Town of East Longmeadow, Massachusetts

Municipal Facilities and Activities Inventory and Operations & Maintenance Plan

NPDES Permit # MAR041005

June 2020

Tighe&Bond
Engineers | Environmental Specialists

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Commonly Used Abbreviations	Definitions
AST	Above-ground Storage Tank
BMP	Best Management Practice
CWA	Clean Water Act
DPW	Department of Public Works
EPA	[United States] Environmental Protection Agency
FY	Fiscal Year
GIS	Geographic Information System
GW	[Public Community] Groundwater System
IDDE	Illicit Discharge Detection and Elimination
MassDEP	Massachusetts Department of Environmental Protection
MassDOT	Massachusetts Department of Transportation
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
NHESP	Natural Heritage and Endangered Species Program
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NTNC	Non-Transient Non-Community Water System
O&M	Operations and Maintenance
ORW	Outstanding Resource Water
SOP	Standard Operating Procedure
SPCC	Spill Prevention, Control, and Countermeasures
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan
SWSC	Springfield Water and Sewer Commission
TMDL	Total Maximum Daily Load
TNC	Transient Non-Community Water System

Section 1
Introduction

This Good Housekeeping and Pollution Prevention Municipal Facilities and Activities Operations and Maintenance (O&M) Plan was prepared to formalize practices and present a consistent framework for use town-wide among staff in various departments, boards, and commissions. This plan applies to all town-owned and/or operated buildings and facilities, parks and open space, vehicles and equipment, drainage infrastructure, and wastewater assets. The plan identifies municipal activities with a range of pollution potential, provides Standard Operating Procedures (SOPs) to address activities and pollutants of concern, and establishes responsibilities and schedules for implementation.

1.1 Regulatory Overview

The U.S. Environmental Protection Agency (EPA) nationally regulates the discharge of stormwater runoff that is transported into local water bodies through Municipal Separate Storm Sewer Systems (MS4) that are located in Urbanized Areas (also known as "regulated areas"). The Town of East Longmeadow meets EPA's regulatory threshold, and therefore is required to be covered under a National Pollutant Discharge Elimination System (NPDES) permit for its stormwater discharges from the MS4 in its Urbanized Area.

Figure 1.1 to the right presents a map prepared by EPA Region 1 showing East Longmeadow's Urbanized Area based on the 2000 census and the 2010 census.[1] As illustrated by the red hatching, East Longmeadow is considered to be nearly entirely urbanized area regulated under the MS4 program, with the exception of the corner of Town southeast of Pease Road near the Elmcrest Country Club.

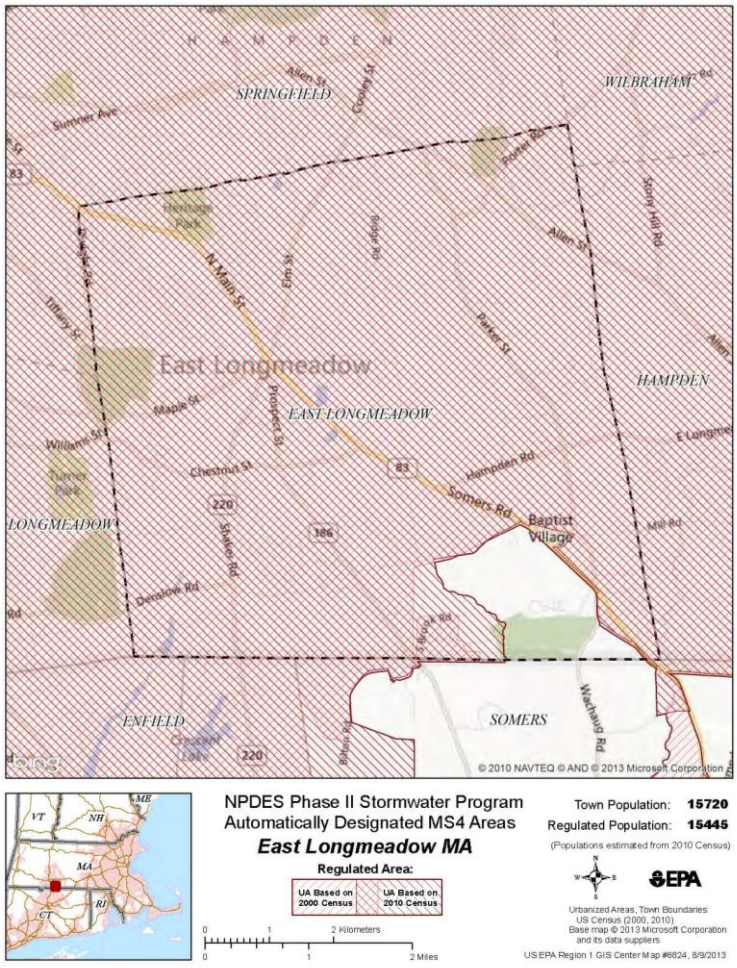


Figure 1.1. East Longmeadow's Urbanized Area based on the 2000 and 2010 Census

[1] NPDES Phase II Stormwater Program Automatically Designated MS4 Areas: East Longmeadow, MA: https://www3.epa.gov/region1/npdes/stormwater/ma/ram/east-longmeadow.pdf

In Massachusetts, the EPA Region 1 and the Massachusetts Department of Environmental Protection (MassDEP) jointly administer the municipal stormwater program. EPA and MassDEP originally authorized East Longmeadow to discharge stormwater in 2003 under a NPDES General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems, known as the "2003 Small MS4 General Permit."

The 2003 Small MS4 General Permit expired in May 2008, but remained in full force and effect until the 2016 replacement permit became effective on July 1, 2018. The reissued NPDES *General Permit for Stormwater Discharges from Small MS4 in Massachusetts*[2] (known as the "2016 Small MS4 General Permit") substantially increases stormwater management requirements and mandates specific timelines for compliance relative to the 2003 Small MS4 General Permit.

The Town of East Longmeadow submitted a Notice of Intent (NOI) to EPA and MassDEP on September 28, 2018 for coverage under the 2016 Small MS4 General Permit,[3] and the Town's Authorization to Discharge Stormwater was issued by EPA and MassDEP on April 5, 2019.[4]

The Town of East Longmeadow has developed a Stormwater Management Program (SWMP) consistent with the requirements of the 2016 Small MS4 General Permit[5], which is updated annually. The SWMP contains six elements called minimum control measures (MCMs) that, when implemented, should result in a significant reduction in pollutants discharged into receiving waters:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management
6. Good Housekeeping and Pollution Prevention

This O&M Plan was developed to be consistent with the requirements of the sixth MCM, Good Housekeeping and Pollution Prevention in Town-Owned Operations.

[2] General Permits For Stormwater Discharges From Small Municipal Separate Storm Sewer Systems In Massachusetts (2016): https://www3.epa.gov/region1/npdes/stormwater/ma/2016fpd/final-2016-ma-sms4-gp.pdf

[3] NPDES Permit ID# MA041005, Town of East Longmeadow, Notice of Intent for Coverage under Small MS4 General Permit: https://www3.epa.gov/region1/npdes/stormwater/ma/tms4noi/east-longmeadow.pdf

[4] NPDES Permit ID# MA041005, Town of East Longmeadow, Authorization to Discharge Stormwater, https://www3.epa.gov/region1/npdes/stormwater/ma/tms4noi/east-longmeadow-auth.pdf

[5] Town of East Longmeadow SWMP (last updated June 2019): https://www.eastlongmeadowma.gov/DocumentCenter/View/8316/Stormwater-Management-Plan

1.2 Local Conditions Driving Pollution Prevention and Good Housekeeping in Municipal Operations

Preservation of water resources within the Town of East Longmeadow is critical to maintaining the community's overall character and economy. Preventing pollution and practicing good housekeeping procedures in municipal operations and at municipal facilities will support this goal by:

- Preserving the water quality of lakes and streams for public health, recreation, and wildlife habitat
- Providing a sustainable, high-quality drinking water source for residents, institutions and commercial establishments
- Operating and maintaining East Longmeadow's drainage system to protect public health and property
- Complying with federal, state, and local environmental regulations such as the NPDES permits, Massachusetts Stormwater Management Standards, Massachusetts Wetlands Protection Act, the East Longmeadow Conservation Commission Bylaw, the Total Maximum Daily Load (TMDL) provisions of the Clean Water Act, and the Safe Drinking Water Act

Priority resource areas for operations and maintenance of town-owned and operated facilities and municipal activities include drinking water resources, and wetlands and vernal pools. **Figure 1.2** shows the location and extent of these priority resource areas.

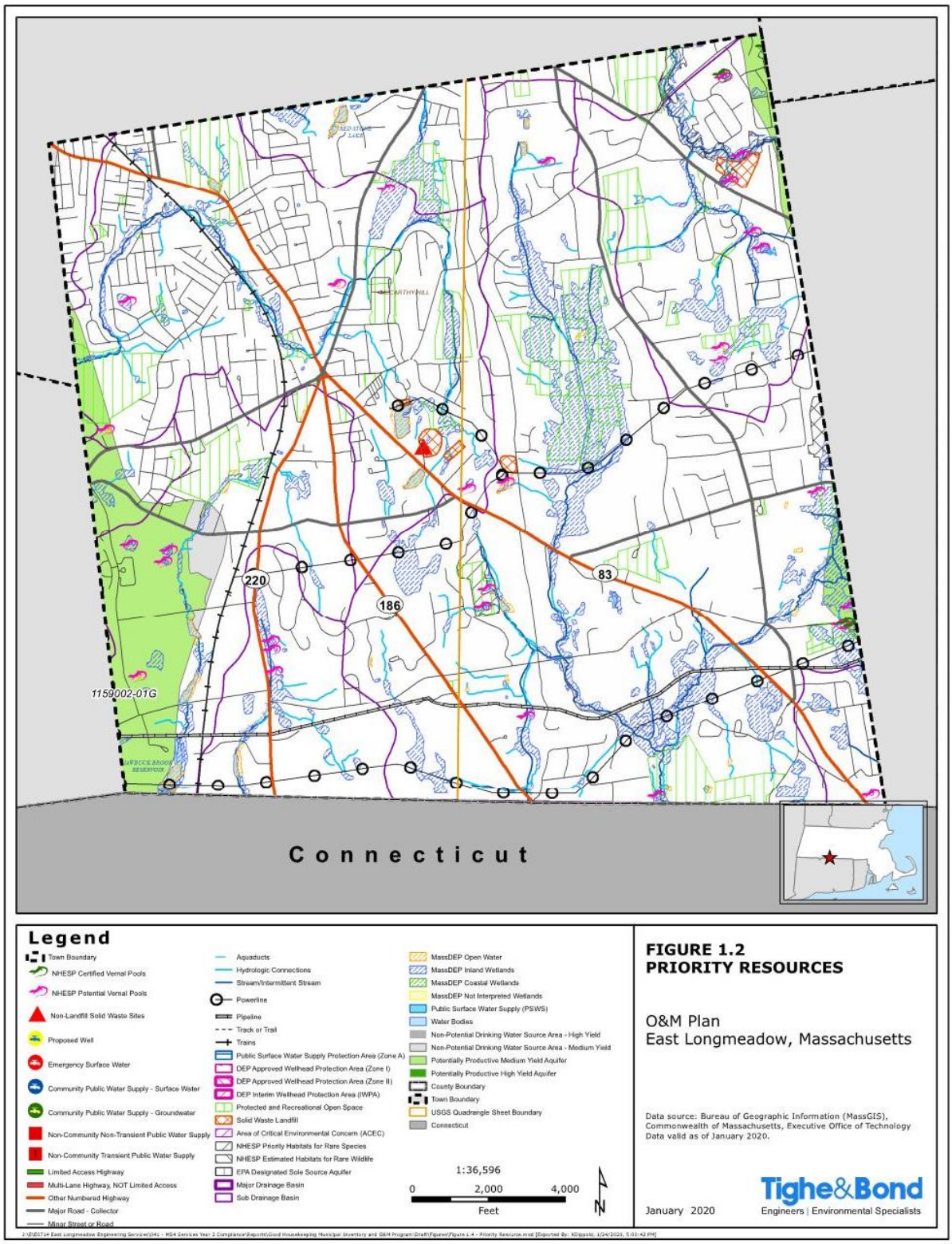


Figure 1.2. Priority resources in the Town of East Longmeadow, Massachusetts.

1.2.1 Areas of High Environmental Value

1.2.1.1 Drinking Water Sources

The Town of East Longmeadow purchases its drinking water supply in wholesale from the Springfield Water and Sewer Commission (SWSC). Raw water is supplied by the Cobble Mountain Reservoir and the Borden Brook Reservoir located in Blandford and Granville, Massachusetts, respectively. Water from the Borden Brook Reservoir feeds into the Cobble Mountain Reservoir and flows to the West Parish Water Treatment Plant in Westfield, Massachusetts for filtration and chlorination. Treated water is then stored in underground storage tanks in Provin Mountain, Agawam and distributed to surrounding communities through a vast water distribution network. The Town has four connections to draw from the SWSC treated water supply. These connections are located on Elm Street, Harkness Avenue, North Main Street, and Dwight Road. While the water is treated by the SWSC, the water distribution system in East Longmeadow is maintained by the Town Department of Public Works (DPW).

Figure 1.3. Harkness Avenue Water Pump Station.

There are no public community groundwater (GW), non-transient, non-community (NTNC), or transient non-community (TNC) water systems mapped in East Longmeadow, or any associated wellhead protection areas (WPAs) per MassGIS. Per MassGIS, a high yield aquifer is mapped in the southwest corner of the Town, but the aquifer is not currently in use as a drinking water supply.

1.2.1.2 Outstanding Resource Waters (ORWs) and Wetland Resources

As shown on Figure 1.2, the Town of East Longmeadow has 3 vernal pools that have been certified by the Natural Heritage and Endangered Species Program (NHESP), which are considered ORWs. Additionally, East Longmeadow has numerous wetland resources and 30 potential vernal pools.

1.2.2 Impaired Waterbodies

In fulfillment of requirements of the Clean Water Act (CWA), the *Massachusetts Year 2016 Integrated List of Waters*[6] identifies waterbodies that are not expected to meet surface water quality standards and prioritizes and schedules those waterbodies that require the derivation of TMDLs. The *Massachusetts Year 2016 Integrated List of Waters* assigns each waterbody one of the following categories:

- Category 1: Waters attaining all designated uses
- Category 2: Attaining some uses, other uses not assessed
- Category 3: No uses assessed
- Category 4a: TMDL is completed
- Category 4b: Impairment controlled by alternative pollution control requirements
- Category 4c: Impairment not caused by a pollutant – TMDL not required
- Category 5: Waters requiring a TMDL

Per the *Massachusetts Year 2016 Integrated List of Waters*, there are no waterbodies within the Town of East Longmeadow listed as impaired.

1.2.3 Waterbodies with a Total Maximum Daily Load

East Longmeadow's MS4 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 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.

1.3 Operation and Maintenance Plan Development

To prepare this O&M Plan, Tighe & Bond worked closely with Town of East Longmeadow staff to develop an inventory of municipal facilities, infrastructure, vehicles and equipment, and operations, and site visits were conducted.

The pollution prevention and good housekeeping controls outlined in this document and referred to as SOPs, are standard operating procedures for Town of East Longmeadow personnel and for use at all applicable town-owned facilities. These SOPs are intended to serve as guidance on good housekeeping practices as they relate to reducing pollutants in runoff from municipal operations.

The targeted facilities include specific locations owned and operated by the Town of East Longmeadow at which municipal activities have the potential to contribute pollutants to stormwater. To create the initial inventory, a list of town-owned parcels was obtained using the MassGIS Assessor's database. A category was assigned to each parcel (e.g., buildings, schools, public safety, cemetery, etc.) based on what activities may occur on the site that have the potential to contribute pollution to stormwater runoff.

