City of Everett, MA Stormwater Management Program (SWMP): Volume 3

NPDES Phase II Small MS4 General Permit June 2020

GOOD HOUSEKEEPING & POLLUTION PREVENTION



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City of Everett, MA NPDES Phase II Small MS4 General Permit

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June 2020

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1.0 INTRODUCTION

This Good Housekeeping and Pollution Prevention Plan has been developed by the City of Everett (the City) to prevent and/or reduce pollutants in stormwater runoff from being discharged to the water of the United States in accordance with the 2016 MS4 general permit (the Permit). The Permit requires a Stormwater Management Program (SWMP), which is comprised of four volumes. This Good Housekeeping and Pollution Prevention Plan is Volume 3 of 4.

- SWMP Volume 1: Stormwater Management Program
- SWMP Volume 2: Illicit Discharge Detection and Elimination (IDDE) Plan
- SWMP Volume 3: Good Housekeeping and Pollution Prevention Plan
- SWMP Volume 4: Annual Reports

2.0 OBJECTIVE

The objective is to protect water quality from all permittee-owned operations by preventing or reducing pollutant runoff from City-owned facilities and maintaining City-owned MS4 infrastructure.

3.0 STATEMENT OF RESPONSIBILITIES

Everett Department of Public Works (DPW) is the lead municipal department responsible for implementing the Good Housekeeping program with assistance from other city departments.

The Department of Public Works will conduct meetings involving persons with key roles from the departments listed above to review the responsibilities and coordinate Good Housekeeping efforts between the departments. The meetings will educate the different departments about Good Housekeeping and the roles of each in identifying and resolving illicit discharges.

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4.0 DEFINITIONS

The following definitions are provided for terms used in this Plan.

Best Management Practices (BMPs) is schedules of activities, practices (and prohibitions of practices), structures, vegetation, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

<u>Erosion</u> is the removal of soil particles by wind and water. Often the eroded debris (silt or sediment) becomes a pollutant via stormwater runoff. Erosion occurs naturally but can be intensified by human activities such as farming, development, road-building, and timber harvesting.

<u>Hazardous materials</u> are common everyday products that are used in and around homes and municipal facilities including paint, paint thinner, herbicides, and pesticides-that, due to their chemical nature, can be hazardous if not properly disposed.

An <u>illicit discharge</u> is any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities.

<u>Municipal Separate Storm Sewer</u> is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

- Owned or operated by a State, city, City, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
- (ii) Designed or used for collecting or conveying stormwater;
- (iii) Which is not a combined sewer; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Municipal Separate Storm Sewer System (MS4) means all separate storm sewers that are defined as "large" or "medium" or "small" municipal storm sewer systems pursuant to paragraphs 40 CFR 122.26 (b)(4) and (b)(7), or designated under paragraph 40 126.26(a) (1)(v). For the purposes of this permit "MS4" may also refer to the permittee with jurisdiction over the sewer system.

<u>Pollutants</u> are contaminants existing at a concentration high enough to endanger the environment or the public health or to be otherwise objectionable.

<u>Sediment</u> is solid material, both mineral and organic, that is being transported or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface. Soil, sand, and minerals washed from land into water, usually after rain.

<u>SWPPP</u> stands for "Stormwater Pollution Prevention Plan." It is a plan of practices specific to a facility or site to make sure that the stormwater discharged from the site is clean and not polluted. The plan



describes all the site operator's activities to prevent stormwater contamination, control sedimentation and erosion, and comply with the requirements of the Clean Water Act.

5.0 INVENTORY OF MUNICIPAL OWNED FACILITIES

The City has developed an inventory of all permittee owned facilities where drainage infrastructure is present and/or where pollutants may be exposed to stormwater within the following three categories: (1) parks and open space, (2) buildings and facilities and (3) vehicle and equipment storage. An inventory table and map of permittee owned facilities is provided in **Appendix A**.

6.0 MUNICIPAL FACILITIES OPERATION AND MAINTENANCE PROGRAMS

The following are Operation and Maintenance (O&M) procedures and best management practices (BMPs) for the three categories of municipally owned facilities identified in **Section 5.0** to be implemented at each facility as applicable. An inventory of facilities and reporting log for maintenance is included in **Appendix B**.

