal employees to help prevent stormwater pollution resulting from the handling and storage of hazardous materials. If services are contracted, this SOP should be provided to the contractor. The contract should also specify that the contractor is responsible for compliance with all applicable laws.

TARGETED CONSTITUENTS:

- Sediment
- Nutrients
- Trash
- Metals
- Oil & Grease
- Organics
- Low Dissolved Oxygen

POLLUTION PREVENTION APPROACH:

Proper management reduces the likelihood of accidental spills or releases of hazardous materials into storm drains or during storm events. In addition, health and safety conditions at the facility will improve. The discharge of pollutants to stormwater from waste handling and disposal can be prevented and reduced by:

- Tracking waste generation, storage, and disposal
- Reducing waste generation and disposal through source reduction, re-use, and recycling
- Preventing run-on and runoff.

Implement applicable suggested Standard Operating Procedures (below) to reduce the influx of pollutants to the stormwater drainage system to the maximum extent practicable.

**STANDARD OPERATING PROCEDURE 11: USE, STORAGE, AND DISPOSAL OF
PETROLEUM AND HAZARDOUS MATERIALS
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



STANDARD OPERATING PROCEDURES:

Loading/Unloading

- All facilities should have proper procedures in place for loading and/or unloading hazardous materials received, especially areas located near catch basins.
- Do not conduct loading and unloading of exposed hazards during wet weather whenever possible.
- If feasible, load and unload all materials and equipment in covered areas such as building overhangs at loading docks.
- Load/unload only at designated loading areas.
- Use drip pans underneath hose and pipe connections and other leak-prone spots during liquid transfer operations, and when making and breaking connections.
- Inspect containers for material compatibility and structural integrity prior to loading/unloading any raw or waste materials.
- Use dry cleanup methods (e.g., squeegee and dust pan, sweeping, and absorbents as last step) rather than hosing down surfaces.

Material Inventory

- Identify all hazardous and non-hazardous substances by reviewing purchase orders and conducting a walk-through of facility.
- Compile Safety Data Sheets (MSDSs) for all chemicals. These should be readily accessible to all facility employees.
- Label all containers of significant materials that include cleaners, fuels, and other hazards.
- Identify handling, storage, and disposal requirements of all chemicals.
- Use environmentally friendly or non-hazardous substitutes when appropriate that include but not limited to H₂Orange₂, Orange Thunder, and Simple Green®.
- Keep hazardous materials and waste off the ground.
- All drums and containers should be in good condition and properly labeled.
- Loose materials including any gravel piles should be covered or placed in shelter.

Storage

- When possible, store petroleum and hazardous materials indoors. Plug or disconnect floor drains that lead to the stormwater system.
- Confine outdoor material storage to designated areas that are covered, on impervious surfaces, away from high traffic areas, and outside of drainage pathways.
- Provide secondary containment for storage tanks and drums with sufficient volume to store 110 percent of the volume of the material.
- Provide sufficient aisle space to allow for routine inspections and access for spill cleanup.
- Storage of reactive, ignitable, or flammable liquids must comply with the Massachusetts Fire Prevention Regulations for the Storage of Flammable and Combustible Materials (527 CMR 14.03).

**STANDARD OPERATING PROCEDURE 11: USE, STORAGE, AND DISPOSAL OF
PETROLEUM AND HAZARDOUS MATERIALS
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



- Place containers in a designated area that is paved, free of cracks and gaps, and impervious in order to contain leaks and spills. The area should also be covered.
- Chemicals should be kept in original labeled containers.
- Containers should not be overfilled.
- Store containers on pallets.
- Properly stack containers and drums.
- Minimize storage onsite
- Containers should not be glass.
- Segregate reactive/incompatible materials (such as chlorine and ammonia).
- Place drip pans under container spouts.
- Install overfill protection on storage tanks/drums.
- Lock storage areas and provide warning signs.

Waste Oil Storage

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

- 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 13: Spill Prevention, Response and Clean-up Procedures. 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.
- 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 9: Oil/Water Separator Maintenance for further information.
- Adopt a regular schedule for the pick-up and disposal of waste materials.
- Recycle leftover materials whenever possible.
- Substitute nonhazardous or less-hazardous materials for hazardous materials whenever possible.
- Protect empty containers from exposure to stormwater and dispose of them regularly to avoid contamination from container residues.

Waste Collection, Handling, and Disposal

- Keep waste collection areas clean before contractor picks up.
- Inspect solid waste containers for structural damage or leaks regularly. Repair or replace damaged containers as necessary.
- Secure solid waste containers; containers must be closed tightly when not in use.
- Place waste containers under cover if possible.

**STANDARD OPERATING PROCEDURE 11: USE, STORAGE, AND DISPOSAL OF
PETROLEUM AND HAZARDOUS MATERIALS
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



- Do not fill waste containers with washout water or any other liquid.
- Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc. may not be disposed of in solid waste containers.
- 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.
- Do not mix wastes; this can cause chemical reactions, make recycling impossible, and complicate disposal.

INSPECTION PROCEDURES:

- Check loading and unloading equipment regularly for leaks, including valves, pumps, flanges and connections.
- Look for dust or fumes during loading or unloading operations.
- Inspect storage areas regularly for leaks or spills.
- Conduct routine inspections and check for external corrosion of material containers.
- Check for structural failure, spills and overfills due to operator error, failure of piping system.
- Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.
- Visually inspect new tank or container installations for loose fittings, poor welding, and improper or poorly fitted gaskets.
- Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
- Replace containers that are leaking, corroded, or otherwise deteriorating with ones in good condition. If the liquid chemicals are corrosive, containers made of compatible materials must be used instead of metal drums.
- Label new or secondary containers with the product name and hazards.
- Conduct physical on-site verification of sealed floor drains.
- If floor drains are not sealed, verify drains are connected to a holding tank, if floor drains are not connected to a holding tank, a facility is required to either:
 - Connect to the municipal sanitary sewer system;
 - Connect to a holding tank; or
 - Seal the floor drains with caps or plugs in accordance with 248 CMR 10.07, provided that, an application for sealing of floor drains that includes a WS-1 form from the Department of Environmental Protection Waste Minimization Program Procedures (MassDEP Form WS-1) is filed and approved by the Plumbing Inspector before commencing any work. A copy of the form indicating the Inspector's approval must be returned to the MassDEP by the applicant, as indicated on the document.
- Regular inspection and cleaning of oil/water separators or other pretreatment holding tanks by qualified contractor or facility personnel.

**STANDARD OPERATING PROCEDURE 11: USE, STORAGE, AND DISPOSAL OF
PETROLEUM AND HAZARDOUS MATERIALS
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



- Regular inspection of material storage areas (inside and outside) to verify items are not exposed to precipitation and are covered or in enclosed areas.
- Inspect stormwater discharge locations and onsite stormwater drainage infrastructure (e.g., catch basins) regularly for contaminants, soil staining, and plugged discharge lines.

MAINTENANCE PROCEDURES:

- Train employees routinely and when new products enter the facility on proper use, storage, disposal, and safety concerns. SDSs should be reviewed and readily accessible in a central location.
- Repair or replace any leaking/defective containers, and replace labels as necessary.
- Maintain caps and/or covers on containers.
- Maintain aisle space for inspection of products/wastes.
- Routinely clean work spaces.
- Properly collect/dispose of waste.
- Routinely maintain and inspect vehicles and equipment.
- Spill Prevention Control and Countermeasure Plan (SPCC) Plan must be prepared and kept on file at facilities that store over 1,320 gallons in aggregate where a spill could reach water. When determining the total quantity of oil stored onsite, include all aboveground containers with a capacity of 55-gallons. Add up all the tanks and drums, any tanks on portable equipment, hydraulic reserves, and oil-filled electrical transformers. The USEPA enforces the Oil SPCC Plan through the Code of Federal Regulations (C.F.R.) Title 40 C.F.R. Part 112—Oil Pollution Prevention.

RAINING

Employees who handle and use hazardous materials are trained **once per year** on this procedure and the proper operation of equipment. Employees are also trained on stormwater pollution prevention, spill and response, and illicit discharge detection and elimination procedures.

REVISING THE SOP

These procedures are reviewed **once per year** and updated as needed.

STANDARD OPERATING PROCEDURE 13: SPILL PREVENTION, RESPONSE, AND CLEAN-UP PROCEDURES
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



DESCRIPTION: 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.

It is important to have proper spill response and cleanup procedures in place in the event of a spill to mitigate the effects of a contaminant release and prevent contaminants from mixing with stormwater runoff. A spill prevention and response plan can be effective at reducing the risk of surface and groundwater contamination, but only with proper personnel training, the availability of clean-up supplies, and when management ensures procedures are followed.

The goal of this written Standard Operating Procedure (SOP) is to provide guidance to municipal employees to help reduce the discharge of pollutants from the MS4 as a result of spills or releases. If services are contracted, the contractor should be given a copy of this and any applicable SOPs to ensure compliance with MS4 regulations.

TARGETED CONSTITUENTS:

- Nutrients
- Metals
- Oil & Grease
- Hydrocarbons
- Organics

RESPONDING TO A SPILL

Employees should be trained in proper spill response specific to the materials used at their site and appropriate personal protective equipment (PPE). In the event of a spill, follow these spill response and cleanup procedures:

- **In the case of an emergency call 911.**
- If the facility has a Stormwater Pollution Prevention Plan (SWPPP) (DPW Garage and Somers Road Transfer Station), notify a member of the facility’s Pollution Prevention Team and/or the facility supervisor. If not, continue to follow the procedures outlined below.
- Assess the contaminant release site for potential safety issues and for direction of flow.
- Stop the contaminant release.
- Contain the contaminant release through the use of spill containment berms or absorbents.
- Protect all drains and/or catch basins with the use of absorbents, booms, berms or drain covers.
- Clean up the spill.
- Dispose of all contaminated products in accordance with applicable federal, state and local regulations.
 - Soil contaminated with petroleum should be handled and disposed of as described in the attached Massachusetts Department of Environmental Protection (MassDEP) Policy WCS-94-400, *Interim Remediation Waste Management Policy for Petroleum Contaminated Soils*.
 - 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.
 - Waste oil contaminated industrial wipes and sorptive minerals:
 - 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.
 - If absorbents pass the “one drop” test they may be discarded in the trash unless contaminated

STANDARD OPERATING PROCEDURE 13: SPILL PREVENTION, RESPONSE, AND CLEAN-UP PROCEDURES

TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



with another hazardous waste.

- It is acceptable to mix the following fluids and handle them as waste oil:
 - Waste motor oil
 - Hydraulic fluid
 - Power steering fluid
 - Transmission fluid
 - Brake fluid
 - Gear oil
- **Do not mix** the following materials with waste oil. Store each separately:
 - Gasoline
 - Antifreeze
 - Brake and carburetor cleaners
 - Cleaning solvents
 - Other hazardous wastes
- If absorbents do not pass the “one drop” test they should be placed in separate metal containers with tight fitting lids, labeled “Oily Waste Absorbents Only.”
- Refer to the attached MassDEP Policy BWP 92-02, *Waste Management Guidance for Industrial Wipers and Sorptive Minerals Contaminated with Waste Oil* for additional information.
- 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 the **East Longmeadow Fire Department** at **(413) 525-5430**.
- Contact the **MassDEP 24-hour spill reporting notification line**, toll-free at **(888)-304-1133**
 - The following scenarios are exempt from MassDEP reporting requirements (see the attached MassDEP Factsheet, *Managing Spills of Oil and Hazardous Materials*.
 - Spills that are less than 10 gallons of petroleum and do not impact a water body
 - Spills that are less than one pound of hazardous chemicals and do not present an imminent health or safety hazard
 - Fuel spills from passenger vehicle accidents
 - Spills within a vault or building with a watertight floor and walls that completely contain all released chemicals

STANDARD OPERATING PROCEDURE 13: SPILL PREVENTION, RESPONSE, AND CLEAN-UP PROCEDURES

TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



REPORTING A SPILL

- 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. Pavement
 - b. Soil
 - c. Drains
 - d. Catch basins
 - e. Water bodies
 - f. Public streets
 - g. Public sidewalks
 5. The concentration of the released contaminant.
 6. What/who caused the release.
 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 GUIDANCE

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:

- 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.