[6] *Massachusetts Year 2016 Integrated List of Waters:*
https://www.mass.gov/doc/final-massachusetts-year-2016-integrated-list-of-waters/download

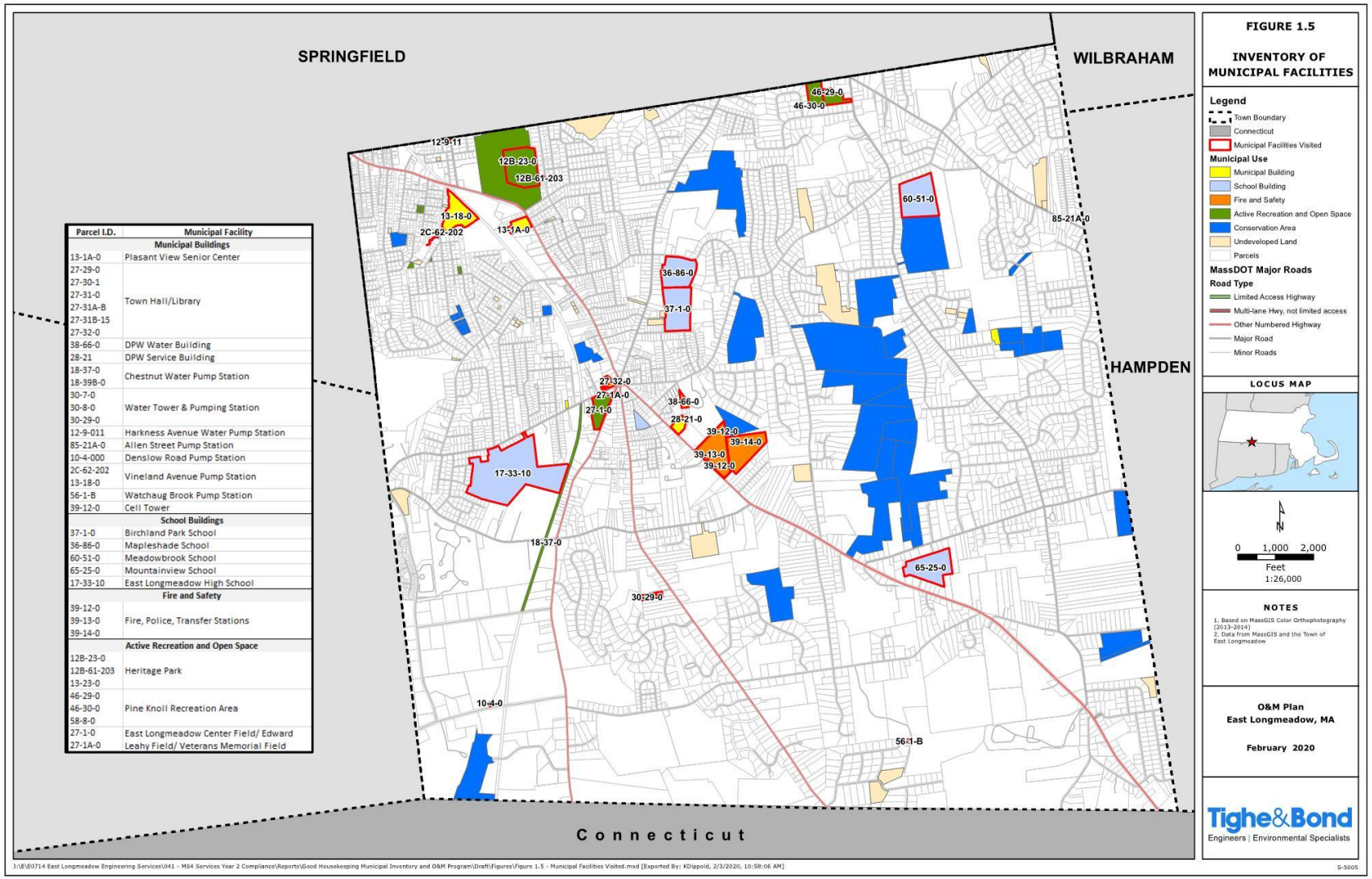
Tighe & Bond gathered publicly available data about each site including the area of buildings, parking, and wastewater disposal type (septic or sewer). The following key features were inventoried during Tighe & Bond's site visit:

- Catch basins and outfalls
- Stockpiled soil, gravel, or sand
- Heating type
- Above ground storage tanks (ASTs)
- Generators
- Waste management (trash)
- Pet waste
- Chemical storage
- Floor drains
- Equipment / vehicle washing
- Equipment / vehicle storage
- Equipment / vehicle maintenance
- Irrigation
- Fertilizer and/or herbicide use
- Structural stormwater best management practices (BMPs)

Figure 1.4: Examples of Key Features Inventoried during site visits: generators (left, at the DPW Service Building) and waste management (right, at the Police Station)

Based on these categories, Tighe & Bond staff, accompanied by the Town of East Longmeadow DPW Assistant Superintendent, Tom Christensen and Joe Dunn, visited the municipal buildings, schools, libraries, public safety complex, cemeteries, and parks and open space areas with active and passive use on December 5, 2019. **Figure 1.5** shows the locations of sites visited.

This manual is intended to be a "living document" that is updated as needed to meet the Town's needs while striving to reduce pollution "to the maximum extent practicable" under the 2016 Small MS4 General Permit. When updates to this document occur, a summary of changes should be included in Annual Reports provided to the MassDEP and the EPA in compliance with the 2016 Small MS4 General Permit.



Parcel I.D.	Municipal Facility
	Municipal Buildings
13-1A-0	Plasant View Senior Center
27-29-0 27-30-1 27-31-0 27-31A-B 27-31B-15 27-32-0	Town Hall/Library
38-66-0	DPW Water Building
28-21	DPW Service Building
18-37-0 18-39B-0	Chestnut Water Pump Station
30-7-0 30-8-0 30-29-0	Water Tower & Pumping Station
12-9-011	Harkness Avenue Water Pump Station
85-21A-0	Allen Street Pump Station
10-4-000	Denslow Road Pump Station
2C-62-202	Vineland Avenue Pump Station
13-18-0	
56-1-B	Watchaug Brook Pump Station
39-12-0	Cell Tower
	School Buildings
37-1-0	Birchland Park School
36-86-0	Mapleshade School
60-51-0	Meadowbrook School
65-25-0	Mountainview School
17-33-10	East Longmeadow High School
	Fire and Safety
39-12-0 39-13-0 39-14-0	Fire, Police, Transfer Stations
	Active Recreation and Open Space
12B-23-0 12B-61-203 13-23-0	Heritage Park
46-29-0 46-30-0 58-8-0	Pine Knoll Recreation Area
27-1-0	East Longmeadow Center Field/ Edward
27-1A-0	Leahy Field/ Veterans Memorial Field

Section 2
Municipal Activities and Associated Potential Pollutants

Numerous activities on municipally-owned parcels and various municipal operations have potential to contribute pollutants to stormwater runoff. For example, in parks and open space, there is the potential for pet waste, littering, mowing, landscaping, and chemical application, which may contribute pollutants such as bacteria, trash, nutrients, pesticides, and other toxins to stormwater runoff.

Figure 2.1: Ballfields at Heritage Park are mowed and irrigated (left) and the parking area at Mountainview School is deiced (right).

Management of municipal facilities, such as building repairs and maintenance, parking lot repairs, and loading, unloading, and storage of chemicals, materials, and oil/fuel have the potential to contribute sediment, metals, hydrocarbons, toxins, and numerous other pollutants to stormwater runoff. Even winter operations such as deicing and snow removal can contribute sodium chloride to the environment. Construction, if not properly managed, can also cause significant sediment and nutrient loading to the environment.

Tables 2-1 and 2-2 summarize the potential pollutants likely associated with municipal facility activities. These tables were adapted from the California Stormwater Quality Association Municipal Best Management Practices (BMP) Handbook[7] and Manual 9: Municipal Pollution Prevention/Good Housekeeping Practices of the Center for Watershed Protection's Urban Subwatershed Restoration Manual Series[8].

[7] California Stormwater Quality Association Municipal BMP Handbook source: https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook

[8] Novotney, M., Winer, R. 2008. Manual 9: Municipal Pollution Prevention/Good Housekeeping Practices. Urban Subwatershed Restoration Manual Series. Center for Watershed Protection: https://owl.cwp.org/mdocs-posts/urban-subwatershed-restoration-manual-series-manual-9/

Table 2-1
Potential Pollutants Likely Associated with Specific Municipal Facilities - Overview

Municipal Facility Activity	Potential Pollutants								
	Sediment	Nutrients	Trash	Metals	Bacteria & Pathogens	Oil & Grease	Organics	Pesticides	Toxins
Building Maintenance	●			●			●		
Building Repair	●		●	●		●			
Chemical Loading, Unloading, Storage						●		●	●
Construction	●	●	●	●		●			
Grounds Maintenance and Repair	●	●	●	●	●	●	●	●	●
Outdoor Container Storage of Liquids		●		●		●	●	●	
Outdoor Loading / Unloading of Materials	●					●			
Outdoor Process Equipment	●		●	●		●	●		
Outdoor Storage of Raw Materials	●	●	●			●	●	●	●
Parking Lot Maintenance	●	●	●	●	●	●	●		
Salt Storage									●
Septic System		●		●	●	●	●		●
Snow Dumping	●	●		●		●			
Solid Waste Management	●	●		●	●	●			
Vehicle and Equipment Fueling			●	●		●	●		●
Vehicle and Equipment Maintenance and Repair				●		●	●		●
Vehicle and Equipment Storage				●		●	●		
Vehicle and Equipment Washing	●	●	●	●		●	●		●
Waste Handling and Disposal	●	●	●	●	●	●	●	●	
Waste Oil Storage, Handling, and Disposal						●			●

Table 2-2
Potential Pollutants Likely Associated with Specific Municipal Activities

Municipal Program	Activities	Potential Pollutants								
		Sediment	Nutrients	Trash	Metals	Bacteria & Pathogens	Oil & Grease	Organics	Pesticides	Toxins
Roads, Streets, and Highways Operation and Maintenance	Sweeping and Cleaning	●		●	●		●			
	Street Repair, Maintenance, Striping / Painting	●		●	●		●	●		
	Bridge and Structure Maintenance	●		●	●		●	●		
Plaza, Sidewalk, and Parking Lot Maintenance and Cleaning	Surface Cleaning	●	●			●	●			
	Graffiti Cleaning	●	●		●			●		●
	Sidewalk Repair	●		●						
	Controlling Litter	●		●		●	●			
Landscape Maintenance	Mowing / Trimming / Planting	●	●	●		●			●	
	Fertilizer & Pesticide Management	●	●						●	
	Landscape Waste Management			●					●	
	Erosion Control	●	●							
Drainage System Operation and Maintenance	Inspection and Cleaning of Stormwater Conveyance Structures	●	●	●		●		●		
	Controlling Illicit Connections and Discharges	●	●	●	●	●	●	●	●	

Municipal Program	Activities	Potential Pollutants								
		Sediment	Nutrients	Trash	Metals	Bacteria & Pathogens	Oil & Grease	Organics	Pesticides	Toxins
	Controlling Illegal Dumping	●	●	●	●	●	●	●	●	
	Maintenance of Catch Basins and Outfall Structures	●		●	●		●			
Waste Handling and Disposal	Solid Waste Collection		●	●	●	●	●	●		●
	Waste Reduction and Recycling			●	●					●
	Household Hazardous Waste Collection			●	●		●	●	●	●
	Leaf and Landscape Waste Collection	●	●	●		●			●	
	Controlling Litter			●	●	●		●		
	Controlling Illegal Dumping	●		●		●	●		●	
Water and Sewer Utility Operation and Maintenance	Water Line Maintenance	●				●	●			
	Septic System Maintenance		●		●	●	●	●		●
	Spill/Leak/Overflow Control, Response, and Containment	●	●			●		●		●
Winter Operations	Snow Removal and Storage	●	●	●			●			●
	De-icing	●								●

The impacts of various pollutants in stormwater runoff in water quality are described in **Table 2-3**. Text included in this table is from the California Stormwater Quality Association Stormwater BMP Handbook for New Development and Redevelopment.[9]

Table 2-3
Stormwater Runoff Pollutant Impacts on Water Quality

	**Sediment** 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 that are attached to it including nutrients, trace metals, and hydrocarbons. Sediment is the primary component of total suspended solids, a common water quality analytical parameter.
	**Nutrients** 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 (a form of nitrogen) can be toxic to fish.
	**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. Such substances may harbor bacteria, viruses, vectors, and depress the dissolved oxygen levels in streams and lakes, sometimes causing fish kills.
	**Metals** Metals including lead, zinc, cadmium, copper, chromium, and nickel are commonly found in stormwater. Many artificial surfaces (e.g., galvanized metal, paint, automobiles, or preserved wood) contain metals, which enter stormwater as those surfaces corrode, flake, dissolve, decay, or leach. Over half the trace metal load carried in stormwater is associated with sediments. Metals are toxic to aquatic organisms, can bioaccumulate (accumulate to toxic levels in aquatic animals), and have the potential to contaminate drinking water supplies.
	**Bacteria and Viruses** Bacteria and viruses are common contaminates 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.

[9] California Stormwater Quality Association Stormwater BMP Handbook for New Development and Redevelopment source: https://www.casqa.org/resources/bmp-handbooks/new-development-redevelopment-bmp-handbook

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.

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 harm to waterways.

Pesticides

Pesticides (including herbicides, fungicides, rodenticides, and insecticides) have been repeatedly detected in stormwater at toxic levels, even when they have been applied in accordance with label instructions. As pesticide use has increased, so 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.

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 BMPs for 72 hours or more, thus providing a source for vector habitat and reproduction.

Section 3 Inventory of Municipal Facilities and Assets

The Town of East Longmeadow owns and maintains approximately 127 individual parcels of land within the Town, ranging in size from 0.03 acres to 62.73 acres. Operation and maintenance activities at each of these locations have the potential to cause pollution in stormwater runoff. **Appendix B** contains a list of each town-owned parcel categorized by type or use. The town inventory includes:

- Municipal offices
- Public library
- Public schools
- DPW buildings, garage, and yard
- Police Department building
- Fire Department building
- Historical Society building
- Parks, playgrounds, and open space
- Transfer Station and Recycling Center
- Water supply infrastructure
- Wastewater infrastructure
- Stormwater infrastructure
- Parking lots
- Vacant land

Water infrastructure includes all of the pump stations, pipes, and manholes associated with drinking water distribution. Wastewater infrastructure includes all of the manholes, storage, pumping, and treatment facilities associated with wastewater collection and treatment. Stormwater infrastructure includes all of the catch basins, outfalls, pipes, and best management practices associated with stormwater collection and treatment.

3.1 Parks and Open Space

There are numerous parks and extensive open space lands within the Town of East Longmeadow. These lands are owned by various entities and are under different levels of protection (e.g., permanently protected, unprotected, conservation restriction, etc.). The Town of East Longmeadow owns a number of parks and open space lands that are actively used or actively managed. A map showing the municipally-owned and managed parks and open space is included in **Appendix A**. **Appendix B** provides a complete inventory listing of these lands. **Appendix C** includes photographs of individual properties and facilities.

Table 3-1 lists parks and other open space that are utilized by the public and therefore have the potential for pollution from pet waste or trash, and also lists areas that are actively managed by the Town of East Longmeadow (e.g., mowing, lawn maintenance, landscaping, and/or pesticide/herbicide/fertilizer application). The inventory is up to date as of December 2019.

There are a number of town-owned parcels that are undeveloped. These are included on the list for completeness, however, most of these properties are not currently actively maintained nor are they actively used by the public. Note that there are no Town-owned or maintained cemeteries.

