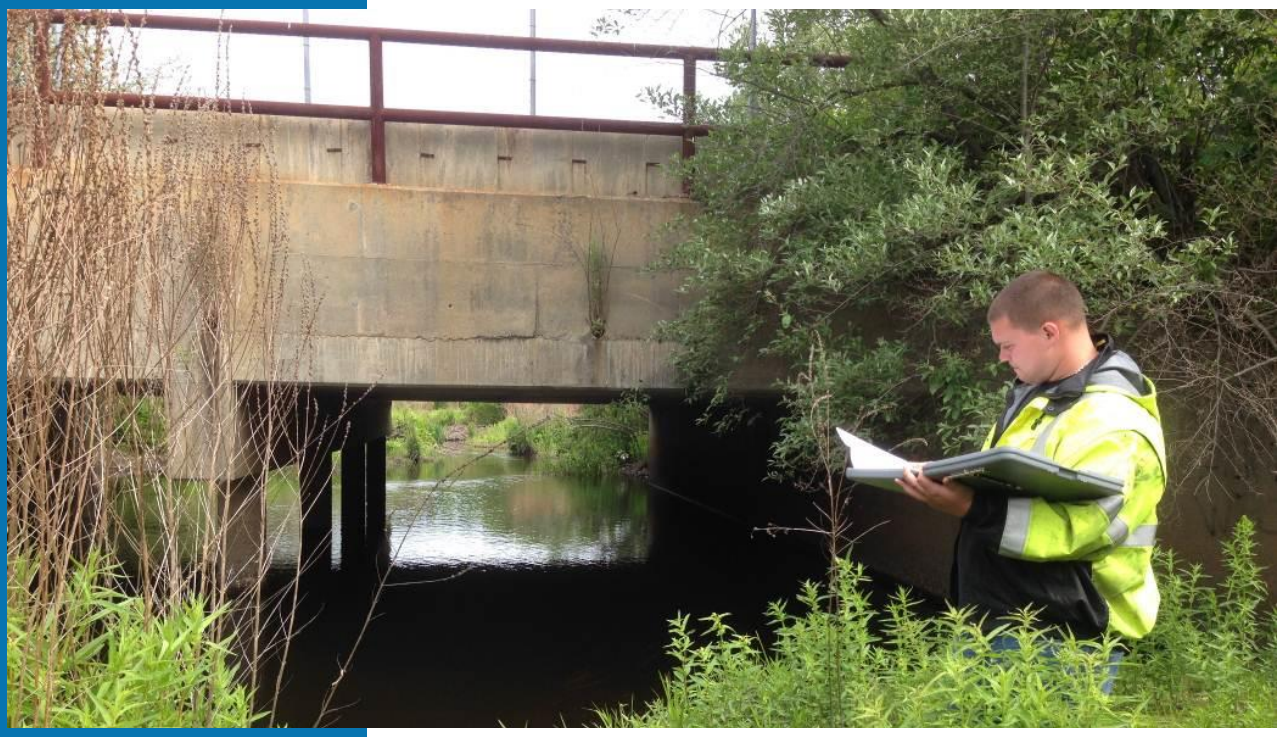
Tighe&Bond

NPDES SMALL MS4 STORMWATER GENERAL PERMIT MCM 6

MUNICIPAL GOOD HOUSEKEEPING PLAN MENDON, MA



SUBMITTED TO

Town of Mendon
Mendon, MA 01756

6/30/2020

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APPENDICES

Section 1
Introduction

Mendon's stormwater discharges are regulated under the Environmental Protection Agency's (EPA's) Small Municipal Separate Storm Sewer System (MS4) General Permit (General Permit). The Small MS4 Program contains six minimum control measures (MCMs) that, when implemented, should result in a significant reduction in pollutants discharged into receiving waters. Development of a Municipal Good Housekeeping Program (MGHP) is required under the sixth MCM, Good Housekeeping and Pollution Prevention, under the General Permit Section 2.3.7. The goal of a MGHP is to evaluate municipal facilities and activities that may contribute to stormwater pollution and take steps to minimize and prevent polluted runoff.

Under MCM 6, Pollution Prevention and Good Housekeeping in Municipal Operations, Mendon is required to[1]:

1. Develop and implement a program with a goal of preventing and/or reducing pollutant runoff from municipal operations. The program must include an employee training component.
2. Develop an inventory of all Town-owned facilities for the following:
    a. Parks and open space (areas such as public golf course [sic] and playing fields);
    b. Buildings and facilities (such as schools (if town-owned or operated), town hall, fire and police, libraries and other civic buildings; and
    c. Municipal vehicles and equipment.
3. Develop written operation and maintenance procedures for the facilities described above.
4. Develop a written program for the operation and maintenance of the Towns stormwater infrastructure (including catch basin cleaning, street sweeping, winter road maintenance, and stormwater treatment structures)
5. Implement the good housekeeping program including a schedule for inspection, maintenance, and training.
6. Develop and fully implement a Stormwater Pollution Prevention Plan for each of the following permittee-owned or operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater as determined by the permittee.

The Town, other than the Highway Department, does not have a formal written Pollution Prevention and Good Housekeeping Program that includes operation and maintenance procedures. This report summarizes the development of the Town-wide Good Housekeeping Plan completed within the first two years of the new General Permit. The

[1] Requirements paraphrased from the 2016 General Permit for Stormwater Discharges in Massachusetts. Refer to Section 2.3.7 for more information.

steps included developing a written inventory of all town-owned facilities within EPA's three categories (General Permit Section 2.3.7.a.ii); parks and open space, buildings and facilities, and vehicles and equipment, assessing pollution potential, and developing written inspection and maintenance procedures to reduce pollution from the MS4. The locations of municipal facilities within the sub watersheds of Mendon is shown in Appendix A.

The Town of Mendon is already taking many actions to prevent or reduce pollution in stormwater runoff from municipal operations. Mendon departments, boards, and commissions participate in and have a responsibility for municipal good housekeeping and pollution prevention including completing ongoing preventative maintenance of the drainage system (such as catch basin cleaning and structure repairs), implementing the Highway/ DPW facility SWPPP and SPCC, managing trash, and maintaining open space and recreational areas,.

The Mendon Good Housekeeping Plan formalizes operation and maintenance practices and presents 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, and drainage infrastructure. The plan identifies municipal activities with a range of pollution potential, provides Standard Operating Procedures to address activities and pollutants of concern, and establishes responsibilities and schedules for implementation. The plan also provides a framework for establishing required annual training for responsible employees.

Figure 1 Mendon Town Hall

Section 2
Municipal Inventory of Buildings and Facilities

As required by Section 2.3.7 a.ii an inventory of Town-owned or operated properties in the Town of Mendon was developed including buildings, facilities, parks and open spaces. A total of 30 sites and facilities were identified where activities may potentially contribute pollution to stormwater runoff (See Appendix A for map with locations). Table 1 below provides an overview of the types of activities that occur at municipal facilities with the potential to cause pollution.

The inventory included a screening for specific activities occurring at each site with potential to contribute pollutants to stormwater runoff, such as vehicle maintenance, storage of fuels, or managed turf (per draft General Permit Sections 2.3.7.a.ii.(1.)-(3.) and identifying the department or individual responsible for maintenance.

Table 2 provides the inventory summary including general attributes and screening results, organized into categories for Municipal Buildings, School Buildings, Fire and Safety Facilities and Parks and Recreation.

The Town completed a second review with input from responsible Town staff to verify and fine tune the facility screening. Based on a review of the activities, Table 3 summarizes the types of major facility operations at each location. The table provides the first step in developing Town-Wide Standard Operating and Procedures as part of an overall Municipal Good Housekeeping Plan and the specific infrastructure operation and maintenance procedures required by Section 2.3.7a. iii the Permit.

Mendon's schools were included in the municipal inventory, but as the schools are part of a separate district and independent from the Town's operating budget, the town is not obligated to include them in the Town's Municipal Good Housekeeping Plan.

Figure 2 Miscoe Hill Middle School

Table 1

Stormwater Pollutants Associated with Municipal Facilities and Operations

Pollution Generating Activity	Stormwater Pollutants: Sediment	Nutrients	Pathogens	Metals	Hydro-carbons	Toxins	Other
Facility Management							
Vehicle and Equipment Repair	○	○	⊘	●	●	●	
Vehicle and Equipment Fueling	⊘	○	⊘	●	●	●	
Vehicle and Equipment Washing	●	●	●	◎	◎	●	
Vehicle and Equipment Storage	○	⊘	⊘	◎	●	○	Trash
Outdoor Loading/ Unloading of Materials	●	◎	●	◎	○	○	Organic Matter
Outdoor Storage of Raw Materials	●	◎	●	◎	◎	◎	
Solid Waste Management (including Scrap Metal	●	●	●	●	◎	●	Trash
Building Repair	●	○	○	◎	◎	◎	
Building Maintenance- Painting	●	⊘	○	●	○	◎	
Parking Lot Maintenance	●	●	●	◎	●	◎	
Turf Management	◎	●	◎	⊘	◎	●	Pesticides
Landscape Management	◎	●	◎	⊘	◎	●	Pesticides
Compost Production Storage	●	●	●	○	⊘	⊘	Bacteria
Salt Storage	○	⊘	⊘	⊘	⊘	○	
Snow Dumping	●	◎	○	◎	◎	◎	
Waste Oil Handling and Disposal	○	⊘	⊘	⊘	◎	●	
Waste Oil Storage	○	⊘	⊘	⊘	◎	●	
Chemical Handling- Loading/Unloading Storage	⊘	⊘	⊘	⊘	●	●	
Construction Project Managements							
Construction Projects	●	○	⊘	○	◎	◎	Trash
Street Repair and Maintenance							
Street Maintenance-Paving/Painting	◎	⊘	⊘	◎	●	◎	Trash
Bridge Maintenance	○	⊘	⊘	◎	●	◎	Trash
Right-of-Way Maintenance	◎	●	⊘	⊘	⊘	●	Pesticides
Winter Operations	●	⊘	⊘	○	○	○	Chloride
Street Sweeping							
Street Sweeping	●	○	●	◎	◎	○	Trash, Organic Matter

Table 1. continued Stormwater Pollutants Associated with Municipal Facilities and Operations