STANDARD OPERATING PROCEDURE 13: SPILL PREVENTION, RESPONSE, AND CLEAN-UP PROCEDURES

TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



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.

- Provide yearly maintenance and inspection at all municipal facilities, paying particular attention to underground storage tanks. Maintain maintenance and inspection records on site.
- Implement good management practices where chemicals and hazardous wastes are stored:
 - Ensure storage in closed containers inside a building and on an impervious surface wherever possible.
 - If storage cannot be provided inside, ensure secondary containment for 110 percent of the maximum volume of the storage container.
 - Locate storage areas near maintenance areas to decrease the distance required for transfer.
 - Provide accurate labels, Material Safety Data Sheets (MSDS) information, and warnings for all stored materials.
 - Regularly inspect storage areas for leaks.
 - Ensure secure storage locations, preventing access by untrained or unauthorized persons.
 - Maintain accurate records of stored materials.
- 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.
- Maintain appropriately stocked spill response kits at each facilities and locations where oil, chemicals, or other hazardous materials are handled and stored.

DOCUMENTATION AND RECORD KEEPING

- Records are kept at the **DPW Office at Town Hall, 2nd Floor, 60 Center Square in East Longmeadow, MA.**
- Records shall be kept for at least three years, including shipping records of transportation of spill-contaminated materials for recycling or disposal.

TRAINING

Employees who work with potential stormwater pollutants are trained **once per year** on proper spill response and clean-up procedures. Employees are also trained on stormwater pollution prevention and illicit discharge detection and elimination procedures.

REVISING THE SOP

These procedures are reviewed **once per year** and updated as needed.

ATTACHMENTS

- Spill Response and Clean-up Contact List
- MassDEP Policy WCS-94-400, *Interim Remediation Waste Management Policy for Petroleum Contaminated Soils*
- MassDEP Policy BWP 92-02, *Waste Management Guidance for Industrial Wipers and Sorptive Minerals Contaminated with Waste Oil.*
- MassDEP Fact Sheet, *Managing Spills of Oil and Hazardous Materials*



Spill Response and Clean-up Contact List
East Longmeadow, Massachusetts

| Contact | Phone Number | Date and Time Contacted |
|---|-------------------------------------|--------------------------------|
| East Longmeadow DPW Superintendent | (413) 525-5400 ext. 1201 | |
| East Longmeadow Fire Department | (413) 525-5430 | |
| MassDEP 24-Hour Spill Reporting | (888) 304-1133 | |
| MassDEP 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) 567-3300 or (413) 587-3181 | |
| Licensed Site Professionals Association (Wakefield, MA) | (781) 876-8915 | |
| Licensed Site Professionals Board | (617) 556-1091 | |



**Significant Spill, Leak, or Other Release Log
East Longmeadow, Massachusetts**

| | |
|--|--|
| Date of incident: | |
| Location of incident: | |
| Description of incident: | Spill or Leak: |
| | Type of Material: |
| | Quantity (approximate): |
| | Other Notes: |
| Circumstances leading to release: | Source: |
| | Other Notes: |
| Actions taken in response to release: | Amount of Material Recovered (approx.): |
| | Material still exposed to stormwater? Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | Other Notes: |
| Measures taken to prevent recurrence: | |

Interim Remediation Waste Management Policy
for Petroleum Contaminated Soils
#WSC-94-400

Attached is a copy of the Department of Environmental Protection's Interim Remediation Waste Management Policy for Petroleum Contaminated Soils (#WSC-94-400). Please note that this interim policy supersedes policy #WSC-400-89 titled "Management Procedures for Excavated Soils Contaminated with Virgin Petroleum Oils". This new policy outlines changes in the management practices for reuse, recycling, disposal, storage, and transport of petroleum contaminated soils, and presents related guidance. These changes are the result of new regulations for remediation waste management in the Massachusetts Contingency Plan (310 CMR 40.0030), changes in the Massachusetts Hazardous Waste Regulations (310 CMR 30.252(2)), and several other related Departmental initiatives.

Date

Thomas B. Powers
Acting Commissioner

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1.0 Introduction

On October 1, 1993 amendments to the "Massachusetts Contingency Plan" (MCP, cited collectively as 310 CMR 40.0000) became effective. These regulations govern the reporting, assessment, and cleanup of releases of oil and/or hazardous materials to the environment. The new MCP contains provisions for the management of contaminated soils generated as a result of performing response actions at disposal sites under M.G.L. c. 21E (310 CMR 40.0030). This policy provides guidance on how to implement the management requirements for petroleum contaminated soil. This policy will remain in effect until a more comprehensive policy, which is currently being developed, is issued by the Department.

For the purposes of this policy unless noted otherwise, the term "**petroleum contaminated soils**" means both used and unused waste oil contaminated soils, including petroleum distillates such as gasoline, diesel, kerosene, jet fuel, lubricating oils, and No. 2, 4, 5, 6 heating oils.

The information contained in this document is intended solely for guidance. This document does not create any substantive or procedural rights, and is not enforceable by any party in any administrative proceeding with the Commonwealth. The regulations related to the management of petroleum contaminated soils contain both specific and general requirements. In addition to summarizing specific requirements, this document also provides guidance on what measures the Department considers acceptable for meeting the general requirements set forth in the regulations. Parties using this guidance should be aware that there may be other acceptable alternatives to this guidance for achieving compliance with such general regulatory requirements.

The regulatory citations provided throughout this document are not meant to be, and should not be relied upon, to be a complete list of all the regulatory requirements for managing petroleum contaminated soils. Parties undertaking response actions which involve the management of contaminated soils should consult 310 CMR 40.0000 (MCP), and 310 CMR 30.000 (the Massachusetts Hazardous Waste regulations), and 310 CMR 19.000 (the Massachusetts Solid Waste Management Regulations) for applicable requirements.

Additional copies of this policy, and other policies and forms referenced throughout this policy may be obtained by calling the DEP InfoLine at (617) 338-2255 or 1-800-462-0444. In addition, the 21E Bill of Lading and Material Shipment Record forms and instructions also may be obtained through the Regional Service Centers located in each DEP regional office.

2.0 Background

This policy represents the Department's interim approach for managing petroleum contaminated soil, and soils from urban and industrialized settings. Several important public policy goals directly influenced the development of this policy, policy #BWP-94-037 titled "Reuse and Disposal of Contaminated Soils at Landfills", and recent permit modifications for each Massachusetts soil recycling facility. Outlined below are the principal policy goals which were considered:

The first goal is to discourage the land disposal of petroleum contaminated soils. The MCP specifies that the landfill disposal of petroleum contaminated soils shall only occur when a demonstration can be made that other alternatives such as asphalt batching, thermal processing or reuse as daily cover at a landfill are not feasible (310 CMR 40.0032(5)).

A second goal is to encourage the use of soil management options which provide for the destruction of volatile organic compounds (VOCs), or minimize the potential for release of VOCs in petroleum contaminated soils to the environment. To that end, specific VOC limits have been established for each Massachusetts soil recycling facility and lined landfill based on each facility's potential to release VOCs to the environment. Therefore, soil recycling facilities and landfills which do not destroy or control VOC emissions are permitted to accept lower levels of VOCs in petroleum contaminated soils than facilities that destroy or control VOC emissions.

A third goal is to facilitate the removal of petroleum contaminated soil and soils from urban and industrialized settings which contain elevated lead concentrations from areas where such soils may pose a health hazard to children. While unrestricted access to lead contaminated soils may pose a serious health hazard to children, cost effective management options for lead contaminated soils have not been widely available. For this reason, DEP seeks to encourage the reuse of lead contaminated soils, which are not a hazardous waste, as daily cover at lined landfills. For more information on the reuse of lead contaminated soils at lined landfills please consult section 8.0 of this policy and policy #BWP-94-037.

A fourth goal is to direct petroleum contaminated soils which are appropriate for recycling at all permitted soil recycling facilities (i.e., soils containing higher levels of TPH, low to moderate levels of VOCs and metals) are directed to these facilities.

A fifth goal is to recognize and affirm that petroleum contaminated soils that exhibit lower levels of TPH and VOCs, with or without elevated metal concentrations, are appropriate and suitable for reuse as daily cover at lined landfills.

3.0 Applicability

The guidance contained in this policy applies to petroleum contaminated soils generated as a result of any response action under 310 CMR 40.0000 (the 1993 MCP). Such response actions include: Limited Removal Actions (LRA), Immediate Response Actions (IRA), Release Abatement Measures (RAM), Utility Related Abatement Measures (URAM), and Comprehensive Response Actions. This policy also applies to petroleum contaminated soils generated by all response actions conducted at disposal sites with approved waivers under 310 CMR 40.000 (the 1988 MCP), and remedial response actions approved by the Department prior to October 1, 1993 pursuant to 310 CMR 40.000.

4.0 The Regulatory Classification of Petroleum Contaminated Soil

Recent amendments to the Massachusetts Hazardous Waste regulations (310 CMR 30.252(2)), now authorize soil contaminated with used or unused waste oil, that is not otherwise a hazardous waste, to be managed in conformance with M.G.L. c. 21E and 310 CMR 40.0000 and the receiving facility's permit issued pursuant to 310 CMR 30.000 or 310 CMR 19.000. This change eliminates the need for PRPs, RPs, or Other Persons to discriminate between "virgin" and "non-virgin" petroleum contamination for determining the regulatory classification and subsequent management procedures for petroleum contaminated soils. However, this distinction should not be lost when identifying the appropriate contaminants of concern and/or making determinations to increase or limit the analytical requirements necessary to characterize petroleum contaminated soil.

Prior to the amendment of 310 CMR 30.252(2), the Department issued a policy on 1/20/93 titled "Interim Policy Regarding the Regulatory Status of Soils Contaminated with Waste Oil of Unknown Origin and/or Hazardous Constituents". The promulgation of the amendment to 310 CMR 30.252(2) supersedes those sections of that policy that concern waste oil contamination of unknown origin. However, section 4 of that policy titled "Soils Contaminated by Hazardous Constituents", is still applicable and should be used as guidance when making decisions concerning the regulatory classification of contaminated media.

Mineral sorbents contaminated with petroleum oils (including used and unused waste oil) generated as part of a response action under M.G.L.c. 21E may be managed in the same way as petroleum contaminated soils. Examples of such material would be sand or mineral sorbents which were applied at the location of a petroleum release. Mixtures of petroleum oils (including used and unused waste oil) and combustible sorptive materials (e.g., absorbent pads, hay, or vegetation) generated as the result of a response action under M.G.L. c. 21E may be transported off-site for combustion at a municipal solid waste incinerator and/or resource recovery facility using the Bill of Lading procedures defined in 310 CMR 40.0030 provided the combustion of such materials is in compliance with the facility permit(s).