Table 3-1
Inventory of Parks and Open Space

Parcel I.D.	Name	Address	Responsible Board / Department	Size (acres)
Active Recreation and Open Space				
12B-23-0 12B-61-203 13-23-0	Heritage Park	Gates Ave 391 North Main St	Recreation	65.71
46-29-0 46-30-0 58-8-0	Pine Knoll Recreation Area	Parker St 1974 Allen St	Recreation	10.23
27-1-0 27-1A-0	Center Field / Leahy Field / Veterans Memorial Field	Shaker Rd	Recreation	8.11
2B-6-441 2B-7-444 2B-19-450	Albert Tranghese Playground	Euclid Ave Mereline Ave 51 Lombard Ave	Recreation	0.75
18-40-0 19-33-0 27-181-0	Bike Trail	Chestnut St Industrial Dr Maple St		8.25
Designated Open Space				
26-18-0	Calkins Avenue Conservation Area	Calkins Ave	Conservation	5.50
50-48-0 51-12-0 63-10B-0	Campbell Conservation Area	Kibbe Rd Rear Fernwood Dr	Conservation	72.04
73-42-0	Charles Buckingham Conservation Area	Tanglewood Dr	Conservation	8.66
61-66-0	Craven Conservation Area	Parker St	Conservation	22.81
15B-7-283	Grove Conservation Area	Grove Ave	Conservation	1.37
90-7-0	Hampden Road Conservation Area	Hampden Rd	Conservation	10.25
74-1A-C	High Pine Conservation Area	Parker Street	Conservation	3.29
50-11A-0 62-11-54A	Hoover Quarry Conservation Area	Kibbe Rd Fernwood Dr	Conservation	70.01
39-29-0	Indian Spring Conservation Area	Rear Indian Spring Rd	Conservation	10.15
61-23-0	Jarvis Nature Sanctuary	Parker St	Conservation	35.89
11-4-A	Jawbuck Brook Reservoir and Wetland	Deer Park Dr	Conservation	22.51
25-23-B	Kenmore Conservation Area	Elm St	Conservation	38.81
2-1-0 2C-10-338	Lull Conservation Area	Gerrard Ave Lull Street	Conservation	3.32
92-13A-0 92-13-0	Mill Road Conservation Area	Rear Mill Rd	Conservation	15.05
52-18-0	Norcross Kibbe Quarry Lot	Kibbe Rd	Conservation	4.50
74-7A-0 74-8-B	Peachtree Road Conservation Area	Rear Parker St Rear Peachtree Rd	Conservation	8.54

Parcel I.D.	Name	Address	Responsible Board / Department	Size (acres)
3A-1-919 3A-14-649 3B-58-205 3B-59-202	Pecowsic Park	Niagara St Donald Ave Smith Ave	Conservation	1.12
42-12-0	Pine Quarry Conservation Area	Rear Chestnut St	Conservation	16.5
87-35-0	Tanglewood Conservation Area	Rear Tanglewood Dr	Conservation	6.00
37-41B-B	Veratti Conservation Area	Pleasant St	Conservation	27.00
15C-5-440 3A-10-958 4A-10-460 4A-11-450 4A-12-453 4A-14-456 15C-10-420 4A-13-417 4A-15-416 4A-16-412 4A-17-406	Vineland-Voyer Conservation Area	Vineland Ave Voyer Ave Patterson Ave	Conservation	4.43
65-9-F-R 52-22-0 63-10A-0 53-25A-0 65-2-G	Watchaug Meadows Conservation Area	64 Hampden Rd Kibbe Rd 386 Somers Rd Rear Hampden Rd	Conservation	96.42
Undeveloped Land				
12A-62-0	Cosgrove Street		DPW	0.29
12A-69A-0	North Street		DPW	0.03
49-108-10A	41 Mayflower Lane			0.59
70-7-0	430 Porter Road			1.50
74-25-19	47 High Pine Circle			0.77
57-39-57	48 Country Club Drive			4.56
57-8-0	5 Meadowlark Drive			4.11
61-46A-35	50 High Pine Circle			0.90
15A-76-640	Arch Street		Board of Selectmen	0.15
15A-77-651	Arch Street		Board of Selectmen	0.25
40-53-0	Chestnut Street			10.00
6-4A-0	Chestnut Street			6.21
26-85-0	Elmcrest Street		East Longmeadow Public Schools	0.54

Parcel I.D.	Name	Address	Responsible Board / Department	Size (acres)
26-86-0	Elmcrest Street		East Longmeadow Public Schools	1.55
15A-81-641	Gaskell Street		Board of Selectmen	0.25
15B-31-59	Terrace Avenue		Board of Selectmen	0.19
15B-32-63	Terrace Avenue		Board of Selectmen	0.14
15B-33-66	Terrace Avenue		Board of Selectmen	0.19
4-50-0	Westwood Avenue			0.24
15A-78-649	Lindendale Avenue		Board of Selectmen	0.14
15A-29-404	Melrose Avenue		Board of Selectmen	0.14
15A-35-357	Melrose Avenue		Board of Selectmen	0.28
1B-12-642	Melvin Avenue		Board of Selectmen	0.25
2A-65-82	Morningside Road		Board of Selectmen	0.25
1B-42-PT/G	Odion Avenue			0.03
49-48A-0	Rear Porter Road		Conservation	20.12
49-99-A	Pilgrim Road			0.03
48-100-31	Porter Road		Conservation	6.50
3-118-B	Nelson Street			0.57
23-16A-0	Rear Elm Street			9.18
72-13-B	Allen Street			9.34
93-1-B-1	Pineywoods Drive			2.87
94-48-B-0	Glen Heather Lane			0.15
85-59-0	252 Allen St			0.67
34-24-0	76 Dawes St			2.33
2B-91-159	Vineland Avenue		DPW	0.24
26-74A-0	Elm Street		DPW	0.57

The inventory included in **Table 3-1** will change over time. Please consult with the Town Recreation Department, Assessor's Office, Conservation Commission, and the GIS Division of the DPW for the most up-to-date list of town-owned parks and open space.

3.2 Buildings and Facilities

There are more than 24 buildings and facilities owned and/or operated by the Town of East Longmeadow through various responsible parties. **Table 3-2** lists schools, town offices, public safety facilities, and other municipal facilities.

Table 3-2
Inventory of Buildings and Facilities

Parcel I.D.	Name	Address	Responsible Board / Department	Size (acres)
Municipal Buildings				
39-12-0 **39-12A-0** **39-13-0** **39-14-0**	Fire, Police, and Transfer Stations	150 – 170 Somers Rd	Fire and Police Departments, Board of Health	17.57
13-1A-0	Pleasant View Senior Center	328 North Main St	Council on Aging	3.75
27-29-0 **27-30-1** **27-31-0** **27-31A-B** **27-31B-15** **27-32-0**	Town Hall / Public Library	Maple St Rear North Main St 60 Center Sq	Board of Selectmen	2.05
16-214-2	Historical Museum House	87 Maple St	Historical Commission	0.33
27-139-0	Center Schoolhouse	35 School Street	Historical Commission	1.00
School Buildings				
37-1-0	Birchland Park School	50 Hanward Hill	East Longmeadow Public Schools	20.00
36-86-0	Mapleshade School	175 Mapleshade Ave	East Longmeadow Public Schools	13.20
60-51-0	Meadowbrook School	607 Parker St	East Longmeadow Public Schools	21.61
65-25-0	Mountainview School	77 Hampden Rd	East Longmeadow Public Schools	18.41
17-33-10	East Longmeadow High School	180 Maple St	East Longmeadow Public Schools	61.40
DPW				
28-21-0	DPW Service Building	84 Somers Rd	DPW – Highway Division	2.64
38-66-0	DPW Water Division Training Center	Rear Somers Rd	DPW – Water Division	1.30
30-7-0 **30-8-0** **30-29-0**	Water Tower and Pumping Station	Prospect St	DPW – Water Division	1.77
18-37-0 **18-39B-0**	Chestnut Water Pump Station	Chestnut St	DPW – Water Division	0.11

Parcel I.D.	Name	Address	Responsible Board / Department	Size (acres)
12-9-11	Harkness Avenue Water Pump Station	82 Harkness Ave	DPW – Water Division	0.29
85-21A-0	Allen Street Pump Station	286 Allen St	DPW – Wastewater Division	0.11
10-4-0	Denslow Road Pump Station	84 Denslow Rd	DPW – Wastewater Division	0.23
74-7-9	Peachtree Road Pump Station	Peachtree Rd	DPW – Wastewater Division	0.00*
2C-62-202 13-18-0	Vineland Avenue Pump Station	Vineland Ave Smith Ave	DPW – Wastewater Division	8.24
56-1-B	Watchaug Brook Pump Station	124 Pease Rd	DPW – Wastewater Division	0.22
39-12A-0	Cell Tower / Control Building and Fire Station	156 Rear Somers Rd	AT & T and DPW, Fire Department	14.83
***Note: Peachtree Road Pump Station is located on an easement on 22 Peachtree Road**				

A map showing the locations of buildings and facilities is included in **Appendix A**. A complete inventory of the buildings and facilities is provided in **Appendix B**. **Appendix C** includes maps of individual facilities. This inventory is up to date as of December 2019.

A site specific stormwater pollution prevention plan (SWPPP) must be developed for any town-owned or operated maintenance garages, public works yards, transfer stations, and/or other waste handling facilities where pollutants are exposed to stormwater. The Town of East Longmeadow DPW Garage and Yard and Transfer Station will require individual SWPPPs. The DPW Garage and Yard additionally has a Spill Pollution, Control, and Countermeasure (SPCC) Plan that is in the process of being updated.

Figure 3.1. East Longmeadow DPW Service Building and Yard (left) and Transfer Station (right)

A site-specific SWPPP must be developed to include the following control measures:

- Minimize or prevent exposure
- Erosion and sediment control
- Management of runoff
- Enclose or cover salt storage
- Maintenance of control measures
- Good housekeeping
- Preventative maintenance
- Spill prevention and response
- Employee training
- Solid waste management

3.3 Vehicles and Equipment

The Town of East Longmeadow owns approximately 112 vehicles that must be stored and maintained. An inventory of town-owned vehicles as of May 7, 2020 is provided as Appendix D. The storage, fueling and maintenance of vehicles is a potential source of stormwater pollution given the location of storm drains on roads and in parking lots. An up-to-date inventory of town-owned vehicles is available from the Town Manager, who maintains an updated list of assets in East Longmeadow.

3.4 Water Infrastructure

The Water Division of the Town of East Longmeadow DPW maintains more than 115 miles of transmission pipe, two pumping stations (Harkness Avenue and Chestnut Street), and two storage tanks located on Prospect Street. The Water Division continuously upgrades its water infrastructure by the replacement of older water lines, hydrants, and related facilities. In addition, the Water Division is responsible for installation and maintenance of more than 5,500 water meters.

3.5 Wastewater Infrastructure

The Sewer Division of the Town of East Longmeadow DPW is responsible for the operation and maintenance of the public sewer system in East Longmeadow, 114 miles of pipes and 17 pump stations that connect the Town's wastewater collection system to the treatment plant located at Springfield's Bondi's Island.

Eight municipal parcels have some form of additional wastewater collection, treatment, and/or disposal as follows:

- 5 parcels have a grease trap installed. Grease traps are watertight structures installed at restaurants, nursing homes, schools, hospitals and any other facility that discharges grease. The function of a grease trap is to separate out grease and oil from the other solid or liquid sewage.
- No parcels have tight tanks. Tight tanks are similar to a septic tank except they do not have an outlet and must be pumped regularly to remain in proper working order.
- 8 parcels have floor drains. The Fire Station, Police Station, and DPW Garage Facility floor drains connect to oil-water separators before discharging to the sewer, while the floor drains in the boiler rooms at the schools connect to the sewer.

3.6 Stormwater Infrastructure

Stormwater infrastructure includes all components of the MS4 (e.g., catch basins, drainage manholes, stormwater outfalls, drainage pipes, open channel conveyances, etc.), interconnections with other MS4s (e.g., abutting communities or MassDOT), culverts, dams, and town-owned or operated structural Best Management Practices (BMPs) such as detention basins, retention basins, swales, etc.

Stormwater infrastructure serves several important functions which can be broadly organized into two groups: drainage and water quality. The original goal of stormwater infrastructure was to remove water from roadways and other impervious surfaces to prevent icing and flooding. The systems were originally designed to collect runoff and quickly discharge it to the nearest water course. Now that the role of stormwater as a transport mechanism for non-point source pollution is better understood, the scope of stormwater infrastructure design has expanded to include water quality as well as quantity.

Table 3-3 presents a summary of the known drainage assets in the Town of East Longmeadow.

Table 3-3
Stormwater Infrastructure in East Longmeadow

Drainage Infrastructure Type	Number	Notes
Catch basins	3,798	Within the MS4 regulated area
Outfalls	342	Inclusive of interconnections
Interconnections with other MS4s	19	Town of Longmeadow (5), City of Springfield (14)
Structural BMPs		
Retention Basins	1	East Longmeadow High School
Detention Basins	2	Vineland Pump Station
Infiltration Basins	1	Pine Knoll Recreation Area
Swales	2	Transfer Station, Vineland Pump Station

Section 4
SOPs and Schedules

This section of the O&M Plan presents the SOPs and schedules for implementation for the municipal facilities and associated activities to address stormwater pollutants of concern and reduce or eliminate potential pollution in stormwater runoff. The inventory of municipal facilities included in **Appendix B** lists each facility and responsible party.

Appendix E provides the following SOPs for the Town of East Longmeadow's municipal facilities and activities:

1. Catch Basin Cleaning
2. Sweeping Streets and Parking Lots
3. Application and Storage of Road Salt and Sand
4. Snow Removal and Stockpiling
5. Structural Stormwater Best Management Practices Inspections and Maintenance
6. Municipal Buildings and Facilities Maintenance
7. Fuel and Oil Handling
8. Lawns, Grounds, and Landscaping Maintenance
9. Oil/Water Separator Maintenance
10. Use, Storage, and Disposal of Pesticides, Herbicides, and Fertilizer
11. Use, Storage, and Disposal of Petroleum and Hazardous Materials
12. Pet Waste Management
13. Spill Prevention, Response, and Clean-up Procedures
14. Trash and Solid Waste Management
15. Storage and Maintenance of Municipal Vehicles and Equipment
16. Washing of Municipal Vehicles and Equipment

4.1 Municipal Activity SOPs

The following sections provide additional detail on the sources of pollutants for specific activities, relevant SOPs, and additional pollution prevention measures applicable to the activity. The municipal facilities SOPs are located in **Appendix E**. Each SOP describes the pollutants of concern addressed by the SOP.

4.1.1 Parks, Playgrounds, and Open Space

Town staff must undertake efforts to manage potential sources of pollution from the activities conducted at parks, playgrounds, and open spaces. **Table 4-1** lists activities typical to parks and open spaces inventoried in **Table 3-1**, as well as potential sources of pollution, relevant SOPs, and pollution prevention measures. **Figure 4.1** shows example existing park activities that have stormwater runoff pollution potential.

Figure 4.1: Field with painted lines at Center Field / Leahy Field (left) and trash dumpster at Pine Knoll Recreation Area (right).