Pollution Generating Activity	Stormwater Pollutants						
	Sediment	Nutrients	Pathogens	Metals	Hydro-carbons	Toxins	Other
Storm Drain Maintenance							
Maintain Inlet/Outlet Structures	⊙	○	●	○	○	○	Trash, Organic Matter
Maintain Storm Drain System	⊙	○	●	○	○	○	Trash, Organic Matter
Stormwater Hotline Response							
Controlling Spills	⊘	○	⊙	⊘	●	●	
Controlling Illicit Discharges	⊙	○	●	○	●	●	Bacteria
Controlling Illegal Dumping	○	○	●	○	●	●	Trash, Organic Matter
Park and Landscape Maintenance							
Turf Management	⊙	●	○	⊘	⊘	●	Pesticides
Landscaping	○	●	○	⊘	⊘	●	Pesticides
Landscape Waste Management	○	⊙	●	⊘	⊘	⊘	Organic Matter
Residential Stewardship							
Stormdrain Stenciling	⊘	⊘	⊘	○	⊙	⊙	Trash, Organic Matter
Waste Collection and Recycling	⊘	⊘	⊘	⊙	○	⊙	Trash
Hazardous Waste Collection	⊘	○	⊘	⊙	●	●	Trash
Leaf and Landscape Waste Collection	⊙	○	⊙	⊘	⊘	⊘	Organic Matter

Source: Center for Watershed Protection, 2000

⊘ not associated with operation ⊙ infrequently associated ● frequently associated ○ rarely associated

The summary tables and map included in this report provide a good overview of the multiple properties, vehicles, equipment and infrastructure that the Town is required to maintain under the General Permit. The inventory will also help the Town understand the stormwater pollution potential from various municipal operations and identify locations within sensitive watersheds where specific activities are occurring.

Of 140 town-owned parcels, 30 improved sites were examined in greater detail based on pollution potential activities occurring at the site. Most of the buildings and facilities in Mendon do not have a high pollution potential. According to the MS4 permit, facilities with higher pollution potential include activities such as vehicle maintenance, operations at public works yards, transfer stations and other waste handling activities. To meet the new permit requirements under Part 2.3.7.b, the Town must prepare site-specific Stormwater Pollution Plans (SWPPP) for these facilities.

Map ID	Name	Address	Parcel	Responsible Board/ Commission/Department	Contact Name	Contact Phone/Email	Size (AC)	Building (Y/N)	Building (SF)	Parking (SF)	Managed Turf (SF)	Outfalls	Catch Basins	Heating (fuel)	AST/ Generator	Waste Mgt	Vehicle Storage	Vehicle Maintenance	Vehicle Washing	Chemical Storage	Floor Drains (Y/N)	Equipment Storage	Equipment Maintenance	Irrigation
Municipal Buildings																								
1	Founders Park Museum	1 Main St.	8_174_1_0	Historical Society	Kimberly Newman	508-478-8863	0.730	Y	640		x			x										
2	Mendon Elderly Housing	9 Blackstone St.	12_108_9_0	Milford Housing Authority	Ellen Murphy	508-473-9521, emurphy@milfordhousing.org	10.930	Y	2,622	x	x		11	electric	x	x								
3	Olney Cook Artisan Shop	54 Hartford Ave. East	18_140_54_0	Historical Society	Kimberly Newman	508-478-8863	0.560	Y	322	x		x												
4	Historical Society Records Room	13 Main St.	8_174_13_0	Historical Society	Kimberly Newman	508-478-8863	0.050	Y	588	x				x										
5	Old Library	18 Main St.	8_174_13_1	Select Board	Kimberly Newman	508-478-8863 / knewman@mendonma.gov	0.310	Y	1,326	x	x			x										
6	Town Hall	20 Main St.	8_174_13_2	Select Board	Kimberly Newman	508-478-8863	0.130	Y	6,454	x	x			x		x								
7	Taft Public Library	29 North Ave.	8_174_13_3	Select Board	Kimberly Newman	508-478-8863	2.810	Y	3,200	x	x			electric		x								
8	DPW/ Highway Garage	66 Providence St.	8_174_13_4	Highway Department	Alan Tetreault	508-473-0737 / highwaydpt@mendonma.gov	12.000	Y	3,240	x		x		x	x	x	x	x	x	x	x	x	x	
9	Mendon Senior Center	64 Providence St.	8_174_13_5	Council on Aging	Amy Wilson Kent	508-478-6175 / coa@mendonma.gov		Y		x	x			x		x								
10	Town Beach	45 Taft Ave.	8_174_13_6	Recreation Department	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	0.210	Y	648	x	x	x				x								
11	Old House	63 Uxbridge Rd.	8_174_13_7	Select Board	Kimberly Newman	508-478-8863	0.170	Y	348	x														
12	Steel Storage Building	26 Inman Hill Rd.	8_174_13_8	Highway Department	Alan Tetreault	508-473-0737 / highwaydpt@mendonma.gov	21.920	Y						x			x					x		
School Buildings																								
13	Clough Elementary and Clough Field	10 North Ave.	8_189_10_0	School Department	Joseph Maruszcak	508-634-1585	8.790	Y	87,000	x	x	x		gas		x	x			x				
14	Miscoe Hill Elementary	148 North Ave.	3_189_148_0	School Department	Joseph Maruszcak	508-634-1585	27.080	Y	127,416	x	x	x		x		x	x			x				
Fire and Safety																								
15	Old Fire Station	18 Main St.	12_174_22_0	Police Department	Dave (David) Kurczy, Chief	508-478-2737, DKurczy@mendonma.gov	0.060	Y	3,969	x				x	x		x							
16	Police Department	22 Main St.	12_174_20_1	Police Department	Dave Kurczy	508-478-2737	0.760	Y	2,400	x				x	x		x			x		x	x	
17	Fire Station	8 Morrison Dr.	17_186_8_0	Fire Department	Bill (William) Kessler, Chief	508-473-3434, wkessler@mendonma.gov	9.760	Y	8,560	x				x	x	x	x		x	x		x	x	
Parks and Open Space																								
Cemetery																								
18	Town of Mendon Cemetery	214 Providence St.	28_206_214_0	Parks and Recreation	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	15.54	Y	900		x													
19	George Cemetery	8 George St.	12_133_8_0	Parks and Recreation	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	1.36	N			x													
20	Swandale Cemetery	15 Hartford Ave East	17_140_15_0	Parks and Recreation	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	4.23	Y			x													
21	Bicknell Cemetery	113 Hartford Ave East	13_140_113_0	Parks and Recreation	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	1.02	N		x	x													
22	Town of Mendon Cemetery	73 Park St.	20_202_73_0	Parks and Recreation	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	0.10	Y	900	x	x													
23	Town of Mendon Cemetery	1 Providence St.	12_206_1_0	Parks and Recreation	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	2.15	N		x	x													
24	Pine Hill Cemetery	218 Providence St.	28_206_218_0	Parks and Recreation	Dan Byer	774-481-1321	1.71	N			x													
Garden and Active Recreation																								
25	Veteran's Park Ball Field, Restrooms & Snack Shack	29 Millville Str.	11_178_29_0	Parks and Recreation	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	6.250	Y	2,514	x	x	x	2									x		
26	Grover Field	10 Colonial Dr.	28_118_10_0	Parks and Recreation	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	3.860	Y		x	x													x
27	Memorial Park	47 Taft Ave.	11_225_47_0	Parks and Recreation	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	0.110	Y		x	x	x	2											
28	Memorial Park	4 Taft Ave.	11_225_4_0	Parks and Recreation	Dan Byer	774-481-1321/ parkcomm@mendonma.gov	11.600	N		x	x													
29	Clough Field	10 North Ave.	8_189_10_0	School Department	Joseph Maruszcak	508-634-1585	8.790	Y																
Solar Field																								
30	Solar Field	36 Milford St.	9_177_36_0	Select Board	Kimberly Newman	508-478-8863	31.87	N																

Table 3 Mendon Facility Operations

Map ID	Name	Address	Building Maintenance	Vehicle Storage	Drainage System Cleaning & Inspection	Lawn, Grounds, & Landscaping Maintenance	Pet Waste	Vehicle Washing	Spill Prevention & Response	Snow Removal & Deicing	Fuel and Oil Handling	Waste Management
Municipal Buildings							**Municipal Buildings**					
1	Founders Park Museum	1 Main Street	x			x					x	
2	Mendon Elderly Housing	9 Blackstone Street	x		x	x				x		x
3	Olney Cook Artisan Shop	54 Hartford Avenue East	x							x		
4	Historical Society Records Room	13 Main Street	x							x	x	
5	Old Library	18 Main Street	x			x				x	x	
6	Town Hall	20 Main Street	x			x				x	x	x
7	Taft Public Library	29 North Avenue	x							x		x
8	DPW/ HIghway Garage	66 Providence Street	x	x				x	x	x	x	x
9	Mendon Senior Center	64 Providence Street	x			x				x	x	x
10	Town Beach	45 Taft Avenue	x			x				x		x
11	Old House	63 Uxbridge Road	x							x		
12	Steel Storage Building	26 Inman Hill Road		x					x		x	
School Buildings							**School Buildings**					
13	Clough Elementary and Clough Field	10 North Avenue	x	x		x			x	x		x
14	Miscoe Hill Elementary	148 North Avenue	x	x		x			x	x	x	x
Fire and Safety Buildings							**Fire and Safety Buildings**					
15	Old Fire Station	18 Main Street	x	x							x	
16	Police Department	22 Main Street	x	x					x	x	x	
17	Fire Station	8 Morrison Drive	x	x				x	x	x	x	x
Parks and Open Space							***Parks and Open Space***					
Cemetery							**Cemetery**					
18	Town of Mendon Cemetery	214 Providence Street	x			x						
19	George Cemetery	8 George Street				x						
20	Swandale Cemetery	15 Hartford Ave East				x						
21	Bicknell Cemetery	113 Hartford Ave East				x						
22	Town of Mendon Cemetery	73 Park Street	x			x						
23	Town of Mendon Cemetery	1 Providence Street				x						
24	Pine Hill Cemetery	218 Providence Street				x						
Garden and Active Recreation							**Garden and Active Recreation**					
25	Veteran's Park Ball Field, Restrooms & Snack Shack	29 Millville Street	x		x	x	x					
26	Grover Field	10 Colonial Drive				x	x					
27	Memorial Park	47 Taft Avenue			x	x	x					
28	Memorial Park	4 Taft Avenue				x	x					
29	Clough Field	10 North Avenue				x	x					
Solar Field							**Commons**					
30	Solar Field	36 Milford Street										

The Highway Department (HWD) is the only facility in Mendon that includes higher pollution potential activities including the following:

- Vehicle and equipment maintenance and storage;
- Vehicle washing;
- Chemical Storage and Hazardous Waste Storage;
- Fueling Operations;
- Salt storage;
- Composting; and
- Recycling.