Petroleum oil contaminated mineral sorbents or combustible sorbents which are generated not as the result of a M.G.L. c. 21E, but through leakage or releases incidental to the normal operation or maintenance of mechanical equipment such as construction vehicles or pumps should be managed in accordance with Department Policy #HW 92-02 titled "Waste Management Guidance for Industrial Wipers and Sorptive Minerals Contaminated with Waste Oil".

5.0 Authorization

Under the former soils policy (#WSC-400-89), all petroleum contaminated soils transported off-site using a 21E Bill of Lading needed the prior approval of the appropriate DEP regional office. This provision has been changed in the new MCP, to allow the off-site transport of petroleum contaminated soils without prior DEP approval, by using a 21E Bill of Lading with a Licensed Site Professional (LSP) Opinion rendered in accordance with 310 CMR 40.0030. The Licensed Site Professional Opinion must state that all necessary testing and assessment actions have been performed to adequately characterize the soil being transported and, as characterized, the soil can be accepted at the receiving facility or temporary storage location. The MCP allows the Department to impose additional requirements on the management of Remediation Waste under the Bill of Lading process if the Department determines that such materials represent a hazard to health, safety, public welfare or the environment (310 CMR 40.0034(7)).

6.0 Sampling and Analysis

6.1 Release, Source and Site Specific Considerations

Sampling of contaminated soil should be done at sufficient and adequately distributed locations so that the concentrations of the chemical constituents attributable to the petroleum release and any other contaminants of concern which may be present at the disposal site are adequately characterized. The factors listed below should be considered when developing and implementing a soil sampling plan to characterize contaminated soils. Evaluation of these release, source, and site

specific conditions provides the basis for selection of field screening techniques, sampling methodologies, sampling frequencies, and analytical parameters used to adequately characterize contaminated soils:

- o the type(s) and likely constituents of the petroleum oil (i.e., unused waste oil or used waste oil, or mixtures of both);
- o the presence or likelihood of any other oil or hazardous materials which may be present at the disposal site (e.g., chlorinated solvents, metals, Polychlorinated Biphenyls (PCBs), Polycyclic Aromatic Hydrocarbons (PAHs), Halogenated Volatile Organic Compounds (HVOCs));
- o current and former site uses, past incidents involving the release of oil or hazardous materials, and past and present management practices of oil and/or hazardous materials at the disposal site;
- o the presence of listed or characteristic hazardous wastes in the environment at the disposal site and/or in the vicinity of the excavation;
- o visual and olfactory observations, field screening, analytical data, and/or in-situ pre-characterization data;
- o soil matrix type - naturally occurring soils, or fill and soil mixtures (i.e., homogenous or heterogenous soil conditions);
- o soil volume; and
- o facility permit requirements for acceptance of petroleum contaminated soils (including sampling, chemical, physical and structural requirements).

Licensed Site Professionals should exercise professional judgement consistent with the Best Response Action Management Approach Standard (310 CMR 40.0191) and Environmental Sample Collection and Analyses (310 CMR 40.0017) sections of the MCP, and section 8.0 of the Department's Policy #WSC-401-91 titled "Policy for the Investigation, Assessment, and Remediation of Petroleum Releases: Interim Site Investigation Protocol Document" in rendering Opinions concerning the appropriate testing and assessment actions necessary to adequately characterize contaminated soils.

6.2 Making Decisions to Increase or Limit Analytical Requirements

Conceptually, soil characterization programs should be performed in two stages. The first stage of a sampling program should focus on an evaluation of information obtained during a "due diligence review", including any preliminary in-situ pre-characterization data or field screening data which may be available. The focus of this initial evaluation should be to identify those contaminants of concern associated with the petroleum release and to screen for other known releases or sources of oil or hazardous materials which are likely to be present in the soil at the disposal site. Based upon the results of this investigation, the contaminants of concern should be clearly identified. Contaminants which were the subject of screening but which were not detected could be removed

from consideration entirely or in some instances could be further evaluated albeit at a reduced frequency. With the contaminants of concern identified, a characterization program can be established which specifies sampling frequencies, and appropriate use of field screening techniques commensurate with the concentrations and types of contaminants, and volume of soils which will need to be characterized.

Pending the issuance of more detailed guidance as part of a comprehensive soils policy, the following examples should be used in addition to guidance provided in section 6.1, as a guide when selecting contaminants of concern, and establishing sampling frequencies to adequately characterize contaminated soils.

Example #1: Petroleum contamination resulting from a known release of unused waste oil (virgin petroleum) in a naturally occurring soil matrix in a non-urban, residential setting typically would require evaluation only for those constituents necessary to characterize the concentrations of the unused waste oil in the excavated soil.

Example #2: Petroleum contamination from an unknown source discovered in a fill/soil matrix in an urban or industrialized setting would require a more thorough characterization to be performed than that described in example #1. Uncertainty exists concerning what analytical parameters should be evaluated to characterize the petroleum release. This evaluation is further complicated by the likelihood that other contaminants of concern associated with either the fill material or from the urban or industrialized setting may be present at the disposal site. As a result a more thorough screening and analytical program is necessary to obtain confidence that the contaminants of concern have been adequately identified.

It is assumed in both situations described above that no other releases or sources of oil and/or hazardous materials (in addition to the known release) are known or suspected to have impacted the soils at the disposal site.

6.3 Application of Tables 1 and 2

Table 1 (on page 11) of this policy reflects DEP policy #BWP-94-037, and Table 2 (on page 13) of this policy provides a summary of the current permit levels for all Massachusetts soil recycling facilities. Both tables identify levels of contaminants commonly encountered in petroleum contaminated soils, and in soils located in urban or industrialized settings which may be transported to these respective facilities without prior DEP approval. These levels are meant to be applied as maximum concentrations of contaminants which would be acceptable for reuse at Massachusetts lined landfills, and for recycling at Massachusetts soil recycling facilities.

Contaminated soils transported to a Massachusetts lined landfill should not exceed any of the applicable contaminant levels specified in Table 1. Soils shipped to a lined landfill which exceed the levels and criteria reflected in Table 1 and in #BWP-94-037 require prior approval by the DEP's Division of Solid Waste Management. Soils transported and accepted at a soil recycling facility which exceed the Facility's permit levels would constitute a violation of 310 CMR 40.0035(1)(i) and the facility's recycling permit.

If the soil, as characterized, exceeds any of the applicable contaminant levels in the tables, or if the soil contains concentrations of oil or hazardous materials which would significantly alter the

overall "representativeness" of the soil (e.g., "hot-spots") that portion of the soil should be segregated and evaluated separately. If a hot-spot contained in the soil cannot be physically isolated, then all of the soil, as characterized, would be ineligible for that particular soil management option if the applicable Table or permit levels are exceeded. Hot-spots identified in the soil which do not exceed the applicable contaminant criteria and/or the facility's permit specifications should not be precluded from shipment to the facility.

6.4 Use of the Jar Headspace Analytical Screening Procedure

The jar headspace analytical screening procedure concentration for volatile organic compounds (VOCs) referenced in the former "virgin soils" policy #WSC-400-89 was used for determining whether or not virgin petroleum contaminated soils may be approved for landfill application. No distinction was made in the former policy between landfill disposal and landfill reuse of petroleum contaminated soils. However, as part of the Department's effort to develop a coordinated approach to contaminated soil management, generic and facility-specific thresholds for the reuse and recycling of soils contaminated with VOCs and other contaminants have been established for all Massachusetts lined landfills and each permitted soil recycling facility. The new performance standards for these facilities are presented in Tables 1 and 2 of this policy.

The jar headspace screening method may be used for estimating the VOC concentration of petroleum contaminated soils proposed for reuse or recycling at Massachusetts facilities.

The new performance standard for volatile organic compounds (VOCs) in petroleum contaminated soils which are proposed for reuse (not disposal) at lined landfills is 10 mg/kg total VOCs (see Table 1). Soils contaminated with gasoline, No. 2, 4, 5, and 6 fuel oils, diesel, kerosene, lubricating oils, and jet fuel that exhibit jar headspace readings less than 100 ppmv generally indicate compliance with the 10 mg/kg total VOC performance standard. All other applications of petroleum contaminated soils at the landfill which utilize the jar headspace screening procedure as part of characterizing the soil should be correlated with laboratory analytical data or studies to demonstrate compliance with the applicable total VOC performance standard.

Each soil recycling facility has in its permit a specific VOC level based in part on the facility's ability to destroy or control VOCs. Soils contaminated with gasoline and No. 2, 4, 5, and 6 fuel oils, diesel, kerosene, lubricating oils, and jet fuel which exhibit a jar headspace reading less than 150 ppmv generally indicate compliance with a total VOC threshold of 15 mg/kg. Petroleum contaminated soils proposed for recycling at Massachusetts soil recycling facilities which exceed a 150 ppmv jar headspace concentration should be correlated with laboratory analytical data or studies to demonstrate compliance with the facility's VOC permit requirement.

Pending the issuance of a comprehensive soils policy, Licensed Site Professionals should exercise professional judgement consistent with the Best Response Action Management Approach Standard (310 CMR 40.0191) and Environmental Sample Collection and Analyses (310 CMR 40.0017) sections of the MCP in selecting field screening techniques to support Opinions concerning appropriate testing and assessment actions necessary to adequately characterize contaminated soils.

7.0 Storage

The new MCP (310 CMR 40.0034(4)) allows parties undertaking response actions to temporarily store petroleum contaminated soils at another location owned or operated by the same PRP, RP, or Other Person conducting the response action. Excavated petroleum contaminated soils stored at the site of generation or at a temporary storage location must be managed to protect health, safety, public welfare and the environment (310 CMR 40.0031(1)). The owner/operator of the site of generation and/or temporary storage area is responsible for ensuring that the requirements contained in 310 CMR 40.0030 concerning temporary storage are met for the duration of the storage period. The following storage procedures are recommended to meet these requirements:

- o All soil stored at the site of generation or temporary storage location should be on a base lined with 6 mil polyethylene and be completely and securely covered with the same material for the duration of the storage period.
- o The selection of any on-site or off-site location to stockpile or temporarily store petroleum contaminated soils near sensitive human health and environmental areas such as private and public water supplies, within 100 feet of wetlands and surface water bodies, or near densely populated residential areas should be avoided.
- o Appropriate steps must be taken to minimize public access to the contaminated soils located at the storage area and/or site of generation.

Petroleum contaminated soils must be transported to a licensed and/or permitted treatment, recycling, reuse or disposal facility within 120 days of excavation or recovery from a disposal site (310 CMR 40.0034(3)(c) or 310 CMR 40.0034(4)(c)). Transportation and storage of the petroleum contaminated soils must be supervised, managed, or overseen by a Licensed Site Professional 310 CMR 40.0034(4)(a) or 310 CMR 40.0035(1)(i). The Department may require immediate removal of stored petroleum contaminated soils if such soils are not stored properly and in accordance with 310 CMR 40.0030, or if the Department determines that storage represents a hazard to health, safety, public welfare or the environment.

Please consult 310 CMR 40.0034(4) for more detailed information on the requirements for the temporary storage of petroleum contaminated soils.