Table 4-1
Activities with Pollution Potential and Relevant SOPs for Parks, Playgrounds, and Open Space

Activity	Source of Pollution	Relevant SOPs	Pollution Prevention Measures
Landscaping Equipment	• Transportation and use of gasoline and oil for fueling of small engines such as lawnmowers.	SOP 7 SOP 13	• Train personnel on fuel and oil handling SOP and spill prevention, response, and clean-up procedures.
Fertilizer and Pesticide Application	• Improper use or application by untrained personnel.	SOP 10	• Minimize use of fertilizer and pesticide. • Use in strict accordance with regulations and manufacturer's instructions. • Use slow release fertilizers. • Pesticides shall only be handled and applied by individuals licensed by the Massachusetts Department of Agricultural Resources.
Field Painting	• Use of incorrect type of paint. • Inappropriate application of field paint.	SOP 8	• Use only purpose-made athletic field paint on athletic fields. • Do not apply paint directly before a rainstorm.
Landscaping and Mowing Procedures	• Grass cuttings and leaf litter can contribute organics to stormwater. • Irrigation can wash fertilizer and pesticides into storm drains.	SOP 8	• Prohibit blowing organic waste materials onto adjacent impervious surfaces. • Consider use of drought-resistant plantings.
Management of Pet Waste	• Pet waste is a source of bacteria when washed into storm drains during rain events.	SOP 12	• Maintain pet waste handling, collection and disposal locations including waste disposal location identification signage and bags.
Management of Refuse	• Visitors to parks and open spaces generate waste that is stored on-site pending disposal.	SOP 14	• Continue to remove trash from municipal facilities on a regular basis. • Clean around trash cans, add anti-littering signs, and keep cans lidded and locked.

4.1.2 Buildings and Facilities

Town staff must undertake efforts to manage potential sources of pollution from the activities conducted at municipal buildings and facilities. **Table 4-2** lists activities typical to buildings and facilities inventoried in **Table 3-2**, as well as possible sources of pollution, relevant SOPs, and pollution prevention measures. **Figure 4.2** shows example existing East Longmeadow municipal facilities with activities that have stormwater runoff pollution potential.

Figure 4.2: Municipal facilities/buildings: East Longmeadow Police Station (left) and Pleasant View Senior Center (right).

Table 4-2
Activities with Pollution Potential and Relevant SOPs for Buildings and Facilities

Activity	Source of Pollution	Relevant SOPs	Pollution Prevention Measures
Landscaping Equipment	• Transportation and use of gasoline and oil for fueling of small engines such as lawnmowers.	SOP 7 SOP 13	• Train personnel on fuel and oil handling SOP and spill prevention, response, and clean-up procedures.
Fuel Transfer Procedures	• Periodic fueling of equipment and emergency generators.	SOP 7 SOP 13	• Fueling activities shall occur on impervious surfaces with proper containment and a spill response kit in close proximity.
Vehicle and Equipment Washing	• Vehicle maintenance can potentially release pollutants as well as detergents into surrounding storm drain systems.	SOP 16	• Follow the guidance described in SOP 16. • Wash vehicles in designated wash areas. • Use biodegradable detergents and quick-break degreasers.
Building Maintenance and Painting	• Routine cleaning and maintenance practices can cause runoff of sediment, nutrients, paints and solvents from the site.	SOP 6	• Provide temporary cover/tarps on worksites, employee training, contractor training, and storm drain covers to minimize pollution. • Carefully manage sanding, painting, power-washing, resealing or resurfacing roofs or parking lots, especially near storm drains.
Management of Refuse	• Municipal buildings generate waste as part of daily operations that is stored on-site pending disposal.	SOP 14	• Continue to remove trash from municipal facilities on a regular basis. • Clean around the trash can areas and keep trash cans lidded and locked.
Use, Storage, and Disposal of Petroleum Products and Hazardous Materials	• Potential contamination of groundwater and surface waters with oils and grease and toxins.	SOP 11 SOP 13	• Keep petroleum products and hazardous wastes stored under cover and in proper containers with correct labeling.
Parking Lot Maintenance	• Pollutants accumulate on paved parking areas, and can enter the stormwater system and waterbodies with stormwater runoff.	SOP 1 SOP 2 SOP 3 SOP 4	• Follow proper winter deicing and snow removal procedures and frequent street sweeping. • Remove pollutants from the drainage system through catch basin inspection, cleaning, and maintenance.

4.1.3 Vehicles and Equipment

Operation and maintenance of town-owned vehicles and equipment inventoried in **Appendix D** must be completed in a manner to prevent pollution. **Table 4-3** lists typical vehicle and equipment maintenance efforts and associated SOPs. **Figure 4.3** shows example existing vehicle and equipment activities that have stormwater runoff pollution potential.

Figure 4.3.: Vehicle rinsing area at the DPW Garage (left) and practice rescue scenario vehicle storage at the Fire Station (right).

Table 4-3
Activities with Stormwater Runoff Pollution Potential and Relevant SOPs for Vehicles and Equipment

Activity	Source of Pollution	Relevant SOPs	Pollution Prevention Measures
Landscaping Equipment	• Transportation and use of gasoline and oil for fueling of small engines such as lawnmowers.	SOP 7 SOP 13	• Train personnel on fuel and oil handling SOP and spill prevention, response, and clean-up procedures.
Fuel Transfer Procedures	• Periodic fueling of equipment and emergency generators.	SOP 7 SOP 13	• Fueling activities shall occur on impervious surfaces with proper containment and a spill response kit in close proximity.
Vehicle and Equipment Washing	• Vehicle maintenance can potentially release pollutants as well as detergents into surrounding storm drain systems.	SOP 16	• Follow the guidance described in SOP 16. • Wash vehicles in designated wash areas. • Use biodegradable detergents and quick-break degreasers.
Vehicle and Equipment Storage	• Poorly maintained equipment may leak contaminants. • Sediments, oil, grease, and metals accumulate on vehicle and equipment during daily activities and may redeposit on impervious surfaces when stored or maintained.	SOP 9 SOP 13 SOP 15	• All vehicles and equipment shall receive regular maintenance and be inspected for leaks or defective parts. • Store municipal equipment on municipal properties inside when not in use to the maximum extent possible. • Do not store vehicles and equipment in areas that drain to the MS4 unless adequate devices are employed to remove oil and sediments.
Vehicle and Equipment Maintenance	• Vehicle maintenance can potentially release pollutants including oil and grease and solvents into surrounding storm drain systems.	SOP 7 SOP 13 SOP 15	• Perform all routine vehicle equipment maintenance indoors when possible. • Utilize drip pans and dispose of used fluids properly. • Have spill materials available including storm drain covers and booms • Provide employee training.

4.2 Drainage Infrastructure SOPs

4.2.1 Catch Basin Inspection, Cleaning, and Maintenance

Each year, the Town of East Longmeadow inspects, cleans, and maintains the 3,798 catch basins within the MS4 regulated area. The East Longmeadow Highway Department should follow the following conditions to optimize routine inspections when cleaning and maintaining catch basins:

Figure 4.4: Catch basin at Birchland Park School.

- Prioritize inspection and maintenance for catch basins located near construction activities (roadway construction, residential, commercial, or industrial development or redevelopment). Clean catch basins in such areas more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings.
- Each catch basin should be cleaned and inspected at least annually, with cleaning targeted for early Spring or late Fall.
- If a catch basin sump is more than 50 percent full during 2 consecutive routine inspections/cleaning events, the Town must document that finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the extent practicable, abate contributing sources. East Longmeadow is required by EPA to describe any actions taken in its annual report.
- East Longmeadow currently meets EPA's requirement by keeping a log of catch basins cleaned or inspected.
- In each Annual Report, the Town must report the total number of catch basins, number inspected, number cleaned, and the total volume or mass of material removed from all catch basins.

East Longmeadow must document its plan for optimizing catch basin cleaning, inspection plans, or its schedule for gathering information to develop the optimization plan in the SWMP and the first annual report under the new MS4 permit. Documentation is required to include metrics and other information used to reach the determination that the established plan for cleaning and maintenance is optimal for the MS4.

SOP 1 in **Appendix E** contains the procedures for cleaning catch basins, the catch basin cleaning form template, and MassDEP guidance on disposal of catch basin cleanings.

4.2.2 Sweeping Streets and Town-Owned Parking Lots

The Town of East Longmeadow has established and implement procedures for sweeping and/or cleaning streets and town-owned parking lots. All streets within the MS4 regulated area are required to be swept and/or cleaned a minimum of once per year in the spring (following winter activities such as sanding). Based on the location of the Town within the Connecticut River watershed, the Town is additionally subject to the

requirements of the Long Island Sound TMDL for Nitrogen, which increase the frequency of street sweeping to twice per year. The Town of East Longmeadow meets this requirement by sweeping all 110 miles of public streets within the Town once in the spring to remove winter sand and once in the fall after leaf fall. The DPW is required to report the number of miles cleaned or the volume or mass of material removed in each Annual Report.

SOP 2 in **Appendix E** contains the procedures for sweeping streets and parking lots, a form for logging street and parking lot sweeping events, and MassDEP guidance on the reuse and disposal of streets and parking lot sweepings.

4.2.3 Storage and Disposal of Catch Basin Cleanings and Sweepings

During the first reporting period (May 1, 2018 to June 30, 2019), the Town of East Longmeadow produced over 157 cubic yards of catch basin cleanings. To meet EPA's 2016 Small MS4 General Permit requirements, the Town must ensure proper storage of catch basin cleanings and street sweepings prior to disposal or reuse such that they do not discharge to receiving waters.

Catch basin cleanings, including soil material such as leaves, sand and twigs removed during cleaning operations, are typically classified as solid waste by the MassDEP, and must be disposed of in accordance with applicable regulations, policies and guidelines. The general rule is that catch basins cleanings can be disposed of at a MassDEP permitted sanitary landfill unless there is evidence that the catch basin has been contaminated by a spill, sanitary waste or other means.

SOPs 1 and 2 in **Appendix E** contain MassDEP guidance regarding reuse and disposal of street sweepings and landfill restrictions regarding the acceptance of catch basin cleanings.

4.2.4 Winter De-icing and Snow Removal

The East Longmeadow DPW has established and implemented procedures for winter road maintenance, including the use and storage of salt and sand, minimization of the use of sodium chloride and other salts, and ensuring that snow disposal activities do not result in disposal of snow into surface waters. These procedures also apply to municipally owned and maintained parking lots, sidewalks, and other walkways around buildings and facilities.

SOPs 3 and 4 in **Appendix E** contain guidance on winter de-icing procedures and maintenance of snow disposal areas, including MassDEP guidance on the selection of snow disposal sites.

4.2.5 Stormwater BMP Inspection and Maintenance

Stormwater BMPs are structures designed to manage post-construction stormwater runoff through conveyance, treatment, infiltration, retaining, attenuation, and storage of stormwater runoff. These BMPs simultaneously manage water quantity and, in most cases, improve water quality.

Structural stormwater BMPs under the ownership or operation by the Town of East Longmeadow should be routinely inspected and maintained. The frequency of inspections and maintenance depend on the type and design of the BMP, but all treatment structures (excluding catch basins) must be inspected annually at a minimum.

As part of the Phase I stormwater mapping requirements under the 2016 Small MS4 General Permit outlined in section 2.3.4.5.a., the Town of East Longmeadow has developed an inventory of municipally owned and operated structural stormwater BMPs, including type, location, age, and inspection schedules. Additionally, as of the date of this O&M Plan, the East Longmeadow GIS Department is aware of two stormwater BMPs that are privately maintained.

4.3 Long Island Sound Nitrogen TMDL Requirements

For facilities and activities in watersheds with impaired waterbodies or final TMDLs, additional good housekeeping and pollution prevention activities are required by EPA. Discharges from MS4s in Massachusetts to waters that are tributaries to the Long Island Sound, which has an approved TMDL for nitrogen, are subject to additional requirements listed in 2016 Small MS4 General Permit Appendix F, Part B.

East Longmeadow discharges within the Connecticut River Watershed and therefore complies with the following enhanced BMPs in addition to the requirements of part 2.3 of the permit:

- The Town has established requirements for use of slow release fertilizers on permittee owned property currently using fertilizer, in addition to reducing and managing fertilizer use, as described in SOP 8: Lawns, Grounds, and Landscaping Maintenance and SOP 10: Use, Storage, and Disposal of Pesticides, Herbicides, and Fertilizer
- The Town has established procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces, as described in SOP 8: Lawns, Grounds, and Landscaping Maintenance
- As noted in Section 4.2.2, the street sweeping frequency of all municipally owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) has been increased to a minimum of two times per year, once in the spring (following winter activities such as sanding) and at least once in the fall (following leaf fall)

Section 5
O&M Plan Implementation

Implementation of the O&M Plan requires commitment from Town staff in various departments, boards, and commissions. This section presents the major steps necessary to implement East Longmeadow's comprehensive O&M program to prevent or reduce pollution in stormwater runoff from municipal facilities and operations.

5.1 Ongoing Implementation Activities

There are numerous ongoing activities necessary to support implementation of East Longmeadow's O&M program. The following sections provide additional detail on these activities and the general schedule.

5.1.1 Record Keeping

Records of good housekeeping and pollution prevention operations should be maintained to document efforts to present or reduce pollutants in stormwater runoff and protect water quality. EPA's 2016 Small MS4 General Permit requires the Town to keep written records of all inspection, maintenance, and trainings for a period of at least five years. **Appendix F** includes forms for employee training and O&M Plan amendments record keeping.

5.1.2 Annual Reporting

EPA's 2016 Small MS4 General Permit requires that the Town report on the status of the following in each annual report:

- Inventory of Town-owned facilities and any subsequent updates
- O&M programs for the municipal facilities and municipal operations and maintenance activities associated with each
- Good housekeeping/pollution prevention trainings

Annual Reports are due by September 30 annually under the 2016 Small MS4 General Permit and must cover the previous reporting period (July 1 through June 30). Annual Reports are due by September 30 annually under the 2016 Small MS4 General Permit and must cover the previous reporting period (July 1 through June 30). The Annual Report for Permit Year 1, covering the period of May 1, 2018 through June 30, 2019, was submitted to EPA and MassDEP on September 27, 2019.[10]

5.1.3 Annual Update of Municipal Facilities Inventory

As part of preparing the Annual Report required by EPA's Small MS4 General Permit, the Town of East Longmeadow should review the inventory of parks and open space, buildings and facilities, vehicles and equipment, drainage infrastructure, and wastewater assets and update as needed. **Appendix F** includes a form to document changes to this O&M plan, including updated inventory components.

[10] https://www3.epa.gov/region1/npdes/stormwater/ma/reports/2019/east-longmeadow-ma-ar19.pdf

5.1.4 Annual Employee Training

Employees involved in good housekeeping and pollution prevention operations should be trained annually on the O&M Plan contents, proper procedures to reduce pollutants in stormwater runoff and protect water quality, and tracking and reporting. The 2016 Small MS4 General Permit specifically requires the following trainings:

- Employees that are responsible for handling petroleum products must be trained as necessary
- For the site-specific SWPPPs at the DPW Garage and Yard and Transfer Station, employees who work in areas where materials or activities are exposed to stormwater or who are responsible for implementing the SWPPPs, including the Pollution Prevention Team, should be trained annually. Training should cover specific components and the scope of the SWPPPs and the control measures to reduce pollution at the site, including spill prevention and response, good housekeeping, and materials management

Written records of any trainings conducted must be kept for a period of at least five years. **Appendix F** includes a log to document trainings completed.

5.1.5 Executing SOPs

Town of East Longmeadow staff must undertake ongoing efforts to manage potential sources of pollution from the activities conducted at parks and open spaces and buildings and facilities, from vehicles and equipment, and from drainage infrastructure operation and maintenance.