Figure 3 - Mendon Highway Fuel Depot

To address the potential concerns with pollution potential, the HWD first implemented a Stormwater Pollution Plan (SWPPP) in 2003 and updated the SWPPP in 2013 following Best Management Practices (BMPs) required for Transportation Facilities under the 2008 EPA NPDES Multisector General Permit for Stormwater Discharges Associated with Industrial Activities (MSGP). The MSGP was reissued in 2015, but the BMP's employed at the Highway Department are still consistent with the requirements of the 2015 MSGP. The HWD maintains all SWPPP specific BMP's, documents regular inspections, and provides annual employee training on the facility SWPPP.

The HWD also developed a Spill Prevention Control and Countermeasures Plan (SPCC) in 2008 (updated in 2013), required by EPA Regulations on Oil Pollution Prevention (40 CFR Part 112). The HWD maintains all SPCC specific BMP's, documents required weekly and monthly inspections, and provides employee training on the contents of the SPCC plan.

The remaining buildings and facilities in Mendon generally involve activities with a lower potential to cause stormwater pollution. Municipal activities at these facilities may include:

- Parking lot maintenance;
- Vehicles and equipment storage;
- Fueling for heating buildings;
- Turf management;
- Limited chemicals handling;
- Building maintenance and painting; and
- Solid Waste management at dumpsters.

Section 3
Inventory of Vehicles and Equipment

Vehicles and equipment are owned and operated by numerous departments in Town and include passenger cars and vans, dump trucks, ambulances, fire trucks, tractors, loaders, street sweepers, backhoes, and mowers. They are utilized for a variety of purposes, including senior citizen transportation, emergencies and public safety, public works operations, and inspections. The majority of Town owned vehicles and equipment is maintained by the Highway Department. A complete list of vehicles and equipment for the Mendon Highway Department is included in Appendix B.

Figure 4 - Mendon Highway Department Vehicles

Figure 5 - Mendon Council on Aging Transit

Section 4
Stormwater Drainage Infrastructure

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 basis, retention basis, swales, etc.

The Town of Mendon owns, operates, and maintains the following stormwater infrastructure assets:

- 29 miles of drainage pipes;
- 1,445 drainage structures (catch basins and manholes);
- 209 outfalls;
- 62 stream crossings (bridges and culverts);
- 69 miles of publicly maintained roadways; and
- Additional stormwater Best Management Practices, which may include structural pretreatment BMPs, treatment BMPs, conveyance BMPs, and/or infiltration BMPs.

Figure 6. Muddy Brook- stream crossing (left) and outfall #MB-62 with dry weather flow (right).

Section 5
Standard Operating Procedures

5.1 Development of Standard Operating Procedures

Thirteen Standard Operating Procedures (SOPs) were developed to address operations and maintenance needs for Mendon's sites and facilities listed in the Town-wide Municipal Inventory. The SOPs listed in Table 4 include written procedures that include pollution prevention methods, handling and storage, inspection and maintenance recommendations, related MassDEP policies or regulations, and cross reference to supporting SOPs. Some of these SOP's are facility specific and others are intended for Town-wide operations, such as road sweeping or snow and ice control.

Table 4
Mendon Good Housekeeping Standard Operating Procedures

SOP #	Title
1	Building Maintenance
2	Fuel and Oil Handling
3	Lawns, Grounds, and Landscaping Maintenance
4	Oil Water Separator Maintenance
5	Pet Waste
6	Petroleum and Hazardous Material Storage
7	Snow Removal and Deicing
8	Spill Prevention, Response and Cleanup
9	Stormwater Drainage System Cleaning and Inspections
10	Street Sweeping
11	Vehicle and Equipment Washing
12	Vehicle Storage
13	Waste Management

5.2 Standard Operating Procedure Department Review

After Draft SOPs were developed, Mendon Departments were interviewed during the spring of 2020 to establish consensus on the Good Housekeeping SOP. In collaboration with the Town, relevant SOP's were discussed with each Town Department responsible for management of sites and facilities identified in the inventory (Table 2). The applicable draft SOPs for each facility or location were initially sent to Department representatives for review and comment. After interviews, representatives were given two weeks to provide feedback prior to finalizing the documents. Five interviews were conducted to review any feedback or questions. Minor comments and feedback were incorporated into the final SOP documents. The SOPs within the Mendon Good Housekeeping Plan, dated June 2020, are subject to further revision as circumstances within the Town change, or state policies or regulations are modified.

The Mendon departments responsible for implementing SOPs are listed below in Table 5 and SOPs are included in Appendix C. The listed procedures have been adopted as part of a Good Housekeeping Program for the Town of Mendon and to comply with the NPDES MS4 General Permit requirements. Implementation includes distribution of the Good Housekeeping Plan to specific departments and development of targeted annual training.

A copy of the General Permit Section 2.3.7.a Operation and Maintenance is included in Appendix D.

Table 5
Mendon Department Good Housekeeping Standard Operating Procedures - Appendix C

Department	Responsible Party	Department Specific SOP Appendix C
Mendon Highway Department	Highway Surveyor	1-4, 6-13
Mendon Fire Department	Fire Chief	1,8,11-13
Mendon Police Department	Police Chief	1,8,11-13
Mendon Parks and Recreation Department	Parks Commissioner	1,3,5,6,11-13
Mendon Housing Authority	Housing Authority Director	1, 13
Mendon School Department	School Superintendent	1,7,13
Mendon Select Board	Town Administrator	1,13
Mendon Council on Aging	Council on Aging Director	1,13
Mendon Historical Society	Town Administrator	1,13

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Engineers | Environmental Specialists

Appendix A
Municipal Facilities

Map No.	Name	Address
1	Founders Park Museum	1 Main Street
2	Mendon Elderly Housing	9 Blackstone Street
3	Olney Cook Artisan Shop	54 Hartford Avenue East
4	Historical Society Records Room	13 Main Street
5	Old Library	18 Main Street
6	Town Hall	20 Main Street
7	Taft Public Library	29 North Avenue
8	DPW/ HIghway Garage	64 Providence Street
9	Mendon Senior Center	64 Providence Street
10	Town Beach	45 Taft Avenue
11	Old House	63 Uxbridge Road
12	Steel Storage Building	26 Inman Hill Road
13	Clough Elementary and Clough Field	10 North Avenue
14	Miscoe Hill Elementary	20 West Street
15	Old Fire Station	18 Main Street
16	Police Department	22 Main Street
17	Fire Station	8 Morrison Drive
18	Town of Mendon Cemetery	214 Providence Street
19	George Cemetery	8 George Street
20	Swandale Cemetery	15 Hartford Ave East
21	Bicknell Cemetery	113 Hartford Ave East
22	Town of Mendon Cemetery	73 Park Street
23	Town of Mendon Cemetery	1 Providence Street
24	Pine Hill Cemetery	218 Providence Street
25	Veteran's Park	29 Millville Street
26	Grover Field	10 Colonial Drive
27	Memorial Park	47 Taft Avenue
28	Memorial Park	4 Taft Avenue
29	Clough Field	10 North Avenue
30	Solar Field	36 Milford Street

UPTON

HOPEDALE

MILLVILLE

BLACKSTONE

Muddy Brook

LONG MEADOW

NIPMUCK POND

Rock Meadow Brook

Meadow Brook

Wigwam Brook

Ohio Brook

Spring Brook

Muddy Brook

Merrimack Basin

StuAsCo Basin

Mill River

Round Meadow Brook

Legend

Municipal Facilities

- Municipal Buildings
- School Buildings
- Fire and Safety
- Cemetery
- Garden and Active Recreation
- Solar Field
- Parks and Open Space

- Major Basin
- Subbasin
- MS4 Regulated Area (2010 and 2000 Census)
- Inland Wetlands
- Waterbody
- Rivers and Streams
- Parcel Boundary
- Town Boundary

1:30,000

0 1,250 2,500

Feet

Based on MassGIS Data

MUNICIPAL FACILITIES

Municipal Facilities
Mendon, Massachusetts

April 2017

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Appendix B
Equipment and Vehicle Inventory

No.	Year	Make/Model
T10	1999	FORD F250 Pickup
T11	2015	DODGE RAM 2500 Pickup
T12	2006	FORD F450 Pickup
T14	2016	FORD F250 Pickup
T21	1993	INT'L 2554
T22	2001	INT'L 2554
T23	2010	INT'L 7400
T24	2016	INT'L 7400
T26	2008	INT'L 7400
T28	1998	INT'L 4700
E14	1988	FORD 5610 Tractor
E114	1988	ALAMO Broom
E214		VALBY Chipper
E314		ALAMO Brush Mower Deck
E414		ALAMO Flail Head
E15	1983	FORD 1700 Tractor
E115		FORD Finish Mower Deck
E215	2009	WOODS Brush Hog
E16	1987	IR Compressor
E216		CP Jackhammer
E17	1986	BOBCAT 843 Skidsteer
E117		FORD Snowblower
E217		SWEEPSTER 5' Power Broom
E317		BOBCAT Dust Pan Sweeper
E417	2003	15C Power Auger
E20	2003	SNOWBEAR Trailer
E21	2003	JOHN DEERE Backhoe
E23		Leaf Vac Unit
E24	2005	Tailgate Spreader
E25		5000 Gallon Ice Ban Tank
E26		Paint Trailer (Homemade)
E28	2008	JD 544 Loader
E29		Dump Body (for T22)
E35	2016	BELMONT Equipment Trailer
E36	2011	CAR-MATE Emergency Resp Trailer
E37	1995	HOLDER C9700H
E50	2000	STOW Roller
E51	2010	CRA Mini Melter
E52	2011	STEPP SSPH-1.0 Hot Box
E53		Shop Made Plate Compactor Carrier
E54	2006	ELGIN Sweeper