8.0 Reuse and Disposal of Contaminated Soils at Massachusetts Landfill Facilities

8.1 Approvals for Reuse at Lined Landfills

Concurrent with the issuance of this Policy, the Department has also issued an interim policy #BWP-94-037 titled "Reuse and Disposal of Contaminated Soils at Landfills", which establishes allowable contaminant concentrations and physical requirements for contaminated soil which may be reused at DEP-permitted lined landfills without prior DEP approval. Table 1 presents these allowable contaminant concentrations from policy #BWP-94-037. Contaminated soils that exhibit concentrations equal to or below the chemical levels in Table 1 and which satisfy the physical requirements for landfill reuse may be transported to a lined landfill using the Bill of Lading procedures contained in 310 CMR 40.0030, and do not need specific DEP approval for each shipment.

Soils which exceed the chemical criteria presented in Table 1, or contain concentrations of oil or hazardous materials for which no threshold is specified in Table 1, may be reused at a lined landfill if the DEP Division of Solid Waste Management approves an application for Landfill - Minor Modification (BWP SW 22) or other DSWM approval.

For more detailed information on the requirements and procedures on the reuse and disposal of contaminated soils at Massachusetts landfills please consult 310 CMR 19.000, and policy #BWP-94-037.

TABLE 1**ALLOWABLE CONTAMINANT LEVELS FOR SOIL REUSE AT LINED LANDFILLS^a**

| CONTAMINANT^b | Reuse Levels^c (mg/kg) |
|---|---|
| Total Arsenic | 40 |
| Total Cadmium | 80 |
| Total Chromium | 1,000 |
| Total Lead | 2,000 |
| Total Mercury | 10 |
| Total Petroleum Hydrocarbons | 5,000 |
| Total PCBs ^d | < 2 |
| Total PAHs ^e | 100 |
| Total VOCs ^f | 10 |
| Conductivity ^g (µmhos/cm) | 4,000 |
| Listed or Characteristic Hazardous Waste (TCLP ^h) | none |

Notes:

- a** Table 1 is a reproduction of the table contained in policy #BWP-94-037.
- b** Contaminant concentrations are in mg/kg, dry weight. Other contaminants are as noted.
- c** Lined landfills have a DEP approved, functioning liner with leachate collection and are operated in compliance with Massachusetts DEP regulations and policies. The criteria apply to reuse of soils at lined landfills as daily cover, intermediate cover, and pre-cap contouring material.
- Please note that the methods specified in footnotes d, e, and f indicate the universe of chemicals to be added up in calculating the total concentrations for these classes of contaminants. This Policy does not specify what method should be used to quantify these contaminants. For example, EPA Method 8100 defines the list of chemicals to be considered in calculating total PAHs. However, EPA Methods 8270 or 8250 may be used to quantify PAH levels.
- d** Total concentrations of polychlorinated biphenyls listed in EPA Method 8080.
- e** Total concentrations of polynuclear aromatic hydrocarbons listed in EPA Method 8100.
- f** Total concentration of volatile organic compounds listed in EPA Method 8240 or equivalent.
- g** For soils or sediments which may be expected to contain elevated NaCl concentrations (e.g., sediments from marine environments or road-salt stockpile affected soils).
- h** TCLP testing should be performed for metals or organic compounds when the total concentrations in the soil are above the theoretical levels at which the TCLP criteria may be met or exceeded. For guidance parties should consult United States Environmental Protection Agency, Memorandum #36, "Notes on RCRA Methods and QA Activities", pp. 19-21, Gail Hanson, January 12, 1993.

8.2 Feasibility Determinations and Landfill Disposal of Contaminated Soils

The MCP specifies that contaminated soils generated in Massachusetts shall not be disposed of at an in-state or out-of-state landfill if a feasible alternative exists that involves the reuse, recycling, destruction, and/or detoxification of such materials (see 310 CMR 40.0032(5)). In making a determination as to whether the above management options are feasible, Licensed Site Professionals and generators of contaminated soil shall consider the following:

- a) the volume and physical characteristics of the contaminated soil;
- b) the concentrations and types of oil or hazardous materials contained in the soil; and
- c) the relative costs of these management options.

8.3 Approvals for Disposal at Lined Landfills

A Special Waste Determination (BWP SW 14 or BWP SW 31) or other approval by the Division of Solid Waste Management will be required for disposal of contaminated soils at all lined landfills.

8.4 Approvals for Reuse and Disposal at Unlined Landfills

A Landfill - Minor Modification (BWP SW 22) or other approval by the Division of Solid Waste Management will be required for reuse of contaminated soils at all unlined landfills. A Special Waste Determination (BWP SW 14 or BWP SW 31) or approval by the Division of Solid Waste Management will be required for disposal of contaminated soils at all unlined landfills.

9.0 Recycling of Petroleum Contaminated Soils at Massachusetts Permitted Soil Recycling Facilities

9.1 Massachusetts Permitted Soil Recycling Facility Summary Levels

All Massachusetts soil recycling facilities are authorized by permit to accept both unused and used waste oil contaminated soils.

Table 2 presents a summary of process-specific levels for contaminants which are commonly detected with petroleum hydrocarbons in petroleum contaminated soils. These process-specific levels have been incorporated into the permits for each type of recycling facility: hot mix and cold mix asphalt batching plants, and thermal processing plants. Below these concentrations, the handling and processing of such soils and reuse of the bituminous concrete/bituminous pavement or thermally processed soil would not be expected to result in a significant risk to human health, safety, public welfare, or the environment.

To determine if a permitted soil recycling facility is eligible to accept a shipment of contaminated soil, generators and Licensed Site Professionals should compare the concentrations in the contaminated soil with the levels in the facility's permit. No threshold presented in Table 2 of this Policy supersedes any requirement specified in the facility permits.

TABLE 2

Massachusetts Soil Recycling Facility Summary Levels ^a

| Contaminant | Hot Mix Asphalt Plants mg/kg^b | Thermal Processing Plant mg/kg | Cold Mix Emulsion Plant mg/kg |
|--|---|---|--|
| Total Arsenic (As) | 30 | 30 | 30 |
| Total Cadmium (Cd) | 30 | 11 | 30 |
| Total Chromium (Cr) | 500 | 500 | 500 |
| Total Mercury (Hg) | 10 | 3 | 10 |
| Total Lead (Pb) | 1,000 | 1,000 | 1,000 |
| Total VOCs^c | 30 to 1,800^d | | |
| Total Petroleum Hydrocarbons | 5,000 to 60,000^e | | |
| Total PCBs | < 2 | < 2 | < 2 |
| Total Halogenated Volatile Organic Compounds | 5 | 5 | 5 |
| Listed or Characteristic Hazardous Waste (TCLP^f) | none | none | none |

Notes:

- a** Contaminant levels presented in Table 2 are a summary of soil recycling permits issued by the DEP's Division of Hazardous Waste as of April 1994. For a complete listing for a specific facility please consult the applicable facility permit.
- b** Concentrations for all three processes are in mg/kg, dry weight.
- c** As determined by EPA method 8240 or equivalent, provided that the presence of such constituents does not cause the soil to be either a characteristic or listed hazardous waste pursuant to 310 CMR 30.000.
- d** The concentrations specified represent the lowest and highest VOC concentration permitted among all soil recycling facilities. However, each permitted VOC level is process-specific and LSPs and generators should consult the facility's individual soil recycling permit to ensure that the VOC concentration in the contaminated soil is consistent with that authorized in the facility permit.
- e** The concentrations specified represent the lowest and highest TPH concentration permitted among all soil recycling facilities. However, each permitted TPH level is process-specific and LSPs and generators should consult the facility's individual soil recycling permit to ensure that the TPH concentration in the contaminated soil is consistent with that authorized in the facility permit.
- f** TCLP testing should be performed for metals or organic compounds when the total concentrations in the soil are above the theoretical levels at which the TCLP criteria may be met or exceeded. For guidance parties should consult United States Environmental Protection Agency, Memorandum #36, "Notes on RCRA Methods and QA Activities", pp. 19-21, Gail Hanson, January 12, 1993.

9.2 On-site Asphalt Batching

Petroleum contaminated soils which are generated at a 21E disposal site, incorporated as aggregate in bituminous concrete/bituminous pavement, and are applied within the boundaries of the same disposal site are not subject to the permitting and approval requirements under 310 CMR 30.800, provided that the petroleum contaminated soils are not otherwise a hazardous waste, and that the response action is conducted in conformance with 310 CMR 40.0000. On-site asphalt batching operations are considered by the Department to be an immobilization technology, which like any other remedial technology, may be used to achieve a temporary or permanent solution under the MCP. As with all remedial technologies, LSPs should exercise professional judgement consistent with the Best Response Action Management Approach Standard when selecting, implementing, and evaluating the effectiveness of any remedial technology at a disposal site. The Department anticipates developing specific guidance and procedures for mobile on-site asphalt batching in the future.

Petroleum contaminated soils which are generated at a 21E disposal site, incorporated as aggregate in bituminous concrete/bituminous pavement, and are applied within or outside the boundaries of the disposal site must be managed to protect health, safety, public welfare and the environment (310 CMR 40.0030). Generators and LSPs should ensure that the bituminous concrete/bituminous pavement proposed for application within or outside the boundaries of the 21E disposal site are suitable for application based on the chemical, physical and structural properties of the bituminous concrete/bituminous pavement and its intended use.

Contaminated soils used as aggregate in bituminous concrete/bituminous pavement for off-site application shall be limited to used and unused waste oil contaminated soils (310 CMR 30.252(2)).

Material specifications (chemical, physical, and structural) for processed aggregate and bituminous concrete/bituminous pavement should be based on accepted standards such as those of the ASTM Standard, the Massachusetts Highway Department, the Massachusetts Turnpike Authority, the Asphalt Institute or other industry-wide accepted standards. The quality assurance and quality control procedures employed on the aggregate, during the emulsion process, and on the resulting bituminous concrete/bituminous pavement should be documented in the next applicable remedial response action submittal along with the location where the material was applied off-site.

The levels of contaminants for petroleum contaminated soils used as aggregate in making bituminous concrete/bituminous pavement for off-site application should be comparable to those levels established by the Department for an analogous stationary soil recycling facility (i.e., type and process specific). Bituminous concrete/bituminous pavement which incorporates as aggregate soil contaminated with oil and hazardous materials which exceed these concentrations may require specific permit and/or approval by the Department pursuant to 310 CMR 30.800.

10.0 Transportation

10.1 In-State Generated Soils to In-State Facilities

The transport of petroleum contaminated soils to Massachusetts soil recycling facilities, Massachusetts landfills, or temporary storage locations must be performed in accordance with the Bill of Lading provisions contained in 310 CMR 40.0030. A common carrier may be used, provided this method of transport does not pose a risk to health, safety, public welfare or the environment. All soils transported by common carrier should be covered to minimize windblown dust and volatilization of contaminants during transport along roadways. In those instances where

large volumes of contaminated soils, or numerous trips are required, or where the site/truck staging area is unpaved, appropriate truck decontamination procedures should be employed, such as truck tire and under-carriage washing to minimize excess tracking of contaminated soil on the roadway. All decontamination water must be managed in accordance with all applicable federal, state, and local laws and regulations (310 CMR 40.0031(2)).

10.2 In-State Generated Soils to Out-of-State Facilities

Under the former "virgin soils" policy (#WSC-400-89), virgin petroleum contaminated soils needed to be manifested and transported by a licensed hazardous waste transporter when shipped to an out-of-state facility.

The 1993 MCP does not require that a Massachusetts licensed hazardous waste transporter and manifest be used for petroleum contaminated soils transported to out-of-state recycling, reuse, treatment or disposal facilities. Petroleum contaminated soils shipped to out-of-state facilities may be transported by common carrier under a 21E Bill of Lading in conformance with 310 CMR 40.0030, provided that this method of transport ensures the protection of health, safety, public welfare and the environment, and is consistent with the receiving facility's permit requirements and with any other law in the receiving state(s) which may govern the transport of contaminated soil.