6.1 PARKS AND OPEN SPACE

Parks and open space operations and maintenance activities commonly involve the operation of equipment such as mowers and tractors; disposal of waste from mowing, planting, weeding, raking, pruning, and trash collection; application of pesticides, herbicides, and fertilizers; cleaning and maintenance of park amenities such as play equipment, restrooms, and structures; and snow removal. These activities have the potential to generate contaminants such as sediments and toxic chemicals that may be picked up by rainwater, thereby entering the storm drainage system and receiving waters.

Pesticides, Herbicides and Fertilizers

The City typically does not use fertilizers, pesticides or herbicides in open spaces and public parks or as part of regular maintenance activities. The City does not contract out work that requires these products nor does it store these products in its facilities. If for any reason fertilizer and/or pesticide is needed, use shall be in strict accordance with the manufacturer's instructions and with local regulations and use shall be minimized.

Lawn Maintenance and Landscaping Activities

Lawn maintenance and landscaping activities in City are minimal and limited to mowing, tree-trimming and general landscaping on City-owned land. The City allows some lawn clippings to remain on mowed areas to (re)fertilize the soils and biodegrade.

The use of landscaping equipment with small engines such as lawn mowers and weed whackers requires the transport and use of gasoline and oil, which provides a risk of spills. Spills may occur while fueling vehicles or equipment and poorly maintained equipment may leak during use.

Best management practices for lawn and landscaping activities include the following:

- All vehicles and equipment receive regular maintenance and are inspected for leaks or defective parts.
- Fueling activities should occur on impervious surfaces when possible with proper containment and a spill response kit in close proximity.



- Vehicles transporting landscaping equipment, pesticides, fertilizer, or paint shall be equipped with a spill response kit in case a spill or leak does occur.
- Personnel involved in fuel or oil handling are familiar with the spill response kit and spill response and cleanup procedures" and are properly trained to efficiently respond to spill and leak events.
- Never wash debris from parking lots into the storm drain.
- Leave clippings on grassy areas or dispose of them in the trash or by composting.
- Collect grass clippings and leaves after mowing. Do not blow or wash them into the street, gutter, or storm drains. Properly recycle or dispose of organic waste after mowing, weeding, and trimming.
- Brush off mowers (reels and decks) and tractors over grassy areas or in contained washout areas. Do not hose off mowers over paved areas that drain into the MS4 or directly to surface waters.
- Repair broken sprinkler heads as soon as possible.
- Only irrigate at a rate that can infiltrate into the soil to limit run-off and avoid irrigating close to impervious surfaces such as parking lots and sidewalks.
- When establishing new plantings, use alternative landscaping materials, such as drought resistant or native plants to reduce the need for irrigation and extensive application of fertilizers and pesticides.

Water Fowl

The City does not currently have issues with waterfowl in specific areas. If needed to address waterfowl congregation areas and prevent droppings from entering the MS4, best management practices for waterfowl management include the following:

- Install signage discouraging the feeding waterfowl.
- Using good landscaping practices to discourage waterfowl. Plant low-growing bushes near the water's edge and avoid lawn areas around surface water, instead opt for more natural landscaping.

Pet Waste and Trash Management

Most parks in the City have trash barrels that are available year round. Dog waste stations provided at three locations - Kearins Playground, Staff Sergeant Day Park and Rivergreen Path & Fields. The DPW collects from trash receptacles throughout the City on Monday and Friday every week and the day before a holiday if it falls on Monday or Friday.

Proper disposal of pet waste is addressed in the City's Ordinance under Chapter 3-4. The following site provides advice and recommendations on installation, servicing, signage, location and quantity of dog waste stations: <u>http://www.zerowasteusa.com/advice.asp</u>

Best management practices for pet waste and trash management include the following:



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

Erosion Control

Parks and open space maintenance activities include erosion control, specifically in regards to poor vegetation cover and particularly within 50 feet of surface water. Best management practices include the following:

- Prevention of erosion and sedimentation is preferable to installing treatments devices.
- Protect vegetated and wooded buffers and leave vegetated areas undisturbed to the extent possible.
- Inspect sites regularly for locations of poor vegetation cover, erosion and sedimentation and channelization. If stabilization is required, corrective actions should be identified and implemented as soon as possible.
- If exposed, soils should be stabilized by mulching, seeding with fast-growing native grass and/or planted with native tree and shrubs. Use erosion control blankets when seeding slopes.
- If necessary, slow stormwater runoff velocities with conveyance measures such as riprap channels or vegetated swales, check dams, level spreaders and outlet protection, etc.
- A buffer/filter strip should be left around surface waters. No fertilizers or pesticides should be applied in the buffer/filter strip except where necessary.