No.	Year	Make/Model
H11		PRO MAC 690 Concrete Saw
H27	2007	EZ-SET Grapple Claw
H28	2008	Grapple to E27 (Granite Claw)
H34		TITAN Paint Striper
H36		CLIPPER Concrete Saw
H38		Plate Compactor
H39		HOMELITE Mud Pump
H49		ARIENS Power Broom
H51	2008	ICS 12" Concrete Saw
H55	2009	18" Chainsaw
H56		Spreader Bar (Homemade)
H57		HOMELITE Brush Cutter
H58		DIETZ Arrow Board
H59		MILWAUKEE Hammer Drill
H61		TANAKA Pole Saw
H62		REDMAX Blower
H63		HUSQ. Pressure Washer (Gas)
H64		HONDA 6500 KW Generator
H65		Traffic Stand
H66	2009	HONDA Pump WD30X
H67	2007	NORTHSTAR Sprayer
H68		LITTLE WONDER Blower (Used)
H70	2011	HONDA Water Pump
H71		DYNA Plate Compactor
H72		WALKER BS500 Compactor
P1	2008	FORD F350 Pickup
P30	1993	FORD F150 Pickup
P31		JOHN DEERE Ride-On Mower 72"
P44		Agricultural Spreader
P55		MID-ATLANTIC Equipment Trailer
P56	2008	JOHN DEERE Walk-Behind Mower
P57	2008	POULAN 20" Push Mower
P58		JOHN DEERE Walk-Behind Mower
P59		JOHN DEERE Ride-On Mower 38"
P60		TRAC VAC
P63	2014	HUSQVARNA 525 LST
P64	2014	HUSQVARNA 525 LST
P65	2009	HUSQVARNA 326 LS
R1		Recycle Box

No.	Year	Make/Model
E721		FRINK 10' 3910 P1SAWG Poly Plow
E822	2000	HI-WAY Sander
E824		TORWEL 6 Yd. SS Sander
E828		TORWEL 3.2 Yd. SS Sander
E912		FISHER 9' Plow (for T12)
E913	2015	MEYER 8' Pro Plow
E914	2016	FISHER Minute Mount 2 - 8'
E921	1982	FRINK 10' Poly Plow
E922	2000	EVEREST 11' Steel Plow (for T24)
E923	2000	EVEREST 11' Wing Plow (for T26)
E924	1999	MONROE 10' Plow
E925		FISHER 8' Plow
E926	2008	EVEREST 11' Steel Plow
E928		FRINK 9' Poly Plow
E931	1970	WAUSAU 10' Plow
E932		MONROE MS-5510 Scraper (for T22)
E933		MONROE MF5 Scraper (for T21)
E935	2008	EVEREST 11' Plow (for T22)
E936	2011	FISHER 10' Plow (for T28)
E937	2015	EVEREST 11' High Discharge Plow
E940	2016	EVEREST 11' Wing

No.	Year	Make/Model
S-2		BENWIL Lift
S-3		MILLERMATIC 251 Mig Welder
S-4		1000 Gallon Fuel Tank
S-5		MCNAUGHT Minilube
S-6		MILWAUKEE Heat Gun
S-8		ARO AIR Grease Gun
S-10		CHICAGO Air Hammer
S-11	2010	POWER EAGLE Pressure Washer
S-12		SEARS Compressor (Inman)
S-13		SOLAR Power Pack
S-14		PT 11 GAL PORT Air Tank (in T14)
S-15	2016	DEWALT 20V Impact Driver
S-16		AIPHINE Intercom System
S-17		HUSQVARNA Cut-Off Saw
S-18		ALLIED Engine Hoist
S-19		LINCOLN Mig Welder
S-20		REELCRAFT Air Hose Reel
S-21		OTC 20T Bottle Jack
S-23		I/R Air Compressor
S-24	2016	DEWALT 20V Hammer Drive
S-25		MTD Tripod Jack Stand
S-26		LINCOLN Stick Welder
S-27		MTD Jack Stand
S-28		MTD Transmission Jack
S-29		OTC 3T Floor Jack Model # 1504A
S-30		IR 3H Drive Ratchet Model # 107XP
S-31	2012	SNAP ON 1/2 Impact Wrench
S-32	2006	MILWAUKEE Sawzall
S-33		Battery Charger
S-34		THOMAS and BETTS Battery Crimp Tool
S-35		CHICAGO D.A. Sander CP 870 (B&T)
S-36		EVERCLEAR 30 Gal Parts Washer
S-37		ROL-AIR Compressor
S-38	2016	DEWALT 20V Sawzall
S-39	2010	MAKITA 7" Grinder
S-40	2011	BIG RED 3 Ton Jack
S-41	2011	Shop Press 40T
S-42	2012	AIR KING M35P
S-43		Used Pallet Jack
S-44	2014	MURRAY 927ES Snow Blower
S-45	2014	MURRAY 824EX Snow Blower
S-46		DEWALT 12" Cut-Off Saw
S-47	2012	AIR KING Filtration System

Tighe&Bond
Engineers | Environmental Specialists

Appendix C
Good Housekeeping SOPs

#1 STANDARD OPERATING PROCEDURE | *Building Maintenance*

TARGETED POLLUTANTS

Sediments
Chemicals

RESPONSIBLE DEPARTMENTS

All Municipal Buildings

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.

Pollution Prevention Approach

To prevent or reduce the potential for stormwater pollution from painting the following preventative maintenance procedures are recommended:

- 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.

#2 STANDARD OPERATING PROCEDURE | *Fuel and Oil Handling Procedures*

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

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

- There is no smoking while fuel handling is in process or underway.
- Sources of flame are kept away while fuel handling is being completed. This includes smoking, lighting matches, carrying any flame, or carrying a lighted cigar, pipe, or cigarette.
- The delivery vehicle's hand brake is set and wheels are chocked while the activity is being completed.
- Catch basins and drain manholes are adequately protected.
- 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.
- 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

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

- 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, "Spill Response and Cleanup 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.

TARGETED POLLUTANTS

Metals
Oil and Grease
Hydrocarbons

RESPONSIBLE DEPARTMENTS

Highway Department

- 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). Procedures for the delivery of drummed materials shall include the following:

- 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, "Spill Response and Cleanup 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. Procedures for the draining of bulk oil tanks shall include the following:

- 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. Refer to SOP, "Spill Response and Cleanup 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.

#3 STANDARD OPERATING PROCEDURE *Lawn, Grounds, and Landscaping Maintenance*

TARGETED POLLUTANTS

Sediments
Nutrients
Trash
Metals
Bacteria
Oil and Grease
Organics
Low Dissolved Oxygen

RESPONSIBLE DEPARTMENTS

School Department
Parks and Recreation

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, has 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.

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

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.

Suggested Standard Operating Procedures

Landscaping Activities

- Use mulch or other erosion control measures on exposed soils.
- Check irrigation schedules and avoid watering during already wet weather.
- 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.
- Water plants in the early morning or late at night.
- Consider use of alternative landscaping materials (e.g., drought-resistant plantings).
- Use yard waste as mulch and topsoil, or compost.
- Sweep up yard debris instead of hosing down.
- Do not leave yard waste in the street or sweep it into storm drains or streams.
- Sweep paved areas regularly to collect loose particles

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 the SOP for 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 the SOP for Spill Response and Cleanup.

Waterfowl Management

- 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, plating foul tasting grasses, eliminate nesting structures, installing detour coyotes, and employing trained dogs to herd and intimidate waterfowl).

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.

#4 STANDARD OPERATING PROCEDURE | *Oil/Water Separator Maintenance*

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

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

TARGETED POLLUTANTS

Oil and Grease

RESPONSIBLE DEPARTMENTS

Highway Department

General Oil/Water Separator Maintenance

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

Oil/Water Separator Inspection Procedures

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

Weekly inspections of an OWS should include the following:

- 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 of an OWS 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)

Cleaning Procedures

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

- 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 of Cleaning and Service

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

Oil/Water Separator Inspection Checklist

Facility: _____

OWS Location: _____

Inspected By: _____

Date: _____

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

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

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

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

#5 STANDARD OPERATING PROCEDURE | *Pet Waste*

TARGETED POLLUTANTS

Nutrients
Organics
Low Dissolved Oxygen
Pathogens/Bacteria

RESPONSIBLE DEPARTMENTS

Parks and Recreation Department

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.

Pollution Prevention Approach

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.

Suggested 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 pooper scooper stations with free sanitary “pick-up” bags and proper receptacles to Town-owned parks and playgrounds that have pet waste problems.
- Incorporate public outreach elements like signage and informational brochures into and around parks, if necessary.

Inspection Procedures

- Routinely inspect common dog walking areas for pet waste.

Maintenance Procedures

- Remove and properly dispose of pet waste.
- Restock Mutt Mitt stations frequently.
- Pick up trash frequently and maintain adequate trash receptacles.

#6 STANDARD OPERATING PROCEDURE | *Petroleum and Hazardous Materials Use Storage and Disposal*

TARGETED POLLUTANTS

Sediment
Nutrients
Trash
Metals
Oil & Grease
Organics
Low Dissolved Oxygen

RESPONSIBLE DEPARTMENTS

Highway Department

Fire Department

It is important to properly store petroleum products and hazardous materials to prevent them from contaminating stormwater runoff. Hazardous materials include:

- Cleaning agents: solvents, drain cleaners, and bleach
- Vehicle maintenance fluids: motor oil, gasoline, antifreeze, degreasers, and radiator flush
- Water treatment chemicals
- Paints

Improper storage and handling of these materials can allow toxic compounds, oils and greases, heavy metals, nutrients, suspended solids, and other pollutants to enter stormwater runoff and/or cause concerns to health and safety.

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; and preventing runon and runoff.

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

Suggested 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.

Material Inventory

- Identify all hazardous and non-hazardous substances by reviewing purchase orders and conducting a walk-through of facility.
- Compile Material Safety Data Sheets (MSDS) 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 indoors.
- 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.
- Provide secondary containment for hazardous materials and waste placed outdoors.
- Keep containers away from high traffic areas.
- Cover all containers and drums or place under shelter, if stored outdoors.
- Chemicals should be kept in original labeled containers.
- Containers should not be overfilled.
- Store containers on pallets.
- Properly stack containers and drums.
- Storage areas should be enclosed.
- 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 Spill Response and Cleanup 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 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 Oil/Water Separator Maintenance for further information.

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 the municipal sanitary sewer system. 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 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. MSDS should be reviewed and readily accessible in central facility 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 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.