10.3 Out-of-State Generated Soils to In-State Facilities

The transport of petroleum contaminated soils generated outside the boundaries of the Commonwealth are not subject to the management requirements of the MCP. Out-of-state generated soils when shipped to a Massachusetts permitted soil recycling facility or Massachusetts lined landfill must use a BWP Material Shipment Record to document the soil transaction. Parties transporting soils generated outside of the Commonwealth should consult the specific facility permit(s), and policy #BWP-94-037 for applicable requirements.

10.4 Transport of Petroleum Contaminated Soils under a Hazardous Waste Manifest

An alternative to using the 21E Bill of Lading procedures to transport petroleum contaminated soils off-site would be to transport the contaminated soils under a hazardous waste manifest using a licensed hazardous waste transporter in conformance with the Massachusetts Hazardous Waste regulations (310 CMR 30.000). A LSP Opinion is not required for transporting materials using a hazardous waste manifest.

Parties transporting petroleum contaminated soils to out-of-state treatment, recycling, or disposal facilities under a hazardous waste manifest must use the waste code MA01. Shipments transported out-of-state under waste code MA01 will be subject to the Massachusetts Transporter Fee.

11.0 Submission of the 21E Bill of Lading Form to DEP

The 1993 MCP (310 CMR 40.0034 and 40.0035) requires generators of contaminated soil to submit the completed Bill of Lading form and summary sheet with original signatures, Licensed

Site Professional Opinions, and all relevant supporting documentation to the appropriate DEP regional office within 14 days after final shipment has been made to the receiving facility.

Parties conducting Limited Removal Actions (in accordance with 310 CMR 40.0318) using a 21E Bill of Lading are not required to submit the completed Bill of Lading form and supporting documentation to the Department (see 310 CMR 40.0034(5)). However, 310 CMR 40.0034(6) requires that the completed Bill of Lading form and supporting documentation be retained by the RP, PRP, or Other Person for a minimum of 5 years.

Parties conducting Utility Related Abatement Measures (URAMs) in accordance with 310 CMR 40.0462(4) may transport these soils to a temporary storage location owned or operated by the same PRP conducting the URAM. A 21E Bill of Lading and LSP involvement is not required for these types of soil shipments to temporary storage areas. However, the shipment of URAM generated soils to treatment, reuse, recycling, or disposal facilities from a temporary storage location, or from the site of excavation must be transported using a 21E Bill of Lading with a LSP Opinion rendered in accordance with 310 CMR 40.0030 (see 310 CMR 40.0462(5)).

12.0 Managing Contaminated Soils below 21E notification Thresholds

The 1993 MCP (310 CMR 40.0032(3)) allows contaminated soils which exhibit concentrations of oil or hazardous materials below the applicable 120 day notification thresholds specified in 310 CMR 40.0300, and which are not otherwise a hazardous waste, to be transported from a disposal site without prior notice or approval from the Department provided that:

- a) the soils are not disposed or reused at locations where oil or hazardous materials in the soil would be in excess of the applicable notification threshold at the receiving location; and
- b) the soils are not disposed or reused at locations where existing concentrations of oil or hazardous materials at the receiving site are significantly lower than the levels of oil or hazardous materials present in the soil being reused or disposed.

However, parties proposing to manage soils contaminated at less than the applicable 120 day notification level specified in the MCP at in-state permitted soil recycling or landfill facilities are required under the facility permit(s) to document that the soils have been adequately characterized. Specifically, a Bureau of Waste Prevention Material Shipment Record form shall be used when transporting these contaminated soils to Massachusetts permitted soil recycling facilities and landfills. A "qualified environmental professional" will be required to sign a statement contained in the form which attests to the adequacy of the testing and assessment actions necessary to adequately characterize the contaminated soils.

The transport of these soils, as described above, to out-of-state facilities or locations shall be protective of health, safety, public welfare, and the environment. Examples of soil management methods and procedures which would be considered protective and consistent with 310 CMR 40.0030, and 310 CMR 30.000 include the 21E Bill of Lading form and procedures, a Hazardous Waste Manifest, or a Material Shipment Record Form. In addition, all soils transported to out-of-state licensed and/or permitted facilities, or locations shall be consistent with any applicable

federal, state or local law which may govern the transport and management of these soils in the receiving state.

Nothing in this section of the policy is intended to prohibit the voluntary use of the 21E Bill of Lading process to document the transport of soils with contamination below the applicable 120 day notification threshold to appropriate facilities or locations, provided that the soils are not otherwise a hazardous waste.

ATTACHMENT I

PETROLEUM HYDROCARBON ANALYSIS

A number of analytical procedures are commonly used to quantitatively and/or qualitatively evaluate heavier molecular weight (i.e., number 2, 4, and 6 Oils) petroleum contaminants within a soil matrix. Many of these procedures are modifications of methods developed for water or wastewater analyses. For the purpose of this policy, the Department suggests using the following methodologies or their equivalent:

Quantitative Total Petroleum hydrocarbons (TPH) in mg/kg

- * Standard Methods Procedure 503B/E, partition-infrared methods;
- * EPA Method 418.1, modified for soil extraction/analysis.

Qualitative/Quantitative TPH in mg/kg

Solvent-extraction analysis using capillary GC-FID, including:

- * "Methodology for Comparison of Petroleum Oils by Gas Chromatography", ASTM Procedure D 3328;
- * "Oil Spill Identification by Gas Chromatograph", U.S. Coast Guard, Report No. CG-D-52-77; and
- * "Gas Chromatography of High Molecular Weight Hydrocarbons with an Inorganic Salt Eutectric Column", Journal of Analytical Chemical, Vol. 50, No. 2 (February 1987).

Soils samples for TPH analysis should, at a minimum be collected and handled in the following manner:

- * a representative samples should be collected (representative samples will be determined on a case-by-case basis);
- * use of pre-cleaned 16 oz. wide mouth glass jars;
- * sample should be iced down or refrigerated to retard biodegradation;
- * expedite delivery to lab; and
- * analysis should be conducted as soon as possible after sample collection.

For further sampling, storage and handling instructions see the specific TPH analytical method which is to be used.

ATTACHMENT II

JAR HEADSPACE ANALYTICAL SCREENING PROCEDURE

The following are recommended procedures for conducting analytical screening of gasoline-contaminated soils utilizing a portable Photoionization Detector (PID) or Flame Ionization Detector (FID):

- (1) Half-fill two clean glass jars with the sample to be analyzed. Quickly cover each open top with one or two sheets of clean aluminum foil and subsequently apply screw caps to tightly seal the jars. Sixteen ounce (16 oz.) (approx. 500 ml) soil or "mason" type jars are preferred; jars less than 8 oz. total capacity (approx. 250 ml), should not be used.
- (2) Allow headspace development for at least 10 minutes. Vigorously shake jars for 15 seconds both at the beginning and end of the headspace development period. Where ambient temperatures are below 32 F (0 C), headspace development should be within a heated vehicle or building.
- (3) Subsequently to headspace development, remove screw lid/expose foil seal. Quickly puncture foil seal with instrument sampling probe, to a point about one-half of the headspace depth. Exercise care to avoid uptake of water droplets or soil particulates.

As an alternative, syringe withdrawal of a headspace sample with subsequent injection to instrument probe or septum-fitted inlet is acceptable contingent upon verification of methodology accuracy using a test gas standard.

- (4) Following probe insertion through foil seal and/or sample injection to the probe, record highest meter response as the jar headspace concentration. Using foil seal/probe insertion method, maximum response should occur between 2 and 5 seconds. Erratic meter response may occur at high organic vapor concentrations or conditions of elevated headspace moisture, in which case headspace data should be discounted.
- (5) The headspace screening data from both jar samples should be recorded and compared; generally, replicate values should be consistent to plus or minus 20%.
- (6) PID and FID field instruments shall be operated and calibrated to yield "total organic vapors" in ppm (v/v) as benzene. PID instruments must be operated with a 10.0 eV (+/-) lamp source. Operation, maintenance, and calibration shall be performed in accordance with the manufacturer's specifications. For jar headspace analysis, instrument calibration shall be checked/adjusted no less than once every 10 analyses, or daily, whichever is greater.
- (7) Instrumentation with digital (LED/LCD) displays may not be able to discern maximum headspace response unless equipped with a "maximum hold" feature or strip-chart recorder. Deviations, departures and/or additions to the above procedures should be consistent with 310 CMR 40.0017. In such cases, compelling technical justification must be presented and documented by the methodology proponent.



Massachusetts
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of
ENVIRONMENTAL
PROTECTION

WASTE MANAGEMENT GUIDANCE FOR INDUSTRIAL WIPERS AND SORPTIVE MINERALS CONTAMINATED WITH WASTE OIL

Policy BWP 92-02, signed by Steven A. DeGabriele, Acting Director, Division of Hazardous Waste, May 20, 1992. Reference to Policy #WSC-400-89 was changed on April, 2001 to Policy #WSC 94-400 which supersedes the previous Policy.

Summary

The Department of Environmental Protection (DEP) provides the following guidance on the applicability of the mixture rule, MGL Chapter 21C, 310 CMR 30.140 (1) (c), to sorptive minerals and industrial wipers that do not contain free-flowing waste oil¹ and are therefore non-saturated. "Sorptive minerals" refers to absorbent clays or diatomaceous earth materials used in commercial and industrial settings, such as auto repair and machine shops. "Industrial wipers" refers to shop towels, rags and disposable wipers used in similar situations.

It is DEP's position that oily, non-saturated, industrial wipers and sorptive minerals do not typically pose a significant threat to human health when managed properly and that this policy provides a sufficient degree of environmental protection. DEP's policy is consistent with EPA's recent proposed rule to regulate waste oil, which included a conditional exemption to the mixture rule for industrial wipers and sorptive minerals.

Conditional Exemptions to the Mixture Rule

The Department interprets the mixture rule as inapplicable to sorptive minerals and industrial wipers that are contaminated with only small amounts of waste oil, provided that:

- They do not contain free-flowing waste oil, as defined by "one drop" in this guidance document, and
- They are used ONLY for spills or leaks when collection of waste oil as liquid is not feasible or practical.

This interpretation does not allow generators to dilute hazardous waste with solid waste so the mixture can be deemed non-hazardous. Intentional dilution of waste oil that could otherwise have been collected as a liquid is a violation of MGL Chapter 21C and 310 CMR 30.000. To the greatest extent possible, waste oils shall be collected in their liquid state for subsequent reuse, recycling, treatment or disposal in accordance with MGL Chapter 21C and 310 CMR 30.000, and any other applicable environmental protection requirements.

¹ "Waste Oil" as defined in 310 CMR 30.131. Additionally, "waste oil" refers to both "used waste oil" and "unused waste oil", as defined in 310 CMR 30.010.

Further, this interpretation covers only waste oil-contaminated sorptive minerals and industrial wipers, and does not apply to other hazardous wastes, such as listed solvents. For virgin (“unused”) oil-contaminated absorbent materials used at sites subject to Chapter 21E (releases to soil or ground or surface water), generators should refer to Section 4.0 of DEP Policy #WSC-94-400, “Interim Remediation Waste Management Policy for Petroleum Contaminated Soils.”