J:\E\E0714 East Longmeadow Engineering Services\041 - MS4 Services Year 2 Compliance\Reports\Good Housekeeping Municipal Inventory and O&M Program\Draft\1 - Draft East Longmeadow Municipal O&M Plan Text.docx

Appendix A
Municipal Facilities and Properties Map

SPRINGFIELD

WILBRAHAM

HAMPDEN

LONGMEADOW

Connecticut

Harkness Avenue Water Pump Station
Heritage Park
23-16A-0
34-24-0
Pine Knoll Recreation Area
ALLEN STREET
PORTER ROAD
PARKER STREET
ELM STREET
Kenmore Conservation Area
Vacant Land
Meadowbrook School
72-13-B
85-59-0
Allen Street Pump Station
Vineland Avenue Pump Station
Pleasant View Senior Center
N MAIN STREET
MAPLESHADE AVENUE
Lull Conservation Area
Pecowsic Park
Jarvis Nature Sanctuary
73-42-0
Mapleshade School
Sewer ROW
Birchland Park School
Grove Conservation Area
Vineland-Voyer Conservation Area
Calkins Avenue Conservation Area
Veratti Conservation Area
Vacant Land
Craven Conservation Area
High Pine Conservation Area
Hoover Quarry Conservation Area
Hoover Quary Conservation Area
Charles Buckingham Conservation Area
KIBBE ROAD
PLEASANT STREET
Town Hall/Library
WESTWOOD AVENUE
Veterans Field/Center Field
DPW Service Building
Fire, Police, Transfer Stations
Redstone Rail Trail
Fire, Police, Transfer Station Parking
Campbell Conservation Area
PARKER STREET
MAPLE STREET
East Longmeadow High School
SHAKER ROAD
PROSPECT STREET
Norcross Kibbe Quarry Lot
Watchaug Meadows Conservation Area
Vacant Land
CHESTNUT STREET
SOMERS ROAD
HAMPDEN ROAD
Hampden Road Conservation Area
Chestnut Water Pump Station
Vacant Land
Mountainview School
Water Tower
Pine Quarry Conservation Area
BENTON DRIVE
220
83
Mill Road Conservation Area
PEASE ROAD
93-1-B-1
Denslow Road Pump Station
94-48B-0
Jawbuck Brook Reservoir & Wetland
186
Vacant Land

Legend

- Town-Owned Parcels
- Parcels
- Town Boundary
- Connecticut

MassDOT Major Roads

Road Type

- Limited Access Highway
- Multi-lane Hwy, not limited access
- Other Numbered Highway
- Major Road
- Minor Roads

1:26,000

0 1,500 3,000

Feet

N

Tighe&Bond
Engineers | Environmental Specialists

1. Based on MassGIS Color Orthophotography (2013)
2. Parcel data from Town of East Longmeadow (2019)

APPENDIX A
INVENTORY OF MUNICIPAL FACILITIES

O&M Plan
East Longmeadow, Massachusetts

November 2019

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Appendix B
Municipal Facilities and Properties Inventory

Parcel ID	Name	Address	Responsible Board / Commission / Department	Size (ac)	Building (Y/N)
1B-12-642	Vacant Land	Melvin Ave	Town Council	0.25	N
1B-42-PT/G	Vacant Land	Odion Ave		0.03	N
2-1-0 / 2C-10-338	Lull Conservation Area	Gerrard Ave / Lull St	Conservation	3.32	N
2A-65-82	Vacant Land	Morningside Rd	Town Council	0.25	N
2B-6-441 / 2B-7-444 / 2B-19-450	Albert Tranghese Playground	Euclid Ave / Mereline Ave / 51 Lombard Ave	Recreation	0.75	N
2B-91-159	Sewer right-of-way	Vineland Ave	DPW - Wastewater	0.24	N
2C-62-202 / 13-18-0	Vineland Ave Pump Station	Vineland Ave / Smith Ave	DPW - Wastewater	8.24	Y
3-118-B	Vacant Land	Nelson St		0.57	N
3A-1-919 / 3A-14-649 / 3B-58-205 / 3B-59-202	Pecowsic Park	Donald Ave / Niagara St / Smith Ave	Conservation	1.13	N
3A-10-958 / 4A-10-460 / 4A-11-450 / 4A-12-453 / 4A-13-417 / 4A-14-456 / 4A-15-416 / 4A-16-412 / 4A-17-406 / 15C-10-420 / 15C-5-440	Vineland-Voyer Conservation Area	Patterson Ave / Vineland Ave / Voyer Ave	Conservation	4.43	N
6-4A-0	Vacant Land	Chestnut St		6.21	N
10-4-0	Denslow Rd Pump Station	84 Denslow Rd	DPW - Wastewater	0.23	Y
12-9-11	Harkness Ave Pump Station	82 Harkness Ave	DPW - Water	0.29	Y
11-4-A	Jawbuck Brook Reservoir & Wetland	Deer Park Dr	Conservation	22.51	N
12A-62-0	Vacant Land	Cosgrove St	DPW	0.29	N
12A-69A-0	Vacant Land	North St	DPW	0.03	N
12B-23-0 / 12B-61-203 / 13-23-0	Heritage Park	Gates Ave / 391 North Main St	Recreation	65.71	N
13-1A-0	Pleasant View Senior Center	328 North Main St	Council on Aging	3.75	Y
15A-29-404	Vacant Land	Melrose Ave	Town Council	0.14	N
15A-35-357	Vacant Land	Melrose Ave	Town Council	0.28	N
15A-76-640	Vacant Land	Arch St	Town Council	0.15	N
15A-77-651	Vacant Land	Arch St	Town Council	0.25	N
15A-78-649	Vacant Land	Lindendale Ave	Town Council	0.14	N
15A-81-641	Vacant Land	Gaskell St	Town Council	0.25	N
15B-31-59	Vacant Land	Terrace Ave	Town Council	0.19	N
15B-32-63	Vacant Land	Terrace Ave	Town Council	0.14	N
15B-33-66	Vacant Land	Terrace Ave	Town Council	0.19	N
15B-7-283	Grove Conservation Area	Grove Ave	Conservation	1.37	N

Parcel ID	Name	Address	Responsible Board / Commission / Department	Size (ac)	Building (Y/N)
16-214-2	Historical Museum House	87 Maple St	Historical Commission	0.33	Y
17-33-10	East Longmeadow High School	180 Maple St	ELPS	61.40	Y
18-37-0 / 18-39B-0	Chestnut Pump Station	Chestnut St	DPW - Water	0.11	Y
18-40-0 / 19-33-0 / 27-181-0	Redstone Rail Trail	Chestnut St / Industrial Dr / Maple St		8.25	N
23-16A-0	Vacant Land	Rear Elm St		9.18	N
26-18-0	Calkins Ave Conservation Area	Calkins Ave	Conservation	5.50	N
26-74A-0	Sewer right-of-way	Elm St	DPW - Wastewater	0.57	N
26-85-0	Vacant Land	Elmcrest St	ELPS	0.54	N
26-86-0	Vacant Land	Elmcrest St	ELPS	1.55	N
27-1-0 / 27-1A-0	East Longmeadow Center Field / Edward Leahy Field / Veterans Memorial Field	Shaker Rd	Recreation / DPW	8.11	Y
27-139-0	Center School Park	35 School St	ELPS	1.00	Y
27-29-0 / 27-30-1 / 27-31-0 / 27-31A-B / 27-31B-15 / 27-32-0	Town Hall/Library	Maple St / Rear North Main St / 60 Center Sq	Town Council	2.05	Y
28-21-0	DPW Service Building	84 Somers Rd	DPW - Highway	2.64	Y
30-7-0 / 30-8-0 / 30-29-0	Water Tower & Pumping Station	Prospect St	DPW - Water	1.77	Y
34-24-0	Vacant Land	76 Dawes St		2.33	N
35-23-B	Kenmore Conservation Area	Elm St	Conservation	38.81	N
36-86-0	Mapleshade School	175 Mapleshade Ave	ELPS	13.20	Y
37-1-0	Birchland Park School	50 Hanward Hill	ELPS	20.00	Y
37-41B-B	Veratti Conservation Area	Pleasant St	Conservation	27.00	N
38-66-0	DPW Water Building	Rear Somers Rd	DPW - Water	1.30	Y
39-12-0	Cell Tower	156 Rear Somers Rd	AT+T - Tower Prop Tax Team	14.83	Y
39-12-0 / 39-13-0 / 39-14-0	Fire, Police, Transfer Stations	150-170 Somers Rd	Fire, Police, Board of Health	17.57	Y
39-29-0	Indian Spring Conservation Area	Rear Indian Spring Rd	Conservation	10.15	N
40-53-0	Vacant Land	Chestnut St		10.00	N
42-12-0	Pine Quarry Conservation Area	Rear Chestnut St	Conservation	16.50	N
4-50-0	Vacant Land	Westwood Ave		0.24	N
46-29-0 / 46-30-0 / 58-8-0	Pine Knoll Recreation Area	Parker St / 1974 Allen St	Recreation	10.23	Y
48-100-31	Vacant Land	Porter Rd	Conservation	6.50	N
49-108-10A	Vacant Land	41 Mayflower Ln		0.59	N
49-48A-0	Vacant Land	Rear Porter Rd	Conservation	20.12	N

Parcel ID	Name	Address	Responsible Board / Commission / Department	Size (ac)	Building (Y/N)
49-99-A	Vacant Land	Pilgrim Rd		0.03	N
50-11A-0 / 62-11-54A	Hoover Quarry Conservation Area	Kibbe Rd / Fernwood Dr	Conservation	70.01	N
50-48-0 / 51-12-0 / 63-10B-0	Campbell Conservation Area	Kibbe Rd / Rear Fernwood Dr	Conservation	72.03	N
52-18-0	Norcross Kibbe Quarry Lot	Kibbe Rd	Conservation	4.50	N
52-22-0 / 53-25A-0 / 63-10A-0 / 65-2-G /65-9-F-R	Watchaug Meadows Conservation Area	Kibbe Rd / 386 Somers Rd / 64 Hampden Rd / Rear Hampden Rd	Conservation	96.42	N
56-1-B	Watchaug Brook Pump Station	124 Pease Rd	DPW - Wastewater	0.22	Y
57-39-57	Vacant Land	48 Country Club Dr		4.56	N
57-8-0	Vacant Land	5 Meadowlark Dr		4.11	N
60-51-0	Meadowbrook School	607 Parker St	ELPS	21.61	Y
61-23-0	Jarvis Nature Sanctuary	Parker St	Conservation	35.89	N
61-46A-35	Vacant Land	50 High Pine Cr		0.90	N
61-66-0	Craven Conservation Area	Parker St	Conservation	22.81	N
65-25-0	Mountainview School	77 Hampden Rd	ELPS	18.41	Y
70-7-0	Vacant Land	430 Porter Rd		1.50	N
72-13-B	Vacant Land	Allen St		9.34	N
73-42-0	Charles Buckingham Conservation Area	Tanglewood Dr	Conservation	8.66	N
74-1A-C	High Pine Conservation Area	Parker St	Conservation	3.29	N
74-25-19	Vacant Land	47 High Pine Cr		0.77	N
74-7-9	Peachtree Rd Pump Station	Peachtree Rd	DPW - Wastewater	0.00	Y
74-7A-0 / 74-8-B	Peachtree Rd Conservation Area	Rear Parker St / Rear Peachtree Rd	Conservation	8.54	N
85-21A-0	Allen St Pump Station	286 Allen St	DPW - Wastewater	0.11	Y
85-59-0		252 Allen St		0.67	Y
87-35-0	Tanglewood Conservation Area	Rear Tanglewood Dr	Conservation	6.00	N
90-7-0	Hampden Road Conservation Area	Hampden Rd	Conservation	10.25	N
92-13-0 / 92-13A-0	Mill Road Conservation Area	Rear Mill Rd	Conservation	15.05	N
93-1-B-1	Vacant Land	Pineywoods Dr		2.87	N
94-48B-0	Vacant Land	Glen Heather Ln		0.15	N

Appendix C
Photograph Log

DPW Service Building

Photo 1. Town of East Longmeadow DPW Service Building and front parking lot/fueling station (December 5, 2019). All town-owned vehicles refuel at one of the three fueling stations on site.

Photo 2. Covered generator and access road on the west side of the DPW Service Building (December 5, 2019).

Photo 3. Covered sand storage shed for resident use located on the east side of the DPW Service Building (December 5, 2019).

Photo 4. View of the vehicle and equipment maintenance/storage bays looking west from the large parking area on the east side of the DPW Service Building (December 5, 2019). The salt shed, dumpsters, and more vehicle parking are in the back. The oil/grit separator is underground in front of the bays.

Photo 5. Looking north at the covered dumpsters towards the back of the parking area of the DPW Service Building (December 5, 2019). The yard is beyond the chainlink fence.

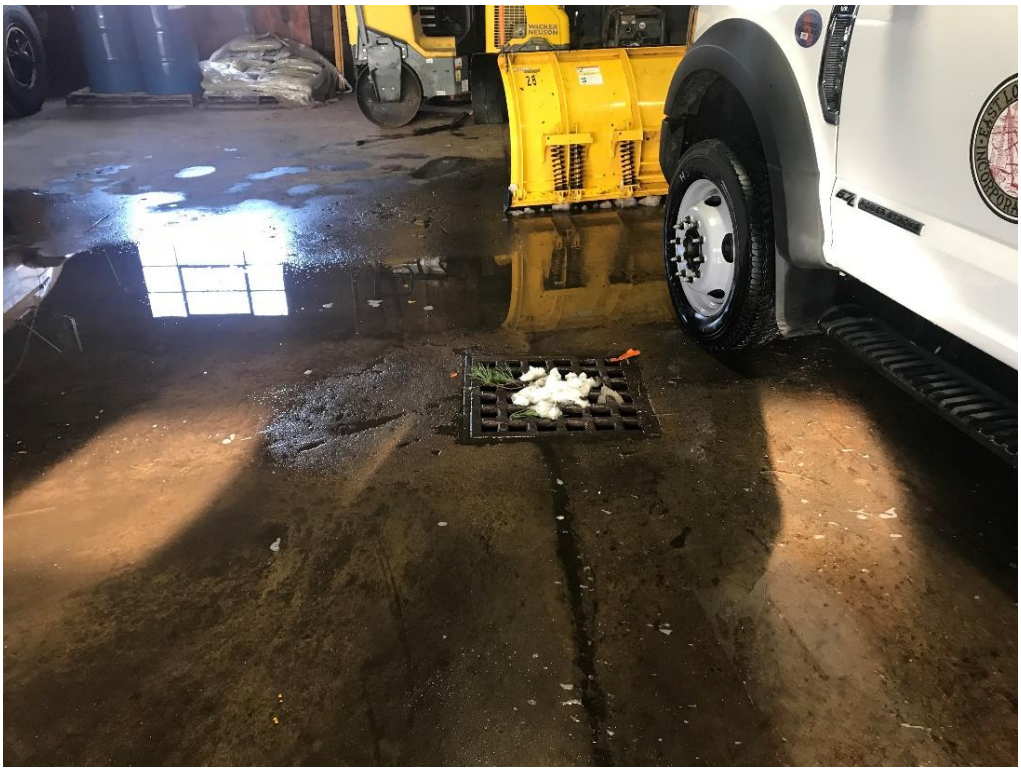

Photo 6. Floor drain inside the DPW Service Building (December 5, 2019).

Photo 7. Vehicle and equipment rinse area north of (behind) the DPW Service Building with a catch basin in the middle of the area (December 5, 2019). The catch basin drains to the oil/grit separator.

Photo 8. Looking east at the rinse area and catch basin at the DPW Service Building (December 5, 2019). The yard is to the left.

Photo 9. View from the yard looking south at a diesel fueling station and the side of the truck garage at the DPW Service Building (December 5, 2019). There is a a 12,000 gallon diesel underground storage tank (UST) below the fueling station.

Photo 10. Garage for storage of fertilizer, equipment, etc. on the north side of the yard at the DPW Service Building (December 5, 2019).

Photo 11. Salt shed on the north end of the yard at the DPW Service Building (December 5, 2019). There is an outfall to a tributary of the Mill River just beyond the shed.

Photo 12. View of vehicle storage in the yard and the DPW Service Building from the salt shed (December 5, 2019).

East Longmeadow Fire Station

Photo 13. Parking lot and back of the East Longmeadow Fire Station looking west (December 5, 2019). There are two outfalls on the far side of the building.