#7 STANDARD OPERATING PROCEDURE | *Winter Deicing and Snow Removal*

Road Salt/Sand Application and Storage

Proper road salt and facility sand/salt applications and storage is necessary to prevent contamination to surface and ground water 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
- Small quantities (5% road salt) contain phosphorus, nitrogen, copper, and cyanide

Best Management Practices

Proper Storage

Mendon has a covered storage facilities on impervious surface for salt and sand/salt mixtures at the Highway Garage that is properly sited. For other facilities should have the following key elements:

- Covered structure on impervious surface.
- Drainage should be diverted away from storage facility.
- Sand/salt handling should be done within storage facility.
- Should not be located in a water supply watershed or within 100-year floodplain.

Proper Disposal

Disposal of sand/salt mixtures should not be done in the following areas:

- Wetlands
- Any surface waters
- Well locations and public drinking supplies

Proper Removal

- Sweet sweeping in spring
- Catch basin cleaning completed as necessary.

Proper Use

- Establish a low salt area near any water bodies or residential areas.
- When feasible, use higher percentage of sand in sand/salt mixture.
- Regulate the amount of road salt applied to prevent over-salting of motorways and increasing runoff concentrations.
- Vary the amount of salt applied to reflect site-specific characteristics, such as road width and design, traffic concentration, and proximity to surface waters.
- Provide calibration devices for spreaders in trucks to aid maintenance workers in the proper application of road salts.
- Use alternative materials, such as sand or gravel, in especially sensitive areas.

Inspection Procedures

- Inspect salt storage shed for leaks on a regular basis.
- Inspect salt application equipment including calibration equipment and spreaders.

TARGETED POLLUTANTS

Sediments
Nutrients
Trash
Metals
Bacteria
Oil and Grease
Organics
Low Dissolved Oxygen

RESPONSIBLE DEPARTMENTS

Highway Department

MASSDEP SNOW DISPOSAL GUIDANCE SOURCE:

http://www.mass.gov/eea/agencies/massdep/water/regulations/snow-disposal-guidance.html

- Inspect salt regularly for lumping or water contamination.
- Inspect surface areas for evidence of runoff – salt stains in ground near and around the salt storage shed, loading area, or downslope.
- Inspect for excessive amounts of salt on roads.

Maintenance Procedures

- Service trucks and calibrated spreaders regularly to ensure accurate, efficient distribution of salt.
- 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.
- Repair salt storage shed leaks.

Snow Stockpiling and Removal

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.

Best Management Practices

During extreme conditions when stockpiling is necessary the following practices should be applied:

- Do not stockpile snow near or within direct drainage to surface waters.
- Do not stockpile snow in wooded areas, around trees, or in vegetated buffer zones due to sediment and salt damage to vegetation.
- Stockpile snow in pervious areas where it can slowly infiltrate.
- During plowing activities on pervious surfaces, blading (plow lowers blade below ground surface level and plows the upper layers of soil in addition to overlying snow) should be avoided to prevent erosion.

Inspection Procedures

- Check snow piles for debris that could be windblown.

Maintenance Procedures

- Contain sediments as snow melts. This includes sweeping roadways and parking lots or other impervious areas.
- During plowing activities, avoid blocking drainage structures including catch basins, swales, and channels.

MassDEP Snow Disposal Guidance

Effective Date: March 8, 2001

Guideline No. BRPG01-01

Applicability: Applies to all federal, state, regional and local agencies, as well as to private businesses.

Supersedes: BRP Snow Disposal Guideline BRPG97-1 issued 12/19/97, and all previous snow disposal guidance

Approved by: Glenn Haas, Assistant Commissioner for Resource Protection

Purpose

To provide guidelines to all government agencies and private businesses regarding snow disposal site selection, site preparation and maintenance, and emergency snow disposal options that are acceptable to the Department of Environmental Protection, Bureau of Resource Protection.

STANDARD OPERATING PROCEDURE | *Winter Deicing and Snow Removal*

Applicability

These Guidelines are issued by the Bureau of Resource Protection on behalf of all Bureau Programs (including Drinking Water Supply, Wetlands and Waterways, Wastewater Management, and Watershed Planning and Permitting). They apply to public agencies and private businesses disposing of snow in the Commonwealth of Massachusetts.

Introduction

Finding a place to dispose of collected snow poses a challenge to municipalities and businesses as they clear roads, parking lots, bridges, and sidewalks. While we are all aware of the threats to public safety caused by snow, collected snow that is contaminated with road salt, sand, litter, and automotive pollutants such as oil also threatens public health and the environment.

As snow melts, road salt, sand, litter, and other pollutants are transported into surface water or through the soil where they may eventually reach the groundwater. Road salt and other pollutants can contaminate water supplies and are toxic to aquatic life at certain levels. Sand washed into waterbodies can create sand bars or fill in wetlands and ponds, impacting aquatic life, causing flooding, and affecting our use of these resources.

There are several steps that communities can take to minimize the impacts of snow disposal on public health and the environment. These steps will help communities avoid the costs of a contaminated water supply, degraded waterbodies, and flooding. Everything we do on the land has the potential to impact our water resources. Given the authority of local government over the use of the land, municipal officials and staff have a critically important role to play in protecting our water resources.

The purpose of these guidelines is to help municipalities and businesses select, prepare, and maintain appropriate snow disposal sites before the snow begins to accumulate through the winter.

Recommended Guidelines

These snow disposal guidelines address: (1) site selection; (2) site preparation and maintenance; and (3) emergency snow disposal.

1. Site Selection

The key to selecting effective snow disposal sites is to locate them adjacent to or on pervious surfaces in upland areas away from water resources and 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. The following areas should be avoided:

Avoid dumping of snow into any waterbody, including rivers, the ocean, reservoirs, ponds, or wetlands. In addition to water quality impacts and flooding, snow disposed of in open water can cause navigational hazards when it freezes into ice blocks.

Do not dump snow within a Zone II or Interim Wellhead Protection Area (IWPA) of a public water supply well or within 75 feet of a private well, where road salt may contaminate water supplies.

Avoid dumping snow on MassDEP-designated high and medium-yield aquifers where it may contaminate groundwater (see the next page for information on ordering maps from MassGIS showing the locations of aquifers, Zone II's, and IWPAs in your community).

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. A high volume of sand, sediment, and litter released from melting snow also may be quickly transported through the system into surface water.

Site Selection Procedures

It is important that the municipal Department of Public Works or Highway Department, Conservation Commission, and Board of Health work together to select appropriate snow disposal sites. The following steps should be taken:

Estimate how much snow disposal capacity is needed for the season so that an adequate number of disposal sites can be selected and prepared.

Identify sites that could potentially be used for snow disposal such as municipal open space (e.g., parking lots or parks).

Sites located in upland locations that are not likely to impact sensitive environmental resources should be selected first.

If more storage space is still needed, prioritize the sites with the least environmental impact (using the site selection criteria, and local or MassGIS maps as a guide).

MassGIS Maps of Open Space and Water Resources

If local maps do not show the information you need to select appropriate snow disposal sites, you may order maps from MassGIS (Massachusetts Geographic Information System) which show publicly owned open spaces and approximate locations of sensitive environmental resources (locations should be field-verified where possible). Different coverages or map themes depicting sensitive environmental resources are available from MassGIS on the map you order. At a minimum, you should order the Priority Resources Map. The Priority Resources Map includes aquifers, public water supplies, MassDEP-approved Zone II's, Interim Wellhead Protection Areas, Wetlands, Open Space, Areas of Critical Environmental Concern, NHESP Wetlands Habitats, MassDEP Permitted Solid Waste facilities, Surface Water Protection areas (Zone A's) and base map features. The cost of this map is $25.00. Other coverages or map themes you may consider, depending on the location of your city or town, include Outstanding Resource Waters and MassDEP Eelgrass Resources. These are available at $25.00 each, with each map theme being depicted on a separate map. Maps should be ordered from MassGIS. Maps may also be ordered by fax at 617-626-1249 (order form available from the MassGIS web site) or mail. For further information, contact MassGIS at 617-626-1189.

2. Site Preparation and Maintenance

In addition to carefully selecting disposal sites before the winter begins, it is important to prepare and maintain these sites to maximize their effectiveness. The following maintenance measures should be undertaken for all snow disposal sites:

A silt fence or equivalent barrier should be placed securely on the downgradient side of the snow disposal site.

To filter pollutants out of the meltwater, a 50-foot vegetative buffer strip should be maintained during the growth season between the disposal site and adjacent waterbodies.

Debris should be cleared from the site prior to using the site 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.

3. Emergency Snow Disposal

As mentioned earlier, it is important to estimate the amount of snow disposal capacity you will need so that an adequate number of upland disposal sites can be selected and prepared.

If despite your planning, upland disposal sites have been exhausted, snow may be disposed of near waterbodies. A vegetated buffer of at least 50 feet should still be maintained between the site and the waterbody in these situations. Furthermore, it is essential that the other guidelines for preparing and maintaining snow disposal sites be followed to minimize the threat to adjacent waterbodies.

Under extraordinary conditions, when all land-based snow disposal options are exhausted, disposal of snow that is not obviously contaminated with road salt, sand, and other pollutants may be allowed in certain waterbodies under certain

conditions. In these dire situations, notify your Conservation Commission and the appropriate MassDEP Regional Service Center before disposing of snow in a waterbody.

Use the following guidelines in these emergency situations:

- Dispose of snow in open water with adequate flow and mixing to prevent ice dams from forming.
- Do not dispose of snow in saltmarshes, vegetated wetlands, certified vernal pools, shellfish beds, mudflats, drinking water reservoirs and their tributaries, Zone IIs or IWPAs of public water supply wells, Outstanding Resource Waters, or Areas of Critical Environmental Concern.
- Do not dispose of snow where trucks may cause shoreline damage or erosion.
- Consult with the municipal Conservation Commission to ensure that snow disposal in open water complies with local ordinances and bylaws.

For More Information

If you need more information, contact one of MassDEP's Regional Service Centers:

Northeast Regional Office, Wilmington, 978-694-3200
Southeast Regional Office, Lakeville, 508-946-2714
Central Regional Office, Worcester, 508-792-7683
Western Regional Office, Springfield, 413-755-2214

or

Call Thomas Maguire of DEP's Bureau of Resource Protection in Boston at 617-292-5602.

#8 STANDARD OPERATING PROCEDURE | *Spill Prevention, Response and Cleanup Procedures*

TARGETED POLLUTANTS

Nutrients
Metals
Oil and Grease
Hydrocarbons
Organics

RESPONSIBLE DEPARTMENTS

Highway Department

Fire Department

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 frrom 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 cleanup supplies, and when management ensures procedures are followed.