6.2 BUILDINGS AND FACILITIES

Municipal buildings and facilities (schools, municipal offices, police and fire stations, municipal pools, parking garages, etc.) often house various chemicals, such as petroleum products and hazardous materials. As a result, these buildings and facilities are potential sources of pollutant discharges to the storm drainage system. The goal of these procedures is to provide guidance to municipal employees on the use, storage, and disposal of chemicals and other stormwater pollutants to reduce the discharge of pollutants from the MS4.

Use Storage and Disposal of Potential Pollutants



Potential pollutants or hazardous wastes that may be used and stored in or around municipal building and facilities include pesticides, paints, cleaners, petroleum products, fertilizers, and solvents. Careful handling and proper storage of these products are the best means of preventing spills and pollution to the environment. Best management practices include the following:

- Storage and handling areas should be covered or enclosed to reduce potential contact with stormwater and wind.
- Potential pollutants should be transported using approved methods and containers to minimize the chance of spillage, and by employees that have familiarity with the potential environmental and human health hazards of the products.
- Proper spill kits applicable to the products being used at each specific building or facility should be easily accessible, and marked clearly so employees can follow procedures quickly and effectively. Leaks or spills should be cleaned up in a timely manner.
- Establish separate storage areas for these types of products with measures in place to contain any spill leaking out of the storage area.
- A designated person should be responsible for these areas.
- The storage area should be inspected frequently, kept clean and in good order with proper labels and signs, and consistent disposal practices.
- Floor drains in storage areas should be disconnected from the stormwater system.
- Routinely inspect buildings and facilities for areas of potential leaks.
- Paint and other chemicals should not be applied on the outside of buildings when it is raining or prior to expected rain.
- When sanding, painting, power washing, etc., ensure that sites are properly prepared (e.g., use tarps) and cleaned (e.g., use dry cleaning methods) especially if they are near storm drains. Protect catch basins when maintenance work is conducted upgradient of them.
- When painting, use a drop cloth and clean up any spills immediately.
- Do not leave open containers on the ground where they may accidentally tip over.
- Do not discharge chlorinated pool water into the stormwater system. Water must be properly dechlorinated and tested before it is discharged.
- Ensure that the washwater does not flow into the storm system. Containment or filtering systems should be provided.

Spill Prevention Plans

The City has spill kits and prevention and control plans in place for all buildings and facilities where hazardous wastes are stored or used. These are coordinated with the fire department as necessary.

Per the Massachusetts Clean Water Toolkit Fact Sheet for Spill Prevention and Control Plans, it is recommended that Spill Prevention and Control Plans (SPCP) clearly state measures to stop the source of a spill, contain the spill, clean up the spill, dispose of contaminated materials, and train personnel to prevent and control future spills. The SPCP should define material handling procedures and storage



requirements and outline actions necessary to reduce spill potential and impacts on stormwater quality. The plan can be a procedural handbook or a poster placed in several locations at the site.

Waste Management

All liquid and solid waste must be disposed of properly. Some of the most common sources of pollution at municipal facilities are a result of littering, improper collection of debris, and improper disposal of solid or liquid waste. Best management practices for handling, storage, transfer and disposal of trash and recyclables include the following:

- All waste and recycling receptacles must be leak-tight with tight-fitting lids or covers.
- Keep lids on dumpsters and containers closed at all times unless adding or removing material. If using an open-top roll-off dumpster, cover it and tie it down with a tarp unless adding materials.
- Place waste or recycling receptacles indoors or under a roof or overhang whenever possible.
- Locate dumpsters on a flat, paved surface and install berms or curbs around the storage area to prevent run-on and run-off.
- Do not locate dumpsters over or adjacent to catch basins.
- Prior to transporting waste, trash, or recycling, ensure that containers are not leaking (double bag if needed) and properly secure containers to the vehicle.
- Clean up any liquid leaks or spills with dry cleanup methods.
- Arrange for waste or recycling to be picked up regularly and disposed of at approved disposal facilities.
- Never place hazardous materials, liquids, or liquid-containing wastes in a dumpster or recycling or trash container.
- Do not wash trash or recycling containers outdoors or in parking lots.
- Conduct periodic inspections of solid and liquid waste storage areas to check for leaks and spills.
- Conduct periodic inspections of work areas to ensure that all wastes are being disposed of properly.
- In dumpster areas, regularly pick up surrounding trash and debris and regularly sweep the area.
- In compactor areas, regularly check the hydraulic fluid hoses and reservoir to ensure that there are no cracks or leaks. Regularly sweep the area.