Photo 14. Vehicles used for firefighter training located north of the back parking lot of the Fire Station (December 5, 2019).

Photo 15. Covered dumpster in the northern corner of the Fire Station parking lot (December 5, 2019).

Photo 16. AT&T tower and service building in the north east corner of the Fire Station parking lot (December 5, 2019).

Photo 17. Covered generator and maintenance bays located at the back of the Fire Station (December 5, 2019). An AST is located to the left of the generator.

Photo 18. View of the front parking lot facing southwest from inside the Fire Station (December 5, 2019). There are two catch basins in the lot.

East Longmeadow Police Station

Photo 19. View of the East Longmeadow Police Station and front parking lot from Somers Rd (December 5, 2019). The employee parking area is located on the left side of the photo.

Photo 20. Catch basin showing as a depression in the snow in front of the Police Station (December 5, 2019).

Photo 21. Parking lot, garage area, and covered dumpsters on the east side of the Police Station (December 5, 2019).

Photo 22. Shed and generator located behind the Police Station (December 5, 2019).

East Longmeadow Transfer Station

Photo 23. View from the entrance driveway to the East Longmeadow Transfer Station looking northeast (December 5, 2019).

Photo 24. 1,000 gallon waste oil AST, universal waste storage shed, and hazardous waste storage shed at south end of Transfer Station (December 5, 2019).

Photo 25. Roll-off dumpsters for metal, wood, and waste refuse looking north at the Transfer Station (December 5, 2019).

Photo 26. View looking north at the construction material storage processing area at the Transfer Station (December 5, 2019).

Photo 27. View looking northeast at the gravel and large stone stockpiles in the construction material storage processing area at the Transfer Station (December 5, 2019).

Photo 28. Storage bays for loam and other construction materials at the Transfer Station (December 5, 2019).

Photo 29. Concrete structure stockpile in the northern end of the Transfer Station (December 5, 2019).

Photo 30. Storage bay for sweepings adjacent to the sand stockpile bay at the Transfer Station (December 5, 2019).

Watchaug Brook Wastewater Pump Station

Photo 31. Watchaug Brook Wastewater Pump Station (December 5, 2019). There is a generator inside the Pump Station.

Mountainview School

Photo 34. Looking northeast at Mountainview School from the parking lot/recreation area (December 5, 2019).

Photo 35. Catch basin at the edge of the paved lot and fertilized lawn at the Mountainview School, looking east. (December 5, 2019).

Meadowbrook School

Photo 36. Looking southeast at a catch basin and paved lot on the northern side of Meadowbrook School (beyond lot) (December 5, 2019).

Photo 37. Roll-off containers located on northern side of Meadowbrook School looking south towards the building (December 5, 2019).

Photo 38. Generator located on north end of Meadowbrook School looking south towards the building (December 5, 2019).

Photo 39. Partially covered dumpster and fully covered recycling dumpster located at the south end of the Meadowbrook School facing south east (December 5, 2019).

Photo 40. Outfall is located in the field beyond the light pole at the Meadowbrook School. Photo was taken from south end of school looking south east towards athletic fields, which are fertilized twice a year. (December 5, 2019).

Allen Street Wastewater Pump Station

Photo 41. Looking east at the Allen Street Pump Station with paved driveway (December 5, 2019).

Photo 42. Fenced in generator north of (behind) the Pump Station (December 5, 2019).

Pine Knoll Recreation Area

Photo 43. Pine Knoll Recreation Area facilities, including a pool and snack bar, looking west uphill from the upper parking lot (December 5, 2019).

Photo 44. Covered dumpsters, waste bins, and sports fields beyond the recently paved parking lot at Pine Knoll Recreation Area looking south (December 5, 2019).

Photo 45. Infiltration basin below the two gravel parking lots heading west along Allen Street (December 5, 2019).

Harkness Avenue Water Pump Station

Photo 46. Existing pump station building with paved drive and parking area to the west (December 5, 2019).

Vineland Avenue Wastewater Pump Station

Photo 47. Vineland Avenue Pump Station with fenced-in, paved parking lot. Swale located behind the building (December 5, 2019).

Photo 48. Vineland Pump Station building and two generators mounted on trailers east of the other pump station building (December 5, 2019).

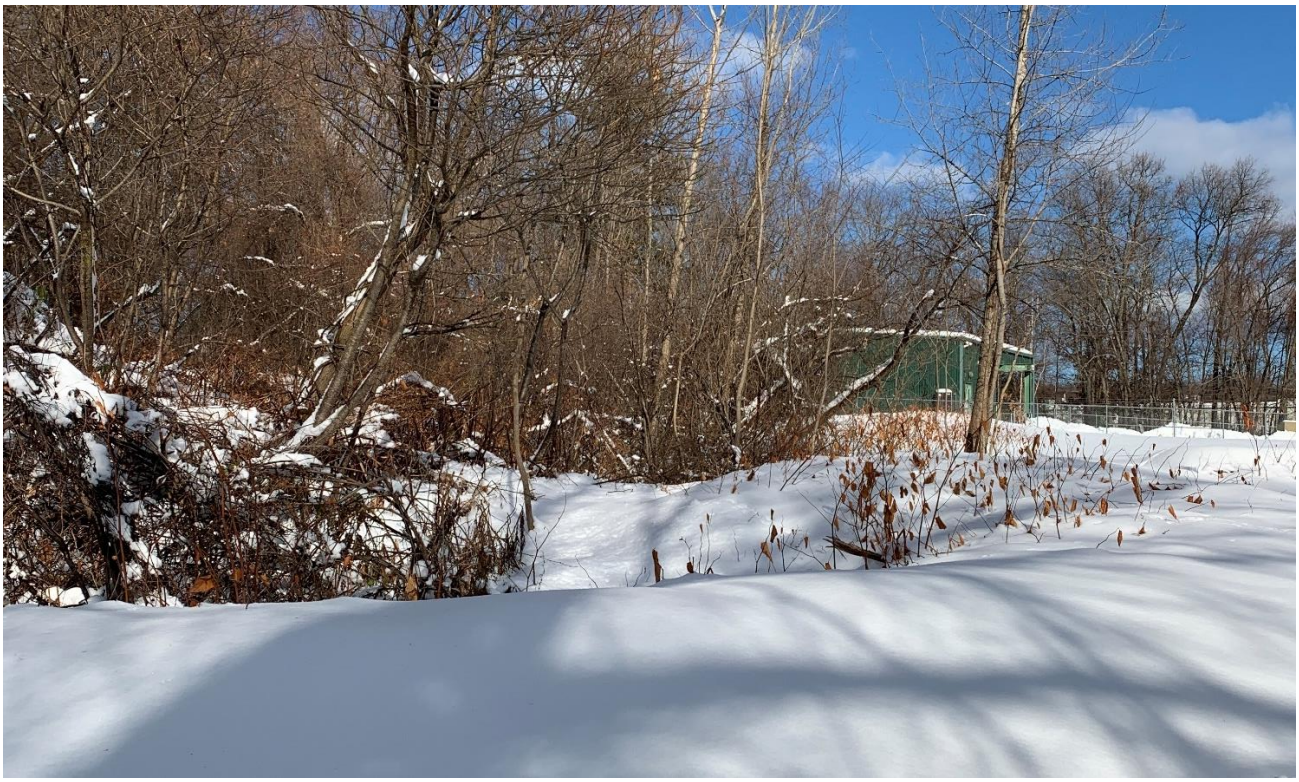

Photo 49. Looking north at a detention basin (depression in center of photograph) and Vineland Pump Station (December 5, 2019).

Photo 50. Looking south of the detention basin to Pecousic Brook, located across the driveway at the Vineland Pump Station (December 5, 2019).

Pleasant View Senior Center

Photo 51. Catch basin in parking lot on the east side of the Pleasant View Senior Center (December 5, 2019). Catch basins drain to outfalls in the woods.

Photo 52. Covered generator next to the parking lot on the east side of the Pleasant View Senior Center (December 5, 2019).

Photo 53. Partially covered dumpsters beyond the parking lot on the south side of the Pleasant View Senior Center building (December 5, 2019).

Heritage Park

Photo 54. Baseball diamond with irrigation valves located in front looking east from the parking lot at Heritage Park (December 5, 2019). Playing fields at Heritage Park are fertilized.

Photo 55. Parking lot and playground east of the pond at Heritage Park looking north (December 5, 2019).

Photo 56. Looking west from the Heritage Park parking lot toward the pond (December 5, 2019). Beyond the pond is a dog park. Geese waste is a larger concern than pet waste at the park.

East Longmeadow High School

Photo 57. Looking east at the south end of the East Longmeadow High School toward covered and uncovered dumpsters and fertilized sports fields in the back (December 5, 2019).

Photo 58. Sports field, tennis courts, and a turf stadium on the east side of the East Longmeadow High School with underdrains to a pond beyond the scoreboard. There are two outfalls to the pond. (December 5, 2019).

Photo 59. Looking northeast at the large parking lot in front of the East Longmeadow High School (December 5, 2019).

Photo 60. Catch basin in front of the East Longmeadow High School (December 5, 2019).

East Longmeadow Town Hall and Public Library

Photo 61. Looking southeast from the large parking lot of the shopping commons towards the East Longmeadow Town Hall and covered trash bins (December 5, 2019).

Photo 62. Catch basin and gutter on the north side of the Town Hall (December 5, 2019).

Birchland Park School

Photo 63. Generator and covered garbage cans and dumpster on the west side of the Birchland Park School (December 5, 2019).

Photo 64. Looking west at a catch basin next to the uncovered dumpster. The basin drains to an outfall just beyond the snowbank (December 5, 2019).

Mapleshade School

Photo 65. Looking west at a catch basin on the north side of Mapleshade School. Mapleshade Avenue is on the right (December 5, 2019).

Photo 66. Looking south at the covered dumpster and recycling bin (December 5, 2019).

Center Field / Leahy Field / Veterans Memorial Field

Photo 67. South end of the detention basin and one outfall on the west side of Shaker Road (December 5, 2019).

Photo 68. North end of the detention basin with two more outfalls (December 5, 2019).

Photo 69. Looking north from the parking lot at fertilized fields and an old, unused fire station on the far right (circled in yellow) (December 5, 2019).

Chestnut Water Pump Station

Photo 70. Indoor generator at the front of the Chestnut Water Pump Station (December 5, 2019).

Denslow Road Wastewater Pump Station

Photo 71. South side of the Denslow Road Wastewater Pump Station (December 5, 2019).

Photo 72. Self-contained diesel generator trailer north of the Denslow Road Wastewater Pump Station (December 5, 2019).

Water Tower and Pumping Station

Photo 73. Blow off valve located on the northeast side of the water storage tank. There is a detention basin and two outfalls beyond the west side of the structure (December 5, 2019).

Photo 74. Maintenance building located on the Water Tower site (December 5, 2019).

Photo 75. Covered generator to the east of the water tower (December 5, 2019).

DPW Water Building / Water Division Training Center

Photo 76. Equipment stockpiled on hard pack outside on the south side of the building contained within a chain-link fence. There is a paved drive and parking areas on the west side of the building (December 5, 2019).

Photo 77. Looking east from the paved lot at stockpiled pipe (December 5, 2019).

Photo 78. Small stream on the west side of the Water Building property that connects through to the DPW Service Building (December 5, 2019).