Pollution Prevention Approach

- Create a well-thought-out spill prevention and response plan, and implement in the event of a spill.
- Facilities that store 1,320 gallons or more of oil (used and new oil, heating oil, engine oil, lube oil, hydraulic oil, and/or transmission fluid) total must develop and keep near oil storage areas an Oil Spill Prevention, Control, and Countermeasure (SPCC) Plan, as regulated under the EPA.
- Post a response checklist in any hazardous waste storage area with contact information (including emergency phone numbers) and spill containment procedures.
- Train personnel on spill prevention and response.
- Regularly update plan, checklists, and contact information.
- Regularly inspect spill potential areas.

Spill Prevention and Response Plan

For facilities that do not already have an Oil SPCC Plan, the plan should include a:

- Description of the facilities, the address, activities and materials involved.
- Identification of key spill response personnel and hospital contacts.
- Identification of the potential spill areas or operations prone to spills/leaks.
- Identification of which areas should be or are bermed to contain spills/leaks.
- Facility map identifying the key locations of areas, activities, materials, structural BMPs, etc.
- Material handling procedures and safety measures for each kind of waste.
- Spill response procedures including:
    - Assessment of the site and potential impacts
    - Containment of the material
    - Notification of the proper personnel and evacuation procedures
    - Clean up of the site

  - Disposal of the waste material
  - Proper record keeping procedures
- Plan to protect all storm drains in the event of a spill.
- Descriptions of spill response equipment, including safety and cleanup equipment.

Standard Operating Procedures

Spill/Leak Prevention

- If possible, move material handling indoors, under cover, or away from storm drains or sensitive water bodies.
- Properly label all containers so that the contents are easily identifiable.
- Berm storage areas so that if a spill or leak occurs, the material is contained.
- Cover outside storage areas either with a permanent structure or with a seasonal one such as a tarp so that rain will not come into contact with the materials.
- Check containers (and any containment sumps) often for leaks and spills. Replace containers that are leaking, corroded, or otherwise deteriorating with containers in good condition. Collect all spilled liquids and properly dispose of them.
- Store, contain, and transfer liquid materials in such a manner that if the container is ruptured or the contents spilled, they will not discharge, flow, or be washed into the storm drainage system, surface waters, or groundwater.
- Place drip pans or absorbent materials beneath all mounted taps and at all potential drip and spill locations during the filling and unloading of containers. Any collected liquids or soiled absorbent materials should be reused/recycled or properly disposed of.
- For Town programs that involve material transport, only transport the minimum amount of material needed for the daily activities and transfer materials between containers at a municipal yard where leaks and spills are easier to control.
- If paved, sweep and clean storage areas monthly. Do not use water to hose down the area unless all of the water will be collected and disposed of properly (e.g., in an oil/water separator).
- Install a spill control device (such as a tee section) in any catch basins that collect runoff from any storage areas if the materials stored are oil, gas, or other materials that separate from and float on water. This will allow for easier cleanup if a spill occurs.
- If necessary, protect catch basins while conducting field activities so that if a spill occurs the material will be contained.
- Keep ample supplies of spill cleanup materials including Speedi Dry and absorbent boom pads onsite.

Spill Clean Up

- Small non-hazardous spills:
  - Use absorbent materials for general cleanup of liquids.
  - Use brooms or shovels for the general cleanup of dry materials.
  - If water is used, it must be collected and properly disposed of. The wash water cannot be allowed to enter the storm drain.
  - Dispose of any waste materials properly, according to regulations.
  - Clean or dispose of any equipment used to clean up the spill properly.
- Large non-hazardous spills
  - Use absorbent materials for general cleanup of liquids.
  - Use brooms, shovels, or street sweepers for the general cleanup of dry materials.

  - If water is used, it must be collected and properly disposed of. The wash water cannot be allowed to enter the storm drain.
  - Dispose of any waste materials properly.
  - Clean or dispose of any equipment used to clean up the spill properly.
- For hazardous or very large spills, contact the **Fire Department**. A private cleanup contractor may be needed to be contacted to assess the situation and conduct the cleanup and disposal of the materials. The used cleanup materials, including rags, are also hazardous and must be disposed of as hazardous waste.

Reporting

- Report any spills immediately to the Facility Supervisor.
- Report spills in accordance with applicable reporting laws. Spills that pose an immediate threat to human health or the environment must be reported immediately to the Town's Health Department and the Fire Department.
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour).
- A spill of 10 gallons or more of oil requires you to call MassDEP immediately at 888-304-1133. Uncontrolled oil can threaten coastlines, waterfowl, and contaminate soils and water supplies. There is a specific "reportable quantity" for other hazardous materials. When in doubt, call MassDEP.
- After the spill has been contained and cleaned up, a detailed report about the incident should be generated and kept on file. The incident may also be used in briefing staff about proper procedures.

Inspection Procedures

- Inspect secondary containment systems and oil/water separators periodically to identify any operational problems.
- Inspect containers for leaks, areas near storm receiver inlets and outlets, and floor drains for indications of spills.

Maintenance Procedures

- Pump out oil/water separators as needed.
- Protect drains with oil absorbent materials.
- Clean out receivers on regular schedule.
- Remove spilled salt from salt loading areas, including the Town's salt storage shed.

Notification and Response Procedures

Internal Notification and Response

If a spill is discovered, **immediately** notify the Safety Officer and the Facility Supervisor.

Safety Officer
Name: _____
Work Phone: _____
Emergency Phone: _____

Facility Supervisor
Name: _____
Work Phone: _____
Emergency Phone: _____

If needed, contractors should be notified for additional assistance.

Cyn Environmental Services
100 Tosca Drive
Stoughton, MA 02072

Tighe & Bond
446 Main Street
Worcester, MA
508-754-2201

24-hour emergency response:800-242-5818 or (800) 899-1038

Federal and State Notification

Agency	Phone Number	When to Call
MassDEP 24-hour Spill Hotline	888-304-1133	- A release of any quantity of oil into water - Within 2 hours of a release of 10 gallons or more of oil on land
EPA Region 1	888-372-7341	- Release of more than 1,000 gallons of oil into a river/stream or if it is the second spill of any quantity of oil into a river/stream within 1 year
National Response Center (24 hours)	800-424-8802	- A release of any quantity of oil into water

Trigger volumes for other chemical spills vary. Contact MassDEP or a Licensed Site Professional for specific guidance on reporting thresholds and requirements for other chemicals.

MassDEP Central Regional Office
(508) 792-7650

Licensed Site Professionals Association (Wakefield, MA)
781-876-8915

For more information, contact:

	Phone Number
Hazardous Waste Compliance Assistance Line	**(617) 292-5898**
Household Hazardous Products Hotline	**(800) 343-3420**
Massachusetts Department of Fire Services	**(978) 567-3100 or (413) 587-3181**

Local Notification

The following local agencies should be called to provide emergency assistance, if required:

	Phone Number	Emergency Phone Number
Mendon Fire Department	(508) 473-5330	911
Mendon Police Department	(508) 478-2737	911
Mendon Highway Department	(508) 473-0737	
Mendon Health Department	(508) 634-2656	
Milford Hospital	(508) 473-1190	911

Local Emergency Room

Milford Hospital
14 Prospect Street
Milford, MA 01757

#9 STANDARD OPERATING PROCEDURE | *Catch Basin Inspection, Cleaning, and Maintenance*

Catch basins help minimize flooding and protect water quality by removing trash, sediment, decaying debris, and other solids from stormwater runoff. 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.

Suggested Standard Operating Procedures

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

- Target cleaning for early spring.
- Clean manually or with equipment (i.e., clamshell or vactor truck).
- Properly dewatering and dispose of catch basin material or store until contractor picks up cleanings (see "Management of Catch Basin Cleanings").
- Repair damaged catch basins including frames and grates.
- Install hoods if catch basins do not have them.
- Inform employees that catch basins are part of the stormwater drainage system and not the sanitary sewer system.
- The Highway Department should maintain an inventory of cleaning activities. Information should at a minimum include amount of cleanings removed and areas with heavily filled basins.
- Facilities should maintain a log of cleaning activities on their parking lots. Information should include date of cleaning activities, staff/ contractor that performs activities, number of basins cleaned, illicit connection/odor issues, repair issues, or heavily filled catch basins.
- Report any illicit (illegal) discharges to the Highway Department Hotline or Board of Health. Report oil spills immediately to the Fire Department and Board of Health.

Required Inspection & Cleaning Freqency

- 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.
- Establish a schedule with a goal that the frequency of routine cleaning will ensure that no catch basin at any time will be more than 50 percent full.
- Inspections should be incorporated during routine cleaning, as part of reconstruction contracts, and through requests made by residents or other Town departments.
- For facilities and activities within watersheds impaired by bacteria and nutrients (e.g., TSS), such as Mill Brook and the Charles River, prioritize inspection and maintenance for catch basins. Clean catch basins more frequently if inspection and maintenance activities indicate excessive sediment or debris loading

TARGETED POLLUTANTS

Sediment
Nutrients
Trash
Metals
Oil and Grease
Organics
Low Dissolved Oxygen
Bacteria

RESPONSIBLE DEPARTMENTS

Highway Department

Reporting

- Report any repair or maintenance problems to the Highway Superintendent. Repair problems may include frame and grate replacement.
- Keep a log of catch basins cleaned or inspected.
- Document Town's 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. 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.
- Report in each annual report the total number of catch basins, number inspected, number cleaned, and the total volume or mass of material removed from all catch basins.
- If a catch basin sump is more than 50 percent full (i.e. a catch basin sump is more than 50 percent full if the contents within the sump exceed one half (½) the distance between the bottom interior of the catch basin to the invert of the deepest outlet of the catch basin) during two (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. Westford is required by EPA to describe any actions taken in its annual report.

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 and 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 the Hazardous Waste Regulations, 310 CMR 30.000, 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 of the 310 CMR 19.000: Solid Waste Management Facility Regulations) for other uses, including non-landfill uses.