The “One Drop” Rule/Testing Procedures

DEP will use the “one drop” approach in EPA’s proposed rule on waste oil (Federal Register, September 23, 1991, vol. 56, p. 48025) as the means for determining whether sorptive minerals and industrial wipers contaminated with waste oil are saturated and therefore hazardous. As long as one drop of oil can flow from a mixture when subjected to its respective test, the mixture is saturated and, therefore, hazardous. The one drop approach employs a simple and inexpensive testing procedure.

The Paint Filter Liquids Test (310 CMR 30.156) shall be the method for determining whether oil/sorptive mineral mixtures pass the one drop test. For industrial wipers, the one drop determination shall be made by “wringing” the rags out by hand or by some other mechanical compaction method. If it is apparent that the industrial wipers or sorptive minerals are non-saturated, testing may not be necessary, though generators remain responsible for proving that their waste can pass the one drop test.

Preferred Material Management Practices

Sorptive materials that fail the one drop test:

The standard rules of hazardous waste management shall pertain to 1) industrial wipers that contain free-flowing waste oil; 2) used, sorptive minerals containing free-flowing waste oil; and 3) all free-flowing waste oil removed from sorptive minerals and industrial wipers.

Proper management of these materials requires compliance with applicable provisions of 310 CMR 30.000, including segregating each type of waste; keeping containers closed, except to add or remove waste; and labeling each container with “Waste Oil” and “Toxic” and the date accumulation began in that container. Waste oil-saturated materials must be transported and disposed in accordance with 310 CMR 30.000.

Materials that pass the one drop test:

Waste oil/sorptive mineral mixtures and industrial wipers that pass the one drop test, and which are used only when it is not feasible or practical to collect the waste oil as a liquid, are not hazardous waste, and therefore have several waste management options as a solid waste. DEP recommends that generators follow the Bureau of Waste Prevention’s hierarchy of solid waste management, which is to first reduce; second, to reuse/recycle; third, to incinerate in a waste-to-energy facility; and last, to landfill.

As an example, the order of DEP’s recommendations is

first, conservative use of absorbent materials,

second, recycling by laundering rags or substituting reusable drip mats for sorptive minerals, or reuse of sorptive minerals at an asphalt batching facility;

third, energy recovery at an incinerator; and finally, disposal at a lined landfill with leachate control.

EPA's Position and Supporting Data

DEP's interpretation is consistent with EPA's September 23, 1991 proposed rule to regulate waste oil as hazardous waste, which includes a discussion on the "Applicability of the [Federal] Mixture Rule to Specific Solid Wastes" and conditional exemptions for industrial wipers and sorptive minerals.

EPA's position is based in part on comments it received in 1986 on a proposal to amend the mixture rule to exclude sorptive minerals. Analytical data provided by the Sorptive Minerals Institute (SMI) showed that waste oil/sorptive mineral mixtures did not release hazardous constituents under pressure and that significant quantities of hazardous constituents did not leach out of sorptive minerals. Further SMI testing using the TCLP showed that the constituents of concern did not leach when exposed to prolonged TCLP extraction. EPA concluded, based on this data, that these mixtures were unlikely to pose a hazard when disposed, and that an exemption from the mixture rule should be considered.

EPA's view is also based on comments it received on its 1985 proposal to regulate waste oil as a hazardous waste and to allow a conditional exemption to the mixture rule for industrial wipers. EPA stated in its proposed waste oil rule last September that a wiper not containing free-flowing waste oil would be considered non-hazardous waste since it would contain "insignificant quantities" of waste oil.

Further, the EPA is currently reviewing a regulatory petition requesting a conditional exemption from hazardous waste status, under the mixture rule, for wipers contaminated with listed solvents. While a determination is pending on this interpretation, the EPA has directed its regions and states to use a case-by-case approach in formulating policy on this subject.

DEP will continue to evaluate the need for rulemaking and regulatory guidance in this area. Specifically, DEP's interpretation of 310 CMR 30.140(1) (c) may be subject to revision as the EPA is currently reevaluating its mixture rule and considering other ways to regulate waste mixtures.

Questions should be addressed to James Paterson at telephone number (617) 556-1096.

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Massachusetts
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fact sheet

Managing spills of oil and hazardous materials

Information for municipalities

Purpose

Oil or chemical spill responses are local events. Because timely action is critical to the success of any cleanup, the Massachusetts Department of Environmental Protection (MassDEP) has prepared this guide to help municipal officials:

- Take defensive action at all spills to identify receptors and limit/contain the release
- After relevant training, take proactive actions to control and clean up spills of limited scope
- Provide support, in accordance with the Incident Management System, to the Fire Department, which normally is the lead agency in spill response situations
- Determine when MassDEP or a Licensed Site Professional (LSP) needs to lead a cleanup
- Represent the municipality's interests in cleanup decisions

Who must clean up a spill?

The primary responsibility for hiring contractors for on-site cleanup and disposal of waste materials, including all associated costs, rests with the person or party that causes or contributes to the release and/or with the owner of the property where it happens. They are collectively referred to as Potentially Responsible Parties (PRPs).¹



Methuen Fire Department response to liquid asphalt spill. Photo by Steven Ross, MassDEP.

¹ M.G.L. Chapter 21E (the Massachusetts Oil and Hazardous Material Release Prevention Act) and 310 CMR 40.0000 (the Massachusetts Contingency Plan, or MCP) spell out the procedures and requirements for release notification, spill response and the cleanup standards that must be met.

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Does the size, type, or location of a spill make a difference?

Yes. Depending on the size and type of spill, MassDEP and other local, state, and federal agencies may have a role in spill response. The PRP must report spills to MassDEP if they exceed specific thresholds. Some releases are exempt from reporting requirements under the MCP. These are spills that involve:

- less than 10 gallons of petroleum and which does not impact a waterbody
- less than one pound of hazardous chemicals and which does not pose an imminent hazard
- fuel from passenger vehicle accidents or
- a vault or building with a watertight floor and with walls that completely contain all released chemicals

Regardless of whether MassDEP notification is required, all spills of oil and hazardous materials must be cleaned up to the extent that no risk to human health is present.

Who responds to oil and hazardous material releases of a limited scope?

The fire department normally responds to spills, initiates containment, and usually directs cleanup of spills of limited scope, i.e. those that do not trigger MassDEP reporting thresholds. When the PRP is unable or unwilling to take responsibility, the fire department may also arrange for cleanup, either by hiring an outside contractor or by using in-house resources. The municipal public works department or other local agencies sometimes provide support. MassDEP generally does not respond to non-reportable releases or those of limited scope, but will be available for technical support. MassDEP will always respond to larger and more complicated spills with potential for posing imminent health, safety, or environmental hazards. MassDEP also attempts to respond to releases where public safety officials request assistance in directing the cleanup.

What specific roles do local officials play?

First responders to a spill are usually equipped to take some action to contain it. Containment is critical to protecting resources at risk. For example, the fire department might take measures to stop the flow or contain the release with absorbents, while public works personnel deliver and spread sand, pick up debris, and provide street drainage maps to aid in the spill investigation. Some municipalities have one or more environmental cleanup firm on retainer to help deal with responses to spills of limited scope.

When PRPs are unable or unwilling to respond, a statewide comprehensive "Hazardous Materials and Medical Waste Collection and Disposal" (FAC36) contract can be used by towns, cities, and state agencies to hire cleanup companies. The contract also provides for emergency response preparedness training for government workers. The contract establishes "Not to Exceed" rates for labor, transportation, and oil and hazardous materials disposal. Information about the Comm-PASS contract may be found at the web site of the Massachusetts Operational Services Division at www.mass.gov/osd.

What training is necessary for cleanup workers?

Because of their roles as first responders and the associated risks of direct exposure to hazardous chemicals, fire department personnel typically undergo training to deal with petroleum and chemical releases, as described in OSHA 1910.120. The International Association of Fire Fighters and the Massachusetts Firefighting Academy offer training programs.

Basic awareness training is highly recommended for staff from other municipal agencies who may be at less risk of direct exposure but still play critical support roles.

How do wastes from spill cleanups need to be handled?

Sand and absorbents contaminated with petroleum can be reused, disposed, or otherwise handled as described in MassDEP policy WSC-94-400, Interim Remediation Waste Management Policy for Petroleum Contaminated Soils, www.mass.gov/dep/images/wsc94400.pdf. But sand and absorbents that are saturated

with petroleum products or by other hazardous chemicals may need special handling (disposal) by licensed transporters. Depending on the size and severity of a spill, a Licensed Site Professional (LSP) may also need to be hired to oversee the cleanup and sign-off on the disposal. MassDEP requires municipalities to properly manage and store small quantities of hazardous materials from spill cleanups. If storage that is consistent with MassDEP guidelines is not possible, an environmental waste removal firm should be hired to remove the material.

Contacting MassDEP Regional Offices:

Northeast Regional Office – 205B Lowell Street, Wilmington, Massachusetts 01887

<http://www.mass.gov/dep/about/region/northeast.htm> (978) 694-3200

Southeast Regional Office - 20 Riverside Dr., Lakeville, MA 02347

<http://www.mass.gov/dep/about/region/southeast.htm> (508) 946-2700

Central Regional Office - 627 Main St., Worcester, MA 01608

<http://www.mass.gov/dep/about/region/central.htm> (508) 792-7650

Western Regional Office - 436 Dwight St., Springfield, MA 01103

<http://www.mass.gov/dep/about/region/western.htm> (413) 784-1100

Visit <http://www.mass.gov/dep/about/region/findyour.htm> to determine which MassDEP regional office serves your community.

For more information:

- If you have questions, please email MassDEP at BWSC.Information@state.ma.us.
- For copies of MassDEP regulations, policies, and other publications, visit: <http://www.mass.gov/dep/bwsc/pubs.htm>

Related regulations and guidance documents:

- Interim Remediation Waste Management Policy for Petroleum Contaminated Soil, WSC-94-400, www.mass.gov/dep/images/wsc94400.pdf
- Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, COMM-97-001, <http://www.mass.gov/dep/recycle/laws/97-001.htm>
- Characteristics of Hazardous Waste, 310 CMR 30.120, <http://www.mass.gov/dep/service/regulations/310cmr30.pdf>
- A Summary of Requirements for Small Quantity Generators, <http://www.mass.gov/dep/recycle/laws/sqgsum.pdf>

MassDEP Telephone numbers:

- Hazardous Waste Compliance Assistance Line – (617) 292-5898
- Household Hazardous Products Hotline – (800) 343-3420

Above ground or underground storage tanks:

Call the local fire department or the Massachusetts Department of Fire Services at (978) 567-3100 or 413-587-3181.

LSP information:

Visit the LSP Board's web page at <http://www.mass.gov/lsp> or call (617) 556-1091.

MassDEP 24-hour Spill Reporting

To report a release of oil or hazardous materials, and other environmental emergencies, call the MassDEP 24-hour notification line toll-free at

(888) 304-1133

Massachusetts Department of
Environmental Protection
One Winter Street
Boston, MA 02108-4746

Commonwealth of Massachusetts
Mitt Romney, Governor
Kerry Healey, Lt. Governor

Executive Office of
Environmental Affairs
Stephen R. Pritchard, Secretary

Department of
Environmental Protection
Robert W. Gollodge, Jr.,
Commissioner

Produced by the
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This information is available in
alternate format by calling our ADA
Coordinator at
(617) 56-1057.



**STANDARD OPERATING PROCEDURE 14: TRASH AND SOLID WASTE MANAGEMENT
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS**



DESCRIPTION: Materials management entails the selection of the individual product, the correct use and storage of the product, and the proper disposal of associated waste(s). It is important to be responsible with common chemicals and solvents including paints, cleaners, and automotive products to reduce contamination to stormwater runoff.