Appendix D
Municipal Vehicles and Equipment Inventory

Town of East Longmeadow DPW Fleet Schedule & Information

FLEET #	DEPT	YEAR	MANUFACTURER	MODEL	VIN #	PLATE	TYPE	DRIVER/S	GPS ID	Radio ID #
1	ADMIN	2017	FORD	ESCAPE - UTILITY	1FMCU9G91HUB30380	M93899	Admin	Bruce Fenney	N/A	N/A
2	ADMIN	2016	FORD	F150 PICKUP	1FTEX1E83GKF21234	M93900	Pick-Ups/Vans	Darell Keane	3002	1576
3	HIGHWAY	2001	FORD	DRWSUP F550	1FDAF57F91EC27083	M82883	Pick-Ups/Vans		3003	952
4	WATER	1997	FORD	L8000 K82 DUMP TRUCK	1FDYK82E7VVA27996	M77918	Dump Trucks		3004	1571
5	HIGHWAY	2014	INTERNATIONAL	700 DUMP TRUCK	1HTWDAAR2EH799065	M90152	Dump Trucks		3005	1755
6	BUILDING	2008	FORD	ECOVAN F250	1FTNE24L08DB40996	M76563	Pick-Ups/Vans	Steve Hanna	3006	954
7	BUILDING	2008	FORD	ECOVAN F250	1FTNE24L98DB40995	M76567	Pick-Ups/Vans	Tom Wiktop	3007	945
8	HIGHWAY	1997	JOHN DEERE	BUCKET LOADER 4 WD 3624C	DW624GB561553	M56729	Equipment	Frank Commiso	3008	683
9	SEWER	1997	FORD	L8000 K82 DUMP TRUCK	1FDYK82E6VVA23986	M77902	Dump Trucks		3009	1103
10	HIGHWAY	1996	FORD	L800 DUMP TRUCK	1FDYR82E1TVA28408	M77903	Dump Trucks		3010	1570
11	WATER	2008	FORD	DRWSUP PICKUP F350	1FDWF37R08EC71360	M99614	Pick-Ups/Vans	Tom Pope	3011	1585
12	WATER	2018	FORD	SRWSUP PICKUP F350	1FTRF3B67JEB73740	M99645	Pick-Ups/Vans	Josh Fois	3012	1105
13	HIGHWAY	2017	FORD	DRWSUP PICKUP F350	1FDRF3B6XHEF40944	M99634	Pick-Ups/Vans		3013	1474
14	ADMIN	2008	FORD	CROWN VICTORIA	2FAFP71V68X167023	M93947	Admin	Tom Christensen	0	0
15	HIGHWAY	2014	FORD	F350 SRWSUP PICKUP	1FDRF3B69EEA38972	M90159	Pick-Ups/Vans	Neil VonFlatern	3015	1572
16	HIGHWAY	2016	TORO	GROUNDMASTER 5910	316000223	M95394	Equipment		N/A	N/A
17	HIGHWAY	2008	VOLVO	BACKHOE LOADER	BL70D11461	M77115	Equipment	Luke Coulis	3017	1060
18	HIGHWAY	2009	ELGIN	PELICAN SWEEPER	NP1124D	M81522	Equipment	Frank Commiso	3018	1107
19	HIGHWAY	2009	INTERNATIONAL	DUMP TRUCK	1HTWDAAR69J115214	M95399	Dump Trucks		3019	1574
20	HIGHWAY	2008	FORD	RANGER PICKUP	1FTYR10U08PA53088	M99222	Pick-Ups/Vans	Roger Bourget	3020	1057
21	HIGHWAY	1980	TRUL HAUL	ASPHALT Trailer for Roller	1C9BT1422P1193235	M47485	Trailer		0	0
22	HIGHWAY	2014	FORD	F550 DRWSUP DUMP	1FDUF5HT2EEA38976	M90160	Pick-Ups/Vans		3022	955
23	SEWER	1996	WACKER	PUMP/TRAILER	1W9PS0519SM203252	M56700	Trailer		0	0
24	HIGHWAY	1994	KUBOTA	TRACTOR (spread fertilizer)	52649	M33604	Equipment		3024	1473
25	STORM	2019	FORD	F350 UTILITY BODY	1FDRF3H64KEG53156		Pick-Ups/Vans	Joshua Crochetiere		
26	WATER	1991	INTERNATIONAL	TRAILER FLATBED	1ZFUF1824MB000498	M40059	Equipment		0	0
27	ADMIN	2013	FORD	TAURUS	1FAHP2M89DG148631	M3674A	Admin	Felix Vachon	N/A	N/A
28	HIGHWAY	2019	FORD	F550	1FDUF5HTXKDA05645	M2659A	Pick-Ups/Vans		N/A	N/A
29	ADMIN	2009	FORD	CROWN VICTORIA	2FAHP71V09X104400	M69073	Admin	Joe Dunn	N/A	N/A
30	WATER/SEWER	2019	BOBCAT	E63 T4 EXCAVATOR	B34R11973		Equipment		N/A	N/A
31	WATER/SEWER	2018	JOHN DEERE	410L BACKHOE LOADER	1T0410LXKHF319249	M98506	Equipment	Brett Hawley	3031	1475
42	SEWER	2017	FORD	TRUCK F450 CABCA	1FDUF4HT2HEB23816	M3064A	Pick-Ups/Vans	Dan Tourtellotte	3042	1476
45	BUILDING	1999	FORD	F250 PICKUP	1FTNF20F2XEA52084	M74831	Pick-Ups/Vans	Mario Santaniello	3045	1059
47	BUILDING	2001	FORD	FORD CUTVAN E350 (OLD 49)	1FDWE35F91HB11946	M40054	Pick-Ups/Vans		0	0
49	WATER	2014	INTERNATIONAL	TERRASTAR DUMP TRUCK	1HTKPSKK2EH799080	M90161	Pick-Ups/Vans		3049	1106
50	HIGHWAY	2020	MACK	GR42F9	1M2GR6AC2LM001305	M5307A	Dump Trucks		3050	1056
51	HIGHWAY	1998	INGERSOLL RAND	PORTABLE AIR COMPRESSOR	A	M56318	Equipment		0	0
53	HIGHWAY	2019	BOBCAT	S595 T4 SKID STEER LOADER	B3NL19007	M5070A	Equipment		N/A	N/A
54	HIGHWAY	1991	PERFORMANCE	BRUSH BANDIT TRAILER CHIPPER	4237	M45097	Equipment	6	0	0
59	HIGHWAY	1999	FORD	SRWSUP SEDAN	1FTNF20F4XEA52085	M74830	Pick-Ups/Vans	Mechanics	3059	1062
60	SEWER	1987	FORD	F-700 TRUCK WITH SEWER JET MACH	1FDPF70H9HVA12573	M77906	Equipment		3060	1573
66	HIGHWAY	2005	VOLVO	LOADER	L70EV60929	M90451	Equipment	Eric Rasid	3066	1464
67	HIGHWAY	2001	FORD	F550 Pickup	1FDAF57FX1EA61138	M77909	Pick-Ups/Vans		3067	1110
68	HIGHWAY	2012	INTERNATIONAL	700SER DUMP	1HTWDAAR0CJ085828	M82889	Dump Trucks		3068	1109
69	HIGHWAY	1996	FORD	L8000 DUMP/CATCH BASIN CLEANER	1FDYR82EXTVA28407	M70133	Equipment		3069	1102
70	HIGHWAY	2019	MACK	GR42F9	1M2GR6AC5KM001037	M2805A	Dump Trucks		3070	1567
71	HIGHWAY	2003	CHEVROLET	CABCH YELLOW DUMP MEDTILT DUM	1GBP8J1C43F514560	M73931	Dump Trucks		3071	1569
72	HIGHWAY	2009	INTERNATIONAL	DUMP TRUCK 7400	1HTWDAAR89J115215	M77911	Dump Trucks		3072	1108
73	HIGHWAY	1999	FORD	255 F800 XL	3FEWF80C6XMA15845	M62500	Dump Trucks		3073	1568
75	HIGHWAY	2018	JOHN DEERE	3038E Tractor	1LV3038ETJJ121160	M6671A	Equipment		3075	943
76	HIGHWAY	2012	FORD	F350 PICKUP TRUCK	1FDRF3H67CEA83333	M82899	Pick-Ups/Vans	Tony Longo	3076	953
77	WATER	2016	FORD	F350 PICKUP TRUCK	1FTRF3B67GEB35577	M94200	Pick-Ups/Vans	Nick Giolosi	3076	953
78	BUILDING	2016	FORD	F350 PICKUP TRUCK	1FDRF3B64GEB35578	M95383	Pick-Ups/Vans	Ed Helleyer	0	0
80	HIGHWAY	1961	HOMEM	TRAILER	Z946267	M33606	Trailer	Rogers paint trailer	N/A	N/A
81	WATER	2002	FORD	F350	1FTSF31F72EB80532	M67891	Pick-Ups/Vans	Jason Cruz	3081	1575
87	HIGHWAY	1993	ROGERS	UTILITY TRAILER	1RBT31201PDD06180	M40158	Trailer		0	0
89	HIGHWAY	1987	DEAN	UTILITY TRAILER (RED TRAILER)	1D9614200H0028174	M37649	Trailer		0	0
90	HIGHWAY	1977	BOBCAT	BOBCAT TRAILER	Z946269	M33605	Trailer		N/A	N/A
91	SEWER	2007	AQUATECH	JV1000 VACUUM TRAILER SYSTEM	1H9PS20217M511038	M77265	Trailer		0	0
92	WATER & SEWER	2014	FELLING	FT12GEN00082 Generator/Trailer	5FTGH132XE1002601	M90644	Equipment		0	0
95	HIGHWAY	2017	FALCON	UTILITY HOT BOX TRAILER	1F9P31725HM339136	M3675A	Equipment		N/A	N/A
101	SEWER	2002	KOHLER	GENERATOR	16MPF091X2D032645	M69047	Equipment		0	0
102	SEWER	2002	KOHLER	GENERATOR	745171	M69048	Equipment		0	0
103	HIGHWAY	2003	MORBARK	950 TUB GRINDER	555181	M70132	Equipment		0	0
104	HIGHWAY	2003	CARRY ON	TRAILER	4YMUL10123v027809	M70121	Trailer		0	0
105	WATER	2004	UTILITY	TRAILER (BIG TEX 16' POPE)	16VPX162442H22596	M69026	Trailer		0	0
106	HIGHWAY	2004	CONCORD	ASPHALT HAULER	1C9A250414P040822	M69094	Equipment		0	0
107	HIGHWAY	1971	HUBER	GRADER	CM3708	M35324	Equipment		0	0
109	HIGHWAY	2006	Bobcat	S185 LOADER	530316215	M77920	Equipment	Luke Coulis	3109	1058
110	SEWER	2008	Utility Trailer	CARMATE FOR SEWER CAMERA	5A3C612S88L000670	M80898	Equipment		0	0
111	BUILDING	2007	Boomlift	GENIE	5400814124	M81166	Equipment		0	0
112	HIGHWAY	2008	Utility Trailer (Boomlift)	BRIMAR	43YDC26258C070002	M75018	Trailer		0	0
113	HIGHWAY	2017	TOW BANDIT	FLAT BED	1F9ET2026HR323702	M3055A	Trailer		N/A	N/A
114	WATER	1998	AXIS	Trailer for shoring box as per RJE	24879010	M80899	Trailer		0	0
115	HIGHWAY	?	Black Parks Trailer	UTILITY TRAILER	N/A	N/A	Trailer			
116	HIGHWAY	1986?	TORO	GROUNDMASTER	3086-230000344	N/A	Equipment			
117	SEWER	1991	GENERACK	GENERATOR			Equipment			

SOP	Title
1	Catch Basin Cleaning
2	Sweeping Streets and Parking Lots
3	Application and Storage of Road Salt and Sand
4	Snow Removal and Stockpiling
5	Structural Stormwater Best Management Practices Inspections and Maintenance
6	Municipal Buildings and Facilities Maintenance
7	Fuel and Oil Handling
8	Lawns, Grounds, and Landscaping Maintenance
9	Oil/Water Separator Maintenance
10	Use, Storage, and Disposal of Pesticides, Herbicides, and Fertilizer
11	Use, Storage, and Disposal of Petroleum and Hazardous Materials
12	Pet Waste Management
13	Spill Prevention, Response, and Clean-up Procedures
14	Trash and Solid Waste Management
15	Storage and Maintenance of Municipal Vehicles and Equipment
16	Washing of Municipal Vehicles and Equipment

Appendix E
Standard Operating Procedures (SOPs) for Municipal Facilities and Activities

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.

- 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

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.
- 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

Catch Basin Inspection Form
East Longmeadow, Massachusetts

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

Required Maintenance/ Problems (check all that apply):

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

Other: _____

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

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

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

Observations:

Color:	
Odor:	

Weather Conditions : Dry > 24 hours ☐ Wet ☐

Sample of Screenings Collected for Analysis? Yes ☐ No ☐

Comments:

Circle those present:

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

Catch Basin Inspection and Cleaning Log
East Longmeadow, Massachusetts

Date	Inspector	Weather Conditions	Number of Catch Basins Inspected/Cleaned	Amount of Material Removed	Catch Basins More Than 50% Full	Corrective Action Taken/Recommended if More Than 50% Full

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs
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.

- 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).

Street Sweeping Log
East Longmeadow, Massachusetts

Date	Operator	Weather Condition	Sweeping Method	Streets and/or Parking Lots Swept	Number of Miles Swept	Volume / Mass of Material Removed	Corrective Action Taken/Recommended

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

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
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

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.

- 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 are 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

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

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

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.

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.

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 ☐ Pre-Storm Event ☐ During Storm Event ☐ Post-Storm Event ☐			
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 ☐ No ☐	
Inspect for invasive species and remove if present	Monthly	Yes ☐ No ☐	
Remove trash	Monthly	Yes ☐ No ☐	
Mulch void areas	Annually	Yes ☐ No ☐	
Remove dead vegetation	Bi-Annually	Yes ☐ No ☐	
Replace dead vegetation	Annually	Yes ☐ No ☐	
Prune	Annually	Yes ☐ No ☐	
Replace all media and vegetation	As Needed	Yes ☐ No ☐	

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 ☐ Pre-Storm Event ☐ During Storm Event ☐ Post-Storm Event ☐			
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 ☐ No ☐	
Replace all media and vegetation	As Needed	Yes ☐ No ☐	

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 ☐ Pre-Storm Event ☐ During Storm Event ☐ Post-Storm Event ☐			
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 ☐ No ☐	
Clean forebays	Annually	Yes ☐ No ☐	
Clean sediment in basin/wetland system	Once every 10 years	Yes ☐ No ☐	
Mulch void areas	Annually	Yes ☐ No ☐	
Remove dead vegetation	Bi-Annually	Yes ☐ No ☐	
Replace dead vegetation	Annually	Yes ☐ No ☐	
Prune	Annually	Yes ☐ No ☐	
Replace all media and vegetation	As Needed	Yes ☐ No ☐	

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 ☐ Pre-Storm Event ☐ During Storm Event ☐ Post-Storm Event ☐			
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 ☐ No ☐	
Mow upper stage, side slopes, embankment and emergency spillway	Bi-Annually	Yes ☐ No ☐	
Remove trash and debris	Bi-Annually	Yes ☐ No ☐	
Remove sediment from basin	At least once every 5 years	Yes ☐ No ☐	

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 ☐ Pre-Storm Event ☐ During Storm Event ☐ Post-Storm Event ☐			
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 ☐ No ☐	
Remove trash and debris	Each Inspection	Yes ☐ No ☐	
Examine to determine if system drains in 72 hours	Annually	Yes ☐ No ☐	
Inspect filtering media for clogging	Per manufacturer's schedule	Yes ☐ No ☐	

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 ☐ Pre-Storm Event ☐ During Storm Event ☐ Post-Storm Event ☐			
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 ☐ No ☐	
Rake sand	Every 6 months	Yes ☐ No ☐	

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 ☐ Pre-Storm Event ☐ During Storm Event ☐ Post-Storm Event ☐			
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 ☐ Pre-Storm Event ☐ During Storm Event ☐ Post-Storm Event ☐			
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 ☐ No ☐	
Mow/rake buffer area, side slopes and basin bottom	Bi-Annually	Yes ☐ No ☐	
Remove trash, debris and organic matter	Bi-Annually	Yes ☐ No ☐	
Inspect and clean pretreatment devices	Every other month and after every major storm event	Yes ☐ No ☐	

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 ☐ Pre-Storm Event ☐ During Storm Event ☐ Post-Storm Event ☐			
Describe the weather conditions at time of inspection			

Specific Information

Maintenance Activity	Maintenance Frequency	Is Status of BMP Satisfactory?	Corrective Action Needed
		Yes ☐ No ☐	
		Yes ☐ No ☐	
		Yes ☐ No ☐	
		Yes ☐ No ☐	
		Yes ☐ No ☐	
		Yes ☐ No ☐	
		Yes ☐ No ☐	

STANDARD OPERATING PROCEDURE 6: MUNICIPAL BUILDINGS AND FACILITIES MAINTENANCE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS

DESCRIPTION: Municipal buildings and facilities (schools, municipal offices, police and fire stations, municipal pools, parking garages, etc.) often house various chemicals, such as petroleum products and hazardous materials. As a result, these buildings and facilities are potential sources of pollutant discharges to the storm drainage system.

The goal of this SOP is to provide guidance to municipal employees on the use, storage, and disposal of chemicals and other stormwater pollutants to reduce the discharge of pollutants from the MS4. If services are contracted, this SOP should be provided to the contractor. The contract should specify that the contractor is responsible for compliance with all applicable laws.

TARGETED CONSTITUENTS:

- Sediment
- Nutrients
- Chemicals
- Trash
- Organics
- Metals
- Oil & Grease
- Hazardous Materials

MUNICIPAL BUILDING AND FACILITIES MAINTENANCE ACTIVITIES

The ***Town of East Longmeadow Department of Public Works (DPW) – Building Maintenance Division*** performs a variety of operations and maintenance activities at its municipally owned and operated buildings, including but not limited to, building maintenance such as painting; use, storage, and disposal of petroleum products; dumpster and waste management; and parking lot sweeping.

HANDLING, STORAGE, TRANSFER, AND DISPOSAL OF TRASH AND RECYCLABLES

All liquid and solid waste must be disposed of properly. Some of the most common sources of pollution at municipal facilities are a result of littering, improper collection of debris, and improper disposal of solid or liquid waste. The Town of East Longmeadowwill implement the following procedures for municipally owned or operated buildings and facilities to reduce the discharge of pollutants from the MS4:

- All waste and recycling receptacles must be leak-tight with tight-fitting lids or covers.
- Keep lids on dumpsters and containers closed at all times unless adding or removing material. If using an open-top roll-off dumpster, cover it and tie it down with a tarp unless adding materials.
- Place waste or recycling receptacles indoors or under a roof or overhang whenever possible.
- Locate dumpsters on a flat, paved surface and install berms or curbs around the storage area to prevent run-on and run-off.
- Do not locate dumpsters over or adjacent to catch basins.
- Prior to transporting waste, trash, or recycling, ensure that containers are not leaking (double bag if needed) and properly secure containers to the vehicle.
- Clean and sweep up around outdoor waste containers regularly.
- Clean up any liquid leaks or spills with dry cleanup methods.
- Arrange for waste or recycling to be picked up regularly and disposed of at approved disposal facilities.