Source: http://www.mass.gov/eea/agencies/massdep/recycle/regulations/management-of-catch-basin-cleanings.html

#10 STANDARD OPERATING PROCEDURE | *Sweeping Streets and Town-owned Parking Lots*

TARGETED POLLUTANTS

Sediments
Nutrients
Trash
Metals
Bacteria
Oil and Grease
Organics
Low Dissolved Oxygen

RESPONSIBLE DEPARTMENTS

Highway Department

MASSDEP REUSE & DISPOSAL OF STREET SWEEPINGS SOURCE:

http://www.mass.gov/eea/docs/dep/recycle/laws/stsweep.pdf

Suggested Standard Operating Procedures

- Adhere to the Town's cleaning schedule.
- Town/facility parking lots should be checked regularly by Facility personnel and swept in the spring. If needed, increase sweeping frequency if excessive sediment accumulates.
- Any visible sediment should be swept up (including sand/salt mixtures and granular material).
- Control the number of points where vehicles leave the Facilities to allow sweeping to be focused on certain areas in parking lots.
- Sweep up the smallest particles feasible.
- Sweep in pattern to keep spilled material from being pushed into catch basins.
- Adjust broom frequently to maximize efficiency of sweeping operations.
- After sweeping is finished, make sure sweepings are properly stored and disposed of.
- Do not use kick brooms or sweeper attachments that tend to spread dirt.
- When unloading sweeper, make sure there is no dust or sediment release.
- For Town-owned sweepers, inspect sweepers to check for any necessary repairs or regular maintenance.

Required Inspection and Frequency of Sweeping

The Town must establish and implement procesures for sweeping and/or cleaning all streets (with the exception of rural uncurbed roads with no catch basins or high speed limited access highways) and Town-owned parking lots at a minimum of once per year in the spring.

More frequent sweeping of targeted areas determined by the Town on the basis of pollutant and load reduction potential, based on inspections, pollutant loads, catch basin cleanings or inspection results, land use, water quality limited or TMDL waters or other relevant factors should be completed:

- For facilities and activities within the Charles River Watershed, increase sweeping frequency of municipal streets and parking lots to a minimum of twice a year, once in the spring and once in the fall, the to address the Charles River TMDL and reduce the discharge of phosphorus.
- For rural uncurbed roadways with no catch basins and limited access highways, either sweep once per year in the spring or in accordance with a more frequent sweeping program, or develop and implement an inspection, documentation, and targeted sweeping plan.

Reporting

- Maintain a log or schedule of sweeping activities conducted. Information should include the date of sweeping activities, staff/contractor that performs activities, sweeping method (mechanical vs vacuum), and any comments such as amount of sweepings removed and heavily sedimented roadways. By recording heavily sedimented areas, prioritizations can be made to sweep these areas or clean catch basins more frequently. Any maps of areas swept should be kept on file.

- Facilities should maintain a log or schedule for their facility parking lots. Information should include the date of sweeping activities, staff/contractor who performs activities, sweeping method (mechanical or vac), and any comments such as amount of sweepings removed and heavily sedimented catch basins. By recording heavily sedimented areas, prioritizations can be made to sweep these areas or clean catch basins more frequently.
- Reporting in the annual MS4 report the number of miles cleaned or the volume or mass of material removed.

Reuse and Disposal of Street Sweepings

This Policy provides guidance on Massachusetts Department of Environmental Protection requirements, standards, and approvals for handling, reuse and disposal of street sweepings.

Approved by: Carl F. Dierker, Assistant Commissioner for the Bureau of Waste Prevention

Policy Statement and Scope

This Policy explains Department of Environmental Protection (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 after obtaining prior approval 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.

The provisions and requirements for managing street sweepings under these options are the subject of this policy.

Applicability

This policy applies to the reuse or disposal of street sweepings that are generated in the ordinary and customary maintenance of roadways. The policy does not apply to catch basin cleanings or street sweepings mixed with catch basin cleanings or other wastes. The policy does not apply to the material generated as the result of the clean up of an oil or hazardous material spill.

Street sweepings 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.

Definitions

Department means the Massachusetts Department of Environmental Protection (MassDEP).

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 but may also contain some leaves and other miscellaneous solid wastes collected during street sweeping.

Street sweepings does not mean 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 means local roads in central commercial and retail business districts and industrial and manufacturing areas.

Pre-Approved Uses, Restrictions & Conditions

This policy allows street sweepings to be used in several applications. No approval from MassDEP is required when the restrictions and conditions identified in this policy are adhered to. However, sweepings shall not be used unless prior approval is obtained from the owner of the location where the sweepings are to be used.

Use at Landfills

Street sweepings may be used for daily cover at lined or unlined permitted solid waste landfills and need no prior MassDEP approval if the sweepings satisfy the requirements for daily cover material specified at 310 CMR 19.130(15).

Use as Fill in Public Ways

Street sweepings shall be used for fill in public ways without prior approval from MassDEP only when the following restrictions and conditions are observed:

- The sweepings have not been collected from Urban Center Roads (see definition);
- The sweepings are used under the road surface or as fill along the side of the road within the public way;
- The sweepings are not used in residential areas;
- The sweepings are kept above the level of the groundwater;
- The sweepings are not used in designated "No Salt Areas";
- The following definitions have been taken verbatim from the solid waste regulations and are repeated here for clarity in understanding this policy.
- The 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 sweepings are not used within 500 feet of a ground or surface drinking water supply.

Use As an Additive to Restricted Use Compost

Street sweepings shall be used as an additive to compost without prior approval froM MassDEP only when the following restrictions and conditions are observed:

- The sweepings have not been collected from Urban Center Roads (see definition);
- The compost is used only in public ways;
- 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;
- The compost is not used within 500 feet of a ground or surface drinking water supply.

Other Uses

Any use not pre-approved in the preceding section requires prior MassDEP approval under the Beneficial Use provisions of the Solid Waste Management Facility Regulations at 310 CMR 19.060. A "Beneficial Use Determination" or BUD can be made only after the submission of an application characterizing the waste and describing the proposed beneficial use.

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 either lined or unlined permitted solid waste landfills without prior approval from the Department.

Handling

Collection of Street Sweepings

Although MassDEP does not regulate the collection of street sweepings, collection practices should be compatible with intended uses. For example, sweepings from Urban Center Roads are not approved for the uses allowed for sweepings from other areas. Keeping sweepings from Urban Center Roads separate from sweepings from other areas will make the full benefits of this policy available.

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, the Massachusetts Hazardous Waste Regulations, 310 CMR 30, the Massachusetts Site Assignment Regulations for Solid Waste Facilities, 310 CMR 16 or the Massachusetts Solid Waste Management Facility Regulations, 310 CMR 19.

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 (in the public way) or at a location, such as a DPW yard, that is under the control of the governmental entity which is doing the sweeping or has contracted for the sweeping;
- The sweepings shall be protected from wind and rain to the extent necessary to prevent dust, erosion and off-site migration;
- The 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 sweepings shall not be stored within 500 feet of a ground or surface drinking water supply;
- Storage shall incorporate good management practice and result in no public nuisance;

Storage must be temporary. Street sweepings shall be used within one year of collection unless the MassDEP Regional Office in the region where the 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 sweepings will be put to a specific identified use prior to the expiration of the extension period.

Preparation Prior to Use

Solid waste, such as paper, auto parts and other trash, shall be removed from the sweepings prior to use. 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.

STANDARD OPERATING PROCEDURE | *Sweeping Streets and Town Owned Parking Lots*

Background

MassDEP has consistently classified street sweepings as solid waste subject to Massachusetts General Law Chapter 111, Section 150A and the Massachusetts Solid Waste Regulations (Site Assignment Regulations for Solid Waste Facilities, 310 CMR 16.00 and Solid Waste Management Facility Regulations, 310 CMR 19.000). There has been confusion among some in the regulated community about this classification.

Prior to the development of this policy, the options for handling street sweepings were limited to:

- Disposal at a permitted solid waste landfill,
- Use as cover at a permitted solid waste landfill or
- Use in accordance with a Beneficial Use Determination (BUD). BUD decisions are made on a case-by-case basis and require the submittal of a formal application to MassDEP containing data showing the chemical composition of the street sweepings.

The simplest of these options was either to use the sweepings for landfill cover or to dispose of the sweepings at the local landfill. As many local landfills close, these options become less available to many communities. However, transporting sweepings to a distant landfill involves increased transportation costs and possibly payment of tipping fees.

To clarify the requirements and to provide simpler and less expensive alternatives for handling street sweepings, the Department undertook the development of this policy. Because useful studies of the chemical composition of street sweepings could not be found in the literature, MassDEP solicited the help of municipalities and state agencies in conducting a study of the composition of street sweepings from various types of areas. The results showed that sweepings from all areas, except Urban Center Roads, were similar with the main constituents of concern being total petroleum hydrocarbons (TPH) and polynuclear aromatic hydrocarbons (PAHs). Very limited data from Urban Center Roads indicated that sweepings from these areas may be more contaminated than sweepings from other areas.

The test results indicate that sweepings may contain levels of contamination that are unsuitable for unrestricted use. However, except for sweepings from Urban Center Roads, the levels of contamination were consistent and low enough to allow the use of sweepings in restricted applications without requiring testing or pre-approval as long as certain conditions were met. Sweepings from urban areas were excluded from some pre-approved uses. This situation could change when more data are available from Urban Center Roads.

This policy makes it possible for municipalities, state agencies and other governmental entities to handle street sweepings in an environmentally sound manner with a minimum of paperwork and expense.

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, may be purchased from the State House Bookstore, 617-727-2834. The solid waste regulations are:

310 CMR 16.000, Site Assignment Regulations for Solid Waste Facilities

310 CMR 19.000, Solid Waste Management Facility Regulations

Questions about the Provisions of the Policy

If you have technical questions about the policy, please call any MassDEP office and ask to speak with a staff member about the provisions of the policy.

#11 STANDARD OPERATING PROCEDURE | *Vehicle and Equipment Washing*

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

Pollution Prevention Approach

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

Suggested Standard Operating Procedures

General

- If possible, take vehicles to a commercial car wash where wash water is properly treated and does not enter the storm drainage system.
- All vehicle washing must discharge to the sanitary sewer system or into a holding tank. Vehicle washing discharged to the drainage system is an illicit (illegal) discharge. Discharge into any Title V septic system is also prohibited.
- 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).
- 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.
- Avoid detergents as much as possible. If detergents are necessary, use a biodegradable, phosphate free detergent such as Zep-O-Shine™.

Vehicle and Equipment Cleaning

- Consider washing vehicles and equipment inside the building if washing/cleaning must occur on-site.
- If washing must occur on-site and outdoors:
    - Use designated paved wash areas. Designated wash areas must be well marked with signs indicating where and how washing must be done. This area must be covered or bermed to collect the wash water and graded to direct the wash water to the gas, sand, and oil separator.
    - Cover the wash area when not in use to prevent contact with rain water.
    - If sewer system access is not available, wash vehicle on a grassed area with a biodegradable, phosphate free detergent such as Zep-O-Shine™.
- Use hoses with nozzles that automatically turn off when left unattended. Use high-pressure, low-volume sprays.