Sweeping and Cleaning of Parking Lots

Vehicle surfaces can collect a variety of contaminants such as sediments, oil, grease, and metals during daily activities. The MS4 permit requires that parking lots are swept and surrounding areas of the facility are kept clean to reduce runoff of pollutants.

Parking lot sweeping and cleaning follows the same schedule as street sweeping, at least twice per year in Spring and Fall, with additional sweeping as need for specific sites. Procedures for sweeping parking lots are included in Section 7.2 Streets and Parking Lots.



Catchbasin and Stormwater Management BMP Maintenance

All catchbasin on city-owned sites are to be included in the City catchbasin inspection and cleaning optimization program described in **Section 7.1**.

Stormwater BMPs for facilities are to be included in the City Stormwater Treatment Structures BMP Inspection and Maintenance program described in **Section 7.5** and maintained as necessary to provide optimum treatment of stormwater runoff.

6.3 VEHICLES AND EQUIPMENT

Regular maintenance of both municipal and contracted vehicles and heavy equipment not only prolongs the life of municipal assets but also helps reduce the potential for leaking of fluids associated with normal wear and tear. Potential pollutants include fuels, oil, antifreeze, brake fluid, solvents, and battery acid. The goal of this procedure is to provide guidance to municipal employees to help reduce the discharge of pollutants from the MS4 as a result of leaks from vehicles and equipment.

Storage

Rainfall on vehicles and equipment storage areas has the potential to collect pollutants and result in high loads of nutrients, metals, and hydrocarbons in stormwater runoff. To prevent this, best management practices include the following:

- All vehicles, equipment and hazardous waste storage containers should receive regular maintenance and be inspected for leaks or defective parts.
- Vehicles and equipment should be stored on a covered slab or within a building with a common drain that discharges to an oil/water separator.
- Outdoor storage of vehicles and equipment should not occur in areas that drain to the storm drain system unless adequate devices are in place to remove oil, sediment and other pollutants.
- Vehicles with fluid leaks should be stored indoors or containment be provided until repaired.

Vehicle and Equipment Maintenance

Vehicle and equipment maintenance shall be conducted in a manor to reduce the discharge of pollutants by following these best management practices:

- Conduct routine inspections of heavy equipment and vehicles to proactively identify maintenance needs or potential leaks.
- Use drip pans as needed until repairs can be performed and when drip pans are used, avoid overtopping.
- Drain fluids from leaking or wrecked vehicles and parts as soon as possible. Dispose of fluids properly.
- Perform routine preventive maintenance to ensure heavy equipment and vehicles are operating optimally.
- Recycle or dispose of waste properly and promptly.
- Conduct all body repair and painting work indoors.



- Minimize waste from paints and thinners. Calculate paint needs based on surface area.
- Do not wash or hose down storage areas unless there is prior approval to collect and discharge the water into the sanitary sewer. Use dry cleanup methods (vacuum, sweep) to clean up metal filings and dust and paint chips from grinding, shaving and sanding. Sweep debris from wet sanding after allowing it to dry overnight on the shop floor. Dispose of waste properly; never dump waste into storm or sanitary sewers.
- Do not dump any liquids or other materials outside, especially near or in storm drains or ditches.
- Store materials and waste in labeled containers under cover and in secondary containment.
- Chemicals should not be combined in containers.
- Carefully transfer collected fluids from containers into designated storage areas as soon as possible.
- Store new and used batteries securely to avoid breakage. Store indoors or in secondary containment to contain potential acid leaks. Recycle used batteries.