Improper storage and handling of solid wastes can allow toxic compounds, oils and greases, heavy metals, nutrients, suspended solids, and other pollutants to enter stormwater runoff.

Implement applicable suggested Standard Operating Procedures to reduce the influx of pollutants to the stormwater drainage system to the maximum extent practicable.

- TARGETED CONSTITUENTS:**
- Sediment
 - Nutrients
 - Trash
 - Metals
 - Oil & Grease
 - Organics
 - Low Dissolved Oxygen

OPERATIONAL BEST MANAGEMENT PRACTICES:

- Use environmentally friendly or non-hazardous substitutes when appropriate that include but are not limited to H₂OOrange₂, Orange Thunder, and Simple Green®.
- Loose materials including any gravel piles should be covered or placed in shelter.

SOLID WASTE

- Solid waste may be classified as both hazardous and non-hazardous waste consisting of agricultural, construction and demolition, dead animal, industrial, municipal, and tire waste.
- 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 knowledgeable of the potential hazards associated with solid waste handling and storage.
- Each waste storage location shall be properly labeled and all significant sources of pollution shall be kept in a secure, covered and contained area.
- Trash storage bins, dumpsters, and disposal areas should be clean and free of debris, especially those located near catch basins.
- Dumpsters should be maintained in good condition and securely closed at all times other than during normal hours of operation.
- Clean up equipment and materials.
- Schedule waste collection to prevent the containers from overfilling.
- Dispose of waste per the requirements of local, state, and federal laws.
- Piled debris, including sweepings, construction, and wood debris, should be inspected weekly before removal off site.

WASTE COLLECTION, HANDLING, AND DISPOSAL

- Keep waste collection areas clean between contractor picks up.
- Inspect solid waste containers for structural damage or leaks regularly. Repair or replace damaged containers as necessary.
- Secure solid waste containers; containers must be closed tightly when not in use.

STANDARD OPERATING PROCEDURE 14: TRASH AND SOLID WASTE MANAGEMENT TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- Place waste containers under cover if possible.
- Do not fill waste containers with washout water or any other liquid.
- Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc. may not be disposed of in solid waste containers.
- 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.
- Do not mix wastes; this can cause chemical reactions, make recycling impossible, and complicate disposal.

FLOOR DRAINS, OIL/WATER SEPARATORS

- If floor drains are not sealed, verify drains are connected to a tight tank. In accordance with the Massachusetts Plumbing Code: 248 C.M.R. 10.09 (1)(b), if floor drains are not connected to the municipal sewer system or a holding tank, a facility is required to either:
 - Connect to the municipal sanitary sewer system;
 - Connect to a holding tank; or
 - Seal the floor drains with caps or plugs in accordance with 248 CMR 10.07, provided that an application for sealing of floor drains that includes a WS-1 form from the Department of Environmental Protection Waste Minimization Program (MassDEP Form WS-1) is filed and approved by the Plumbing Inspector before commencing any work. A copy of the form indicating the Inspector's approval must be returned to the MassDEP by the applicant, as indicated on the document.
- Regular inspection and cleaning of oil/water separators or other pretreatment holding tanks should be performed by qualified contractor or facility personnel in accordance with SOP 9: Oil/Water Separator Maintenance.
- Perform regular inspection of material storage areas (inside and outside) to verify items are not exposed to precipitation and are covered or in enclosed areas.
- Inspect stormwater discharge locations and onsite stormwater drainage infrastructure (e.g., catch basins) regularly for contaminants, soil staining, and plugged discharge lines.

MAINTENANCE PROCEDURES

- Repair or replace any leaking/defective containers, and replace labels as necessary.
- Maintain caps and/or covers on containers.
- Maintain aisle space for inspection of products/wastes.
- Routinely clean work spaces.
- Properly collect/dispose of waste.
- Routinely maintain and inspect vehicles and equipment.
- Spill Prevention Control and Countermeasure Plan (SPCC) Plan must be prepared and kept on file at facilities that store over 1,320 gallons aggregate where a spill could reach water. The USEPA enforces the Oil SPCC Plan through the Code of Federal Regulations (C.F.R.) Title 40 C.F.R. Part 112—Oil Pollution Prevention.

STANDARD OPERATING PROCEDURE 15: STORAGE AND MAINTENANCE OF MUNICIPAL VEHICLES AND EQUIPMENT
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



DESCRIPTION: Regular maintenance of both municipal and contracted vehicles and heavy equipment not only prolongs the life of municipal assets but also helps reduce the potential for leaking of fluids associated with normal wear and tear. Potential pollutants include fuels, oil, antifreeze, brake fluid, solvents, and battery acid.

The goal of this written Standard Operating Procedure (SOP) is to provide guidance to municipal employees to help reduce the discharge of pollutants from the MS4 as a result of leaks from vehicles and equipment.

If services are contracted with respect to vehicles and equipment, this SOP should be provided to the contractor. The contract should also specify that the contractor is responsible for compliance with all applicable laws.

Refer to the Municipal Vehicle and Equipment Inventory in Appendix D for a list of Town-owned vehicles and equipment as of May 2020.

TARGETED CONSTITUENTS:

- Sediment
- Nutrients
- Trash
- Metals
- Oil & Grease
- Organics

STORAGE:

- Monitor vehicles and equipment for leaks and use drip pans as needed until repairs can be performed.
- When drip pans are used, avoid overtopping.
- Drain fluids from leaking or wrecked vehicles and parts as soon as possible. Dispose of fluids properly.
- Store and park vehicles on impervious surfaces and/or under cover or indoors whenever possible.

FUELING

- Fueling areas owned or operated by the municipality should be covered.
- Ensure that all fueling activities are not conducted near storm drains and dry wells or that procedures are in place to control any spills.
- Fuel storage tanks should be placed on impervious surfaces with no cracks or gaps; secondary containment is recommended.
- Provide barriers such as posts, guard rails, or bollards where tanks are exposed, to prevent collision damage with vehicles.
- Post signs at the fuel dispenser or fuel island warning vehicle owners/operators against "topping off" of vehicle fuel tanks.
- Label drains within the facility boundary, by paint/stencil (or equivalent), to indicate whether they flow to an oil/water separator or directly to the storm drain.
- Follow the procedures described in SOP 7: Fuel and Oil Handling.

VEHICLE MAINTENANCE

- Conduct routine inspections of heavy equipment and vehicles to proactively identify maintenance needs or potential leaks.
- Perform routine preventive maintenance to ensure heavy equipment and vehicles are operating optimally.
- Recycle or dispose of waste properly and promptly.

STANDARD OPERATING PROCEDURE 15: STORAGE AND MAINTENANCE OF MUNICIPAL VEHICLES AND EQUIPMENT
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- Sweep and pick up trash and debris as needed.
- Do not dump any liquids or other materials outside, especially near or in storm drains or ditches.
- Provide a designated area for vehicle maintenance on an impervious surface.
- Keep equipment clean; do not allow excessive build-up of oil and grease.
- If possible, perform all vehicle fluid removal or changing inside or under cover:
 - Keep a drip pan under the vehicle while you unclip hoses, unscrew filters, or remove other parts
 - Promptly transfer used fluids to the proper waste or recycling drums. Don't leave drip pans or other open containers lying around.
 - Keep drip pans or containers under vehicles or equipment that might drip during repairs.
 - Do not change motor oil or perform equipment maintenance in non-appropriate areas.
- If temporary work is being conducted outside: Use a tarp, ground cloth, or drip pans beneath the vehicle or equipment to capture all spills and drips.
- If equipment (e.g., radiators, axles) is to be stored outdoors, oil and other fluids should be drained first. This is also applicable to vehicles being stored and not used on a regular basis.

BODY REPAIR AND PAINTING

- Conduct all body repair and painting work indoors.
- Minimize waste from paints and thinners. Calculate paint needs based on surface area.
- Use dry cleanup methods (vacuum, sweep) to clean up metal filings and dust and paint chips from grinding, shaving and sanding. Sweep debris from wet sanding after allowing it to dry overnight on the shop floor. Dispose of waste properly; never dump waste into storm or sanitary sewers.
- Use sanding tools equipped with vacuum capability to pick up debris and dust.

PARTS CLEANING

- Use designated areas for engine, parts, or radiator cleaning. Do not wash or rinse parts outdoors. If parts cleaning equipment is not available then capture parts cleaning fluids.
- Recycle cleaning solution. Never discharge waste to the sanitary sewer or storm sewer.
- Use steam cleaning or pressure washing of parts instead of solvent cleaning. Cleaning equipment must be connected to an oil/water interceptor prior entering the sanitary sewer.
- When using solvents for cleaning, drain parts over the solvent tank to avoid drips to the floor. Catch excess solutions and divert them back to tank. Allow parts to dry over the hot tank.

MATERIAL MANAGEMENT

- Store materials and waste in labeled containers under cover and in secondary containment.
- Chemicals should not be combined in containers.
- Hazardous waste must be labeled and stored according to hazardous waste regulations. Follow the procedures in SOP 11: Use, Storage, and Disposal of Petroleum and Hazardous Materials.

STANDARD OPERATING PROCEDURE 15: STORAGE AND MAINTENANCE OF MUNICIPAL VEHICLES AND EQUIPMENT
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



- Carefully transfer collected fluids from containers into designated storage areas as soon as possible.
- Store new and used batteries securely to avoid breakage. Store indoors or in secondary containment to contain potential acid leaks. Recycle used batteries.
- Conduct periodic inspections of storage areas to detect possible leaks.
- Do not wash or hose down storage areas unless there is prior approval to collect and discharge the water into the sanitary sewer. Use dry cleanup methods whenever possible.
- Keep lids on containers. Store them indoors or under cover to reduce exposure to rain.
- Inspect and maintain all pretreatment equipment, including interceptors, according to the manufacturer's maintenance schedule and at least once per year.
- Proper spill protocol should be followed to prevent chemicals from entering the stormwater system. Follow the procedures in SOP 13: Spill Prevention, Response, and Clean-up.

INSPECTION PROCEDURES

- Identify locations of floor drains and catch basins and know where they discharge to. Floor drains should be connected to a holding tank and catch basins should be connected to the stormwater drainage system. This is best conveyed with a facility map.
- Regularly inspect vehicles and equipment for leaks and repair immediately.
- Inspect fuel storage tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
- Inspect fueling areas, catch basin inserts, containment areas, and drip pans on a regular schedule.

MAINTENANCE PROCEDURES

- If it is paved, sweep the maintenance area on a regular basis to collect loose particles. Wipe up spills with rags and other absorbent material immediately. Do not hose down the area to a storm drain.
- Clean oil/water separators, sumps, and on-site treatment/recycling units according to manufacturer's recommendations that include cleaning intervals, methods, and supplies.
- Keep ample supplies of spill cleanup materials onsite. Clean up spills immediately.
- Properly train employees on fueling and handling oil and waste oil as described in SOP 11: Use, Storage, and Disposal of Petroleum and Hazardous Materials. .

TRAINING

Employees who perform work on/with municipal vehicles are trained **once per year** on this procedure and the proper operation of equipment. Employees are also trained on stormwater pollution prevention, spill and response, and illicit discharge detection and elimination procedures.

REVISING THE SOP

These procedures are reviewed **once per year** and updated as needed.