TARGETED POLLUTANTS

Sediments
Nutrients
Trash
Metals
Oil and Grease
Organics

RESPONSIBLE DEPARTMENTS

Highway Department

Fire Department

Police Department

- 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.

Disposal

- Filter and recycle wash water if possible.
- If discharging to a gas, sand, and oil separator, do not use detergents that disperse oil in wash water and make separators ineffective with oil passing to the sanitary sewer system. It is best to use high pressure water with no cleaning agent. If one is not recommended for discharges pretreated by an oil/water separator, use a non-emulsifying cleaner such as Landa L-215 or QOR-110 ("Quick Oil Release").

Inspection Procedures

- Inspect floor drain systems and holding tanks regularly – use only those that discharge to a tight tank or sanitary sewer.
- Identify the need for cleaning of catch basins and gas, sand, and oil separators or oil/water separators.

Maintenance Procedures

- 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.

#12 STANDARD OPERATING PROCEDURE | *Vehicle and Equipment Storage and Maintenance*

Vehicle repair and service (e.g., parts cleaning and fueling), replacement of fluids (e.g., oil change), and outdoor equipment storage and parking (dripping engines) can impact water quality if stormwater runoff from areas with these activities occurring become polluted by a variety of contaminants.

Pollution Prevention Approach

Properly store and discard vehicle fluids including oil, transmission fluid, antifreeze, and lubricants to prevent surface and groundwater contamination from spills or improper disposal.

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

TARGETED POLLUTANTS

Sediments
Nutrients
Trash
Metals
Oil and Grease
Organics

RESPONSIBLE DEPARTMENTS

Highway Department

Fire Department

Police Department

Suggested Standard Operating Procedures

General

- If possible, take vehicles to a commercial car wash where wash water is Store fluids in labeled, plastic or metal container with a lid away from drains and catch basins.
- Place flammables in a fire safe cabinet.
- Place drip pans under leaking vehicles, valves, spigots, and pumps.
- Routinely check for leaking vehicles.
- Do not conduct any vehicle maintenance near storm drains.
- Vehicle maintenance should be completed in covered facility.

Fueling

- Ensure that all fueling activities are not conducted near storm drains and dry wells and 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 sewer or storm drain.

Vehicle Maintenance

- Provide a designated area for vehicle maintenance on an impervious surface.
- Keep equipment clean; don’t 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.

Vehicle Maintenance

- Recycle or properly dispose of fluids.
- Dump full pans into 55-gallon drums.
- Dispose of debris including oil filters, oil cans, rags, and clean-up supplies.
- Do not dump vehicle fluids down storm drains.
- Interior floor drains should discharge to holding tanks or be sealed.

Used Oil

- Recycle used oil.
- Do not mix wastes with used oil.

Inspection Procedures

- Identify locations of floor drains and catch basins and know where they discharge to. Floor drains should be connected to the sanitary sewer system 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

- Sweep the maintenance area on a regular basis, if it is paved, 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.

#13 STANDARD OPERATING PROCEDURE | *Trash/Solid Waste Management*

TARGETED POLLUTANTS

Sediment
Nutrients
Trash
Metals
Oil & Grease
Organics
Low Dissolved Oxygen

RESPONSIBLE DEPARTMENTS

All Municipal Buildings

Highway Department

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.

Pollution Prevention Approach

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

Suggested Standard Operating Procedures

- 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 within local, state, and federal laws.
- Debris piled including sweepings, construction, and wood debris should be inspected weekly before removed off site.

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

- Physical on-site verification of sealed floor drains.
- If floor drains are not sealed, verify drains are connected to the municipal sanitary sewer system. 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 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. MSDS should be reviewed and readily accessible in central facility 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 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.

Tighe&Bond
Engineers | Environmental Specialists

Appendix D
NPDES MS4 General Permit Section 2.3.7.a

2.3.7 Good House Keeping and Pollution Prevention for Permittee Owned Operations

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

a. Operations and Maintenance Programs

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

ii. Within two (2) year of the effective date of this permit, the permittee shall develop an inventory of all permittee owned facilities within the categories listed below. The permittee shall review this inventory annually and update as necessary.

1. Parks and open space: Establish procedures to address the proper use, storage, and disposal of pesticides, herbicides, and fertilizers including minimizing the use of these products and using only in accordance manufacturer's instruction. Evaluate lawn maintenance and landscaping activities to ensure practices are protective of water quality. Protective practices include reduced mowing frequencies, proper disposal of lawn clippings, and use of alternative landscaping materials (e.g., drought resistant planting). Establish pet waste handling collection and disposal locations at all parks and open space where pets are permitted, including the placing of proper signage concerning the proper collection and disposal of pet waste. Establish procedures to address waterfowl congregation areas where appropriate to reduce waterfowl droppings from entering the MS4. Establish procedures for management of trash containers at parks and open space (scheduled cleanings; sufficient number). Establish procedures to address erosion or poor vegetative cover when the permittee becomes aware of it; especially if the erosion is within 50 feet of a surface water.

2. Buildings and facilities where pollutants are exposed to stormwater runoff: This includes schools (to the extent they are permittee-owned or operated), town offices, police, and fire stations, municipal pools and parking garages and other permittee-owned or operated buildings or facilities. Evaluate the use, storage, and disposal of petroleum products and other potential stormwater pollutants. Provide employee training as necessary so that those responsible for handling these products know proper procedures. Ensure that Spill Prevention Plans are in place, if applicable, and coordinate with the fire department as necessary. Develop management procedures for dumpsters and other waste management equipment. Sweep parking lots and keep areas surrounding the facilities clean to reduce runoff of pollutants.

3. Vehicles and Equipment: Establish procedures for the storage of permittee vehicles. Vehicles with fluid leaks shall be stored indoors or containment shall be provided until repaired. Evaluate fueling areas owned or operated by the permittee. If possible, place fueling areas under cover in order to minimize exposure. Establish procedures to ensure that vehicle wash waters are not discharged to the municipal storm sewer system or to surface waters. This permit does not authorize such discharges.

iii. Infrastructure Operations and Maintenance

1. The permittee shall establish within two (2) year of the effective date of the permit a written (hardcopy or electronic) program detailing the activities and procedures the permittee will implement so that the MS4 infrastructure is maintained in a timely manner to reduce the discharge of pollutants from the MS4. If the permittee has an existing program to maintain its MS4 infrastructure in a timely manner to reduce or eliminate the discharge of pollutants from the MS4, the permittee shall document the program in the SWMP.

2. The permittee shall optimize routine inspections, cleaning and maintenance of catch basins such that the following conditions are met:

    - 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.
    - Establish a schedule with a goal that the frequency of routine cleaning will ensure that no catch basin at anytime will be more than 50 percent full.
    - If a catch basin sump is more than 50 percent full during two consecutive routine inspections/cleaning events, the permittee shall document that finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the extent practicable, abate contributing sources. The permittee shall describe any actions taken in its annual report.
    - For the purposes of this part, an excessive sediment or debris loading is a catch basin sump more than 50 percent full. A catch basin sump is more than 50 percent full if the contents within the sump exceed one half the distance between the bottom interior of the catch basin to the invert of the deepest outlet of the catch basin.
    - The permittee shall document in the SWMP and in the first annual report its plan for optimizing catch basin cleaning, inspection plans, or its schedule for gathering information to develop the optimization plan. Documentation shall include metrics and other information used to reach the determination that the established plan for cleaning and maintenance is optimal for the MS4. The permittee shall keep a log of catch basins cleaned or inspected.
    - The permittee shall report in each annual report the total number of catch basins, number inspected, number cleaned, and the total volume or mass of material removed from all catch basins.

3. The permittee shall establish and implement procedures for sweeping and/or cleaning streets, and permittee-owned parking lots. All streets with the exception of rural uncurbed roads with no catch basins or high speed limited access highways shall be swept and/or cleaned a minimum of once per year in the spring (following winter activities such as sanding). The procedures shall also include more frequent sweeping of targeted areas determined by the permitt ee on the basis of pollutant load reduction potential, based on inspections, pollutant loads, catch basin cleaning or inspection results, land use, water quality limited or TMDL waters or other relevant factors as determined by the permittee. The permittee shall report in each annual report the number of miles cleaned or the volume or mass of material removed.

    For rural uncurbed roadways with no catch basins and limited access highways, the permittee shall either meet the minimum frequencies above, or develop and implement an inspection, documentation and targeted sweeping plan within two

(2) year of the effective date of the permit, and submit such plan with its year one annual report.

The permittee shall ensure proper storage of catch basin cleanings and street sweepings prior to disposal or reuse such that they do not discharge to receiving waters. These materials should be managed in compliance with current MassDEP policies:

- For catch basins cleanings: http://www.mass.gov/eea/agencies/massdep/recycle/regulations/management-of-catch-basin-cleanings.html
- For street sweepings: http://www.mass.gov/eea/docs/dep/recycle/laws/stsweep.pdf.

4. The permittee shall establish and implement procedures for winter road maintenance including the use and storage of salt and sand; minimize the use of sodium chloride and other salts, and evaluate opportunities for use of alternative materials; and ensure that snow disposal activities do not result in disposal of snow into waters of the United States. For purposes of this MS4 Permit, salt shall mean any chloride-containing material used to treat paved surfaces for deicing, including sodium chloride, calcium chloride, magnesium chloride, and brine solutions.

5. The permittee shall establish and implement inspection and maintenance frequencies and procedures for all stormwater treatment structures such as water quality swales, retention/detention basins, infiltration structures, proprietary treatment devices or other similar structures. All permittee-owned stormwater treatment structures (excluding catch basins) shall be inspected annually at a minimum.

iv. The permittee shall report in the annual report on the status of the inventory required by this part and any subsequent updates; the status of the O&M programs for the permittee-owned facilities and activities in part 2.3.7.a.ii; and the maintenance activities associated with each.

v. The permittee shall keep a written (hardcopy or electronic) record of all required activities including but not limited to maintenance activities, inspections and training required by part 2.3.7.a. The permittee shall maintain, consistent with part 4.2.a, all records associated with maintenance and inspection activities required by part 2.3.7.a.