- Never place hazardous materials, liquids, or liquid-containing wastes in a dumpster or recycling or trash container.
- Do not wash trash or recycling containers outdoors or in parking lots.
- Conduct periodic inspections of solid and liquid waste storage areas to check for leaks and spills.
- Conduct periodic inspections of work areas to ensure that all wastes are being disposed of properly.
- In dumpster areas, regularly pick up surrounding trash and debris and regularly sweep the area.
- In compactor areas, regularly check the hydraulic fluid hoses and reservoir to ensure that there are no cracks or leaks. Regularly sweep the area**.**

BUILDING MAINTENANCE

- When power washing buildings and facilities, ensure that the washwater does not flow into the storm system. Containment or filtering systems should be provided.
- Paint and other chemicals should not be applied on the outside of buildings when it is raining or prior to expected rain.
- When sanding, painting, power washing, etc., ensure that sites are properly prepared (e.g., use tarps) and cleaned (e.g., use dry cleaning methods) especially if they are near storm drains. Protect catch basins when maintenance work is conducted upgradient of them.
- When painting, use a drop cloth and clean up any spills immediately.
- Do not leave open containers on the ground where they may accidentally tip over.
- Buildings should be routinely inspected for areas of potential leaks.
- Do not discharge chlorinated pool water into the stormwater system. Water must be properly dechlorinated and tested before it is discharged.
- Streets and parking lots surrounding municipal buildings and facilities should be swept and kept clean to reduce runoff of pollutants and debris to the stormwater system.
- Streets and parking lots around buildings and facilities will be swept in accordance with the procedures in SOP 2: Street Sweeping Procedures.

STORAGE OF PETROLEUM PRODUCTS AND POTENTIAL POLLUTANTS

- Floor drains in storage areas should be disconnected from the stormwater system.
- Routinely inspect buildings and facilities for areas of potential leaks.
- All municipal buildings and facilities should be periodically inspected to address potential pollutant sources (e.g., leaks).
- For storage and handling procedures of petroleum products and potential pollutants, refer to SOP 11: Petroleum and Hazardous Materials Storage and Handling and SOP 7: Fuel and Oil Handling Procedures.
- For storage and handling procedures for fertilizers, pesticides, and herbicides, refer to SOP 10: Fertilizers, Pesticides, and Herbicides.

PAINTING

When conducted outdoors, the preparation of surfaces for painting and the final application of paints and finishes represent potential sources of stormwater pollution. Grit from sanding and overspray from painting and finishing are two common contaminants resulting from painting operations. Painting in areas which are not covered or contained adequately may result in the introduction of grit, overspray, and chemicals to the stormwater system.

Handling and use of paints and finishes by improperly trained personnel increases the potential for spills and incorrect use. Contamination of stormwater can also occur during storage, when the paints are not being directly handled. Leaks and spills from faulty containers can migrate to the engineered storm drain system or receiving waters if not promptly controlled.

- All preparation and application activities should take place in an area that has been covered and contained to the greatest feasible extent. Simple brush-based painting needs less containment than spray painting and sand blasting, which must adhere to air pollution control and OSHA enclosure requirements.
- Ground cloths or drop cloths should be used at each painting site to collect debris and spills. Runoff control devices can be used around catch basins to prevent spilled paint from entering the storm drain system. In case a spill or leak does occur, storage areas and any vehicles transporting paints should be equipped with a spill response kit.
- During precipitation events, painting materials should be stored either indoors or under cover to avoid contact with stormwater.
- Permanent storage can be in cabinets or in other high, dry locations and in accordance with the manufacturer's instructions. Cabinets and storage area floors should be watertight, impervious, and provide spill containment. Many of the guidelines for the storage of pesticides and fertilizers can be applied to paints and finishes as well.

SPILL PREVENTION PLAN

- Spill prevention plans such as Spill Prevention Control and Countermeasure (SPCC) Plans should be in place where applicable, based on inventories of material storage and potential pollutants. Coordinate with the ***East Longmeadow Fire Department*** if necessary.

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.

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.

- 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.

- 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** ☐	**No** ☐	
In the case of bulk fuel delivery, does tank capacity exceed the amount of delivery?	**Yes** ☐	**No** ☐	**N/A** ☐
In the case of drum fuel delivery, are all drums free of leaks and punctures?	**Yes** ☐	**No** ☐	**N/A** ☐
Commence unloading. Remain with vehicle at all times.			
Post-Unloading Checklist			
Have all fuel containers, including the vehicle, been inspected for leaks?	**Yes** ☐	**No** ☐	
Has the ground at the unloading point been inspected for evidence of leaks?	**Yes** ☐	**No** ☐	
If there are any leaks or spills, has the material been properly cleaned?	**Yes** ☐	**No** ☐	**N/A** ☐
Has the correct amount of fuel been delivered?	**Yes** ☐	**No** ☐	
Has a receipt been collected?	**Yes** ☐	**No** ☐	
Delivery is complete.			

STANDARD OPERATING PROCEDURE 8: LAWNS, GROUNDS, AND LANDSCAPING MAINTENANCE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS / RECREATION

DESCRIPTION: Nutrient loads generated by suburban lawns as well as municipal properties can be significant, and recent research has shown that lawns produce more surface runoff than previously thought. Grass clippings and leaf litter contribute nutrients to local waters. Dumping lawn and yard waste directly into streams or the drainage system is prohibited.

Landscaping activities, such as mowing, fertilizing, and pesticide application, have the potential to contribute to local stormwater pollution. When lawn mowers, weed whackers, and other landscaping equipment with small engines are used at municipal parks, gasoline and oil are generally also transported to the park to fuel these pieces of equipment. There is an inherent risk of spilling fuel when equipment is being fueled. Poorly maintained equipment may also leak liquids during use.

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
- Bacteria
- Oil & Grease
- Organics
- Low Dissolved Oxygen

LANDSCAPING ACTIVITIES

Prevent lawn debris from entering surface and groundwater supplies by washing and cleaning with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater drainage system.

- Repair damage to landscaped or mulch or vegetated bare areas as soon as possible to prevent erosion. If there are areas of erosion or poor vegetation, repair them as soon as possible, especially if they are within 50 feet of a surface water (e.g., pond, lake, or river).
- Use mulch or other erosion control measures on exposed soils.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the stormwater drainage system.
- Use hand or mechanical weeding where practical.
- Reduce mowing frequency and employ mowing techniques to maintain a healthy lawn and minimize chemical use – no more than 1 inch of lawn should be removed from each mowing (grasses kept at 2.5 to 3 inches high are more heat-resistant than close-cropped grass).
- Keep mower blades sharp and leave clippings in place after mowing. If lawn clippings are collected, dispose of them properly. Do not blow or wash grass clippings into the street, gutter, or storm drains.
- Brush off mowers (reels and decks) and tractors over grassy areas or in contained washout areas. Do not hose off movers over paved areas that drain into the MS4 or directly to surface waters.
- Leave clippings on grassy areas or dispose of them in the trash or by composting.
- Water plants in the early morning or late at night.
- Use yard waste as mulch and topsoil, or compost.
- Sweep up yard debris instead of hosing down.
- When establishing new plantings, use alternative landscaping materials, such as drought resistant or native plants to reduce the need for irrigation and extensive application of fertilizers and pesticides.

- In accordance with MS4 requirements related to the Long Island Sound TMDL for Nitrogen, blowing organic waste material (grass cuttings, leaf litter) onto adjacent impervious surfaces is strictly prohibited.
- In accordance with MS4 requirements related to the Long Island Sound TMDL for Nitrogen, the Town of East Longmeadow will use slow-release fertilizers in addition to reducing fertilizer use.
- Fertilizers, herbicides, and pesticides should be properly used, stored, and handled (see SOP 10: Storage and Use of Pesticides, Herbicides, and Fertilizer).
- Repair broken sprinkler heads as soon as possible.
- Only irrigate at a rate that can infiltrate into the soil to limit runoff.
- Check irrigation schedules and avoid watering during already wet weather.
- Avoid irrigating close to impervious surfaces such as parking lots and sidewalks.

EQUIPMENT AND GASOLINE/OIL MANAGEMENT

- To prevent contamination of stormwater by gasoline and oil during maintenance activities at municipal parks, all equipment and containers should be regularly maintained and inspected to ensure that no leaks are present. Handling of gasoline and oil, including filling fuel tanks, should be conducted on impervious surfaces with proper containment of the surrounding area in the event of a spill or a leak. Please refer to SOP 7: Fuel and Oil Handling, for more detailed procedures.
- Equip vehicles transporting landscaping equipment, pesticides, fertilizer, or paint with a spill response kit in case a spill or leak of any of the aforementioned materials does occur. More detailed information on spill kits can be found in SOP 13: Spill Prevention and Response.
- Follow the procedures outlined in SOP 15: Vehicle and Equipment Storage and Maintenance and SOP 16: Vehicle and Equipment Washing.

WATERFOWL MANAGEMENT

Grassed areas and parks are often attractive locations for Canada geese and other birds and waterfowl to congregate. Waterfowl droppings are not only a nuisance for park visitors and children playing on athletic fields, but also contribute nutrient and bacteria pollution to surface waters.

- Install signs in locations of higher waterfowl density prohibiting feeding the waterfowl and wild animals. Feeding water fowl discourages their natural behavior and may cause dependency on handouts from park visitors. This can lead to overpopulation in parks and other open spaces. When left on their own, waterfowl will find new areas where food sources are more plentiful.
- Regularly maintain areas of waterfowl congregation to prevent pollution due to droppings and feathers. Regularly maintain waterways and entrances to the drainage system which may accumulate waterfowl droppings.
- Consider employing physical methods for discouraging waterfowl from residing at parks and open spaces (e.g. reducing watering and fertilizer use, planting foul tasting grasses, eliminating nesting structures, installing predatory decoys, and employing trained dogs to herd and intimidate waterfowl).

TRASH MANAGEMENT

- All waste and recycling containers must be leak-tight with tight-fitting lids or covers.
- Place waste and recycling containers indoors or under a roof or overhang whenever possible.
- Clean and sweep up around outdoor waste containers regularly.
- Arrange for waste and recyclables to be picked up regularly and disposed of at approved disposal facilities.
- Do not wash out waste or recycling containers outdoors or in a parking lot.
- Conduct periodic inspections of waste areas to check for leaks and spills.
- Ensure there are enough trash and recycling containers at appropriate areas. Monitor waste and recycling containers at heavily-used sites and on holidays to ensure that there is no overflow.

OTHER MAINTENANCE

- Provide pet waste stations with bags and trash receptacles where pets are permitted. Post signs describing the proper disposal of pet waste. Refer to SOP 12: Pet Waste.
- All portable toilets should be staked down in flat, secure locations where they are less likely to be knocked down or blown over. They should be placed in a location that would retain any spillage from washing into the MS4 or receiving waters. Ensure routine maintenance and cleaning of portable toilets.
- Water from power washing signs, structures, or bleachers cannot be discharged into the stormwater system.
- When painting park equipment, use a drop cloth and clean up any spills immediately.
- Do not leave open containers on the ground where they may accidentally tip over.

INSPECTION PROCEDURES

- Look for erosion and poor vegetation cover. Address promptly, especially when these areas are within 50 feet of a surface water or storm drain.
- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring.
- Minimize excess watering and repair leaks in the irrigation system as soon as they are observed.
- Inspect and remove accumulated debris from grounds.
- Routinely monitor lawns to identify problems during their early stages.
- Identify nutrient/water needs of plans. Inspect for problems by testing soils.

TRAINING

Employees who perform landscaping, maintenance, or other applicable work at municipal facility grounds, parks, and open spaces 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 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. Where use of detergent cannot be avoided, use of a biodegradable, phosphate-free detergent is preferred.

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.
- If detergent use is necessary, use a biodegradable, phosphate-free detergent such as Zep-O-Shine™.
- Avoid using degreasers. If degreasers are necessary, use quick-break degreasers.
- Do not drain antifreeze, non-biodegradable 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 clean-up 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.
- 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 ☐	No ☐
Is there any evidence of petroleum bypassing the OWS?	Yes ☐	No ☐
Are there any unauthorized substances entering the OWS?	Yes ☐	No ☐
Does the OWS exhibit any signs of leaks or malfunctions?	Yes ☐	No ☐

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

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

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

STANDARD OPERATING PROCEDURE 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.

- 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.

- 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.

- 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 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 $H_2Orange_2$, 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).

- 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.

- 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.

- 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 12: MANAGEMENT OF PET WASTE
TOWN OF EAST LONGMEADOW DEPARTMENT OF PUBLIC WORKS

DESCRIPTION: Pet droppings can be significant contributor of pollution in lakes and pond watersheds where there are high populations of dogs. It has been estimated that for a small watershed (up to 20 square miles), 2 to 3 days of droppings from a population of 100 dogs contribute enough bacteria, nitrogen, and phosphorus to temporarily close it to swimming. This SOP is intended to provide the Town with institutional and structural best management practices to prevent pet waste related pollution.

TARGETED CONSTITUENTS:

- Nutrients
- Organics
- Low Dissolved Oxygen
- Pathogens/Bacteria

POLLUTION PREVENTION APPROACH – INCREASING AWARENESS

Provide pet awareness and education programs with the following elements:

- Encouraging residents to clean up after their pets and to properly dispose of such wastes that may be deposited in their yards, streets, and parks.
- If pet waste is a problem, post signs in local parks describing the problem and urging cleanup and proper disposal of pet wastes or target residential areas for public education brochures.

STANDARD OPERATING PROCEDURES

- Put waste in trash.
- Restrict dog access to areas of parks where swales, steep slopes, and streams are.
- Provide vegetated buffers of prescribed widths between dog parks and waterways, swales, storm drain inlets, gullies, and steep slopes.
- Add and maintain pooper scooper stations with free sanitary “pick-up” bags and proper receptacles to Town-owned parks and playgrounds that have pet waste problems.
- Continue to incorporate public outreach elements like signage and informational brochures into and around parks, as necessary.

INSPECTION PROCEDURES

- Routinely inspect common dog walking areas for pet waste.

MAINTENANCE PROCEDURES

- Remove and properly dispose of pet waste.
- Restock dog waste pick up bag stations frequently.
- Pick up trash frequently and maintain adequate trash receptacles.

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 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 <u>are exempt</u> 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

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.

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** ☐ **No** ☐
	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

Table of Contents

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:

- 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.

- 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.

- 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 Department 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 oil[1] 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 <u>fail</u> 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 <u>pass</u> 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.

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

Commonwealth of
Massachusetts
Argeo Paul Cellucci, Governor
Jane Swift, Lt. Governor

Executive Office of
Environmental Affairs
Bob Durand, Secretary

Department of
Environmental Protection
Lauren A. Liss, Commissioner

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Massachusetts Department of ENVIRONMENTAL PROTECTION

f a c t s h e e t

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.

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

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

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Department of
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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/northeas.htm (978) 694-3200
Southeast Regional Office - 20 Riverside Dr., Lakeville, MA 02347
http://www.mass.gov/dep/about/region/southeas.htm (508) 946-2700
Central Regional Office - 627 Main St., Worcester, MA 01608
http://www.mass.gov/dep/about/region/centralr.htm (508) 792-7650
Western Regional Office - 436 Dwight St., Springfield, MA 01103
http://www.mass.gov/dep/about/region/westernr.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

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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 $H_2Orange_2$, 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.

- 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.

- 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.

- 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.
- Avoid detergents as much as possible. If detergents are necessary, use a biodegradable, phosphate free detergent such as Zep-O-Shine™.
- Avoid using degreasers. If degreaser use is necessary, use quick-break degreasers.
- 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 Filtrexx™ FilterSoxx product, or equal. The treatment device shall be positioned such that all drainage must flow through the device, preventing bypassing or short-circuiting.
- 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.

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.
- Avoid detergents as much as possible. If detergents are necessary, use a biodegradable, phosphate free detergent such as Zep-O-Shine™.
- Avoid using degreasers. If degreaser use is necessary, use quick-break degreasers.
- 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.
- Refer to SOP 9 for oil/water separator maintenance.

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. Avoid detergents as much as possible. If detergents are necessary, use a biodegradable, phosphate free detergent such as Zep-O-ShineTM.
- 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”.

Appendix F
Forms

EMPLOYEE TRAINING LOG

Training Date:	
Title of Training:	
Training Duration (minutes):	
Subject(s) covered during Training: (Check items or attach copy of training materials)	
Employee(s) Trained:	**Signature:**

Amend. No.	Description of Amendment	Date of Amendment	Prepared by (Name/Title)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

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