STANDARD OPERATING PROCEDURE 16: VEHICLE AND EQUIPMENT WASHING
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



DESCRIPTION: Wash water from vehicle and equipment cleaning activities performed outdoors or in areas where wash water flows onto the ground can contribute toxic hydrocarbons and other organic compounds, oils and greases, nutrients, phosphates, heavy metals, and suspended solids to stormwater runoff.

Implement applicable suggested Standard Operating Procedures (SOPs) to reduce the influx of pollutants to the stormwater drainage system to the maximum extent practicable.

TARGETED CONSTITUENTS:

- Sediment
- Nutrients
- Trash
- Metals
- Oil & Grease
- Organics

STRUCTURAL CONTROLS:

- Mark the area clearly as a wash area.
- Post signs stating washing is allowed in wash area and that discharges to the storm drain are prohibited. Facility employees should know where catch basins are.
- Provide a trash container in wash area
- All vehicle washing from an area that discharges to floor drains must discharge to a gas, sand, and oil separator for pretreatment before discharging to the sanitary sewer system per Massachusetts Plumbing Code 248 C.M.R. 10.09 (1) (b).
- All vehicle washing must discharge to a sanitary sewer system or into a holding tank. Vehicle washing discharged to the drainage system is an illicit (illegal) discharge. Discharge into any Title 5 septic system is also prohibited.

OPERATIONAL BEST MANAGEMENT PRACTICES:

- If possible, take vehicles to a commercial car wash where wash water is properly treated and does not enter the storm drainage system.
- Consider washing vehicles and equipment inside the building if washing/cleaning must occur on-site.
- Use hoses with nozzles that automatically turn off when left unattended. Use high-pressure, low-volume sprays.
- Avoid detergents as much as possible. If detergents are necessary, use a biodegradable, phosphate free detergent such as Zep-O-Shine™
- Perform pressure cleaning and steam cleaning off-site to avoid generating runoff with high pollutant concentrations. If done on-site, no pressure cleaning and steam cleaning should be done in areas designated as protection areas for public water supply.
- Inspect floor drain systems and holding tanks regularly.
- Identify the need for cleaning of catch basins and gas, sand, and oil separators or oil/water separators.
- Maintain a map of on-site storm drain locations to avoid discharges to the storm drainage system.
- Take precautions against excess use of and spillage of detergents.
- Clean vehicles only where wastes can be captured for proper disposal.

Outdoor Vehicle Washing

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:

- Avoid discharge of any wash water directly to a surface water (e.g., stream, pond, drainage swale, etc.)
- Minimize use of water to the extent practical.
- Where use of detergent cannot be avoided, use products that do not contain regulated contaminants. Use of a biodegradable, phosphate-free detergent is preferred.
- Do not use solvents except in dedicated solvent parts washer systems or in areas not connected to a sanitary sewer.
- Do not power wash, steam clean or perform engine cleaning or undercarriage cleaning.
- 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.
- 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 Filtrex™ FilterSoxx product, or equal. The treatment device shall be positioned such that all drainage must flow through the device, preventing bypassing or short-circuiting.
- All adjacent engineered storm drain system catch basins shall have a sump. These structures shall be cleaned periodically (refer to SOP 1: Catch Basin Cleaning).
- Solids and particulate accumulation from the washing area shall be completed through periodic sweeping and/or cleaning.
- 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 13: Spill Prevention, Response, and Clean-Up Procedures.
- Heavily soiled vehicles or vehicles dirtied from salting or snow removal efforts shall not be washed outside, without exception.

Indoor Vehicle Washing

- Where use of detergent cannot be avoided, use products that do not contain regulated contaminants. Use of a biodegradable, phosphate-free detergent is preferred.
- 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.
- Designate separate areas for routine maintenance and vehicle cleaning. This helps prevent contamination of wash water by motor oils, hydraulic lubricants, greases, etc. If using degreasers, use quick-break degreasers.
- Dry clean-up methods, such as sweeping and vacuuming, are recommended within garage facilities. Do not wash down floors and work areas with water.
- Bring smaller vehicles to commercial washing stations if possible.
- Maintain absorbent pads and drip pans to capture and collect spills or noticeable leaks observed during washing activities. Clean up any spills as described in SOP 13: Spill Prevention, Response, and Clean-Up Procedures.
- Refer to SOP 9 for oil/water separator maintenance.

STANDARD OPERATING PROCEDURE 16: VEHICLE AND EQUIPMENT WASHING

TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS



Heavy Equipment Washing

- Mud and heavy debris removal shall occur on impervious pavement or within a retention area.
- Maintain these areas with frequent mechanical removal and proper disposal of spoils.
- All adjacent engineered storm drain system components shall have a sump. These structures shall be cleaned periodically (refer to SOP 1: Catch Basin Cleaning).
- Impervious surfaces with engineered storm drain systems shall not discharge directly to a surface water.
- 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.
- Where use of detergent cannot be avoided, use products that do not contain regulated contaminants. Use of a biodegradable, phosphate-free detergent is preferred.
- 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 13: Spill Prevention, Response, and Clean-up Procedures.
- Refer to SOP 9 for oil/water separator maintenance.

Engine Washing and Steam Washing

- Do not wash parts outdoors.
- 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 13: Spill Prevention, Response, and Clean-up Procedures.
- Where use of detergent cannot be avoided, use products that do not contain regulated contaminants. Use of a biodegradable, phosphate-free detergent is preferred.
- Avoid cleaning with solvents except in dedicated solvent parts washer systems. Make use of pressure washing and steam cleaning.
- Recycle clean solutions and rinse water to the extent practicable.
- 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 9: Oil/Water Separator Maintenance for more information).

DISPOSAL OF WASH WATER

- Filter and recycle wash water if possible.
- If discharging to a gas, sand, and oil separator, do not use detergents that disperse oil in wash water and make separators ineffective with oil passing to the sanitary sewer system.
- It is best to use high pressure water with no cleaning agent. If one is not recommended for discharges pretreated by an oil/water separator, use a non-emulsifying cleaner such as Landa L-215 or "Quick Oil Release".

Tighe&Bond

APPENDIX D

Appendix D
Forms and Record Keeping

| General Information | |
|--|--|
| Date of Inspection: | Time of Inspection: |
| Name and Title of Inspector(s): | |
| Contact Information of Inspector: | |
| Signature of Inspector: | |
| Inspection Period: <i>Inspections shall be conducted at least once each calendar quarter. At least one of the quarterly inspections shall occur during a period when a stormwater discharge is occurring.</i> | |
| <input type="checkbox"/> 1 st Quarter (July through September) | <input type="checkbox"/> 3 rd Quarter (January through March) |
| <input type="checkbox"/> 2 nd Quarter (October through December) | <input type="checkbox"/> 4 th Quarter (April through June) |
| Weather Information | |
| Weather at time of this inspection: | |
| <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snow <input type="checkbox"/> High Winds <input type="checkbox"/> Other: _____ | |
| Temperature: | |
| Discharge Information | |
| Have any previously unidentified discharges of pollutants from the site occurred since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| If yes, describe: | |
| Are there any discharges occurring at the time of inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| If yes, describe: | |



Control Measures Needing Maintenance or Repairs

| Structural Control Measure | Specific Inspection Notes | Control Measure is Operating Effectively? | If No, In Need of Maintenance, Repair, or Replacement? | Corrective Action Needed and Notes |
|----------------------------|---|---|---|---|
| Catch Basins | <p>Are any sumps more than 50% full of material? <input type="checkbox"/>Yes <input type="checkbox"/>No <i>If yes, clean ASAP.</i></p> <p>Are any of the following present? Sewage odor <input type="checkbox"/>Yes <input type="checkbox"/>No Suds <input type="checkbox"/>Yes <input type="checkbox"/>No Bulk material/trash <input type="checkbox"/>Yes <input type="checkbox"/>No Any structural issues? <input type="checkbox"/>Yes <input type="checkbox"/>No</p> | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement | <p><i>Indicate CBs requiring corrective action on Site Plan on p.5.</i></p> |
| Grass Swales | <p>Is there sediment, debris, or trash obstructing flow that needs to be removed? <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>Is grass well established? <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>Is grass being mowed at least twice per year? <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>Signs of rill formation or gullyng (i.e., slope erosion)? <input type="checkbox"/>Yes <input type="checkbox"/>No</p> | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement | |
| Detention Basin | <p>Is the outlet structure clogged? <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>Is grass being mowed and trash and debris removed at least twice per year? <input type="checkbox"/>Yes <input type="checkbox"/>No</p> <p>Is sediment being removed at least once every five years? <input type="checkbox"/>Yes <input type="checkbox"/>No</p> | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement | |



QUARTERLY INSPECTION FORM
 EAST LONGMEADOW DPW GARAGE SWPPP

| Structural Control Measure | Specific Inspection Notes | Control Measure is Operating Effectively? | If No, In Need of Maintenance, Repair, or Replacement? | Corrective Action Needed and Notes |
|--|--|---|---|--|
| Outfall PB-095: [40" RCP passing under Mass Electric parcel on the north side of the site] <i>One quarterly inspection per year is to be completed while stormwater discharge is occurring</i> | Is there dry weather flow (≥ 24 hrs no rain)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A – inspection not conducted during dry conditions If flowing, collect a grab sample in a clear container and visually inspect. Note any of the following: <input type="checkbox"/> Color <input type="checkbox"/> Low clarity <input type="checkbox"/> Odor <input type="checkbox"/> Oil sheen <input type="checkbox"/> Floating solids <input type="checkbox"/> Settled solids <input type="checkbox"/> Suspended solids <input type="checkbox"/> Foam <input type="checkbox"/> Other obvious indicators of stormwater pollution | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Maintenance <input type="checkbox"/> Repair <input type="checkbox"/> Replacement | Probable source of any observed contamination (if known): <hr/> |
| Notes: | | | | |



Areas of Industrial Materials or Activities Exposed to Stormwater

| Area/Activity | Inspected? | Specific Inspection Notes | Controls Adequate (appropriate, effective, and operating)? | Corrective Action Needed and Notes |
|---|---|--|---|------------------------------------|
| Material loading/ unloading and stockpile areas | <input type="checkbox"/> Yes <input type="checkbox"/> No | Waste on ground? <input type="checkbox"/> Yes <input type="checkbox"/> No General cleanliness: <input type="checkbox"/> Good <input type="checkbox"/> Bad | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Equipment operations and maintenance areas | <input type="checkbox"/> Yes <input type="checkbox"/> No | General cleanliness: <input type="checkbox"/> Good <input type="checkbox"/> Bad | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Solid waste handling and disposal areas | <input type="checkbox"/> Yes <input type="checkbox"/> No | Dumpsters/trash covered and in good condition? <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Salt and sand storage area | <input type="checkbox"/> Yes <input type="checkbox"/> No | Large quantity of salt on ground outside shed? <input type="checkbox"/> Yes <input type="checkbox"/> No General cleanliness: <input type="checkbox"/> Good <input type="checkbox"/> Bad | <input type="checkbox"/> Yes <input type="checkbox"/> No | |

Overall Site Walkthrough

Any signs of spill or leaks Yes No Any erosion problems Yes No Any housekeeping problems Yes No

Describe any additional control measures needed to reduce potential for pollution or improve good housekeeping:

Other Notes

Use this space and the Site Plan on the back for any additional notes or observations from the inspection:



SWPPP AMENDMENT LOG
EAST LONGMEADOW DPW GARAGE SWPPP

Tighe&Bond

| Amend. No. | Description of the Amendment | Date of Amendment | Amendment Prepared by (Name/Signature) |
|------------|------------------------------|-------------------|--|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |





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