Fueling Areas

Vehicle fueling activities can result in gasoline and diesel fuel entering the storm drain system. Spills can occur by topping off fuel tanks and during deliveries. If possible, fueling areas are to be places under cover in order to minimize exposure. Best management practices for fueling areas include the following:

- Deliveries to fuel tanks and fueling of vehicles and equipment should occur on impervious surfaces with proper containment and that spill response kits be readily accessible at fueling and maintenance areas.
- Fueling areas owned or operated by the municipality should be covered.

Parts Cleaning

Cleaning of parts can transport pollutants into the municipal system storm drain system or surface waters. The Permit does not authorize these types of discharges. Best management practices to avoid this include the following:

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

Vehicle and Equipment Wash Waters

Washing down of maintenance and fueling areas and vehicles can transport pollutants into the municipal system storm drain system or surface waters. The Permit does not authorize these types of



discharges. Best management practices to ensure that vehicle wash waters are not discharged to the municipal system or surface waters include the following:

- Vehicles and equipment should be washed inside whenever possible to reduce runoff to the stormwater system.
- Grassy and pervious (porous) surfaces may be used to promote direct infiltration of wash water, providing treatment before recharging groundwater and minimizing runoff to an adjacent stormwater system. Pervious surfaces or other infiltration-based systems should not be used within wellhead protection areas or within other protected resources.
- Avoid discharge of any wash water directly to the storm drainage system or surface water (e.g., stream, pond, or drainage swale)
- Do not use solvents except in dedicated solvent parts washer systems.
- Wash vehicles with non-toxic, phosphate-free, biodegradable cleaners
- Wash vehicles on an asphalt lot using a collection system with containment berms and discharge to water quality devices that will remove pollutants. Detergents should not be used in areas where oil/water separators provide pre-treatment of drainage.
- Floor drains should be connected to a sanitary sewer or tight tank. Floor drains discharging to adjacent surface water bodies or engineered storm drain systems should be permanently plugged or otherwise abandoned before any vehicle wash activities are completed.
- Designate separate areas for routine maintenance and vehicle cleaning. This helps prevent contamination of wash water by motor oils, hydraulic lubricants, greases, or other chemicals.



7.0 MUNICIPAL INFRASTRUCTURE OPERATION AND MAINTENANCE

The Permit requires a written program detailing the activities and procedures the City will implement so that the MS4 infrastructure is maintained in a timely manner to reduce the discharge of pollutants from the MS4. This program includes operation and maintenance of stormwater infrastructure such as catch basins and treatment structures and the impervious surfaces, streets and parking lots that are tributary to them.

7.1 CATCH BASINS INSPECTION AND MAINTENANCE OPTIMIZATION

Catch basins help minimize flooding and protect water quality by removing trash, sediment, decaying debris, and other solids from stormwater runoff. These materials are retained in a sump below the invert of the outlet pipe (older catch basins may not have a sump). Catch basin cleaning reduces foul odors, prevents clogs in the storm drain system, and reduces the loading of trash, suspended solids, nutrients, bacteria, and other pollutants to receiving waters.

The City intends to optimize routine inspections, cleaning, and maintenance of catch basins with a goal that no catch basin at any time will be more than 50% full of sediment/debris.

According to the Permit, excessive sediment or debris loading is a catch basin sump more than 50% full. A catch basin sump is more than 50% 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.

Procedure:

As part of routine inspection/cleaning events, Everett intends to clean each catch basin a minimum of once every three years as well as annually for any catch basins with debris levels projected to be above 50% full. Catch basins will be divided into 6 wards and each year all catch basins in 2 of these wards will be cleaned. Everett will collect data on which catch basins fill up most frequently and once identified those will be cleaned more frequently in anticipation of filling up past 50% – See tracking form in **Appendix C**. If a catch basin sump is identified as greater than 50% full during two consecutive cleanings, the City will investigate the contributing drainage area for sources of excessive sediment or trash loading and address the source. If the source cannot be addressed, each of these catch basins will be cleaned annually, regardless of ward. Actions taken will be described in the annual report.

Inspection and maintenance for catch basins located near construction activities (roadway construction, residential, commercial, or industrial development or redevelopment), if identified as accumulating will be included in the annual maintenance program as identified.

The waters around Everett have WQLW requirements for solids, oil and grease, and metals. The catch basins which discharge to the Chelsea, Malden and Mystic Rivers should be especially prioritized and monitored. Because of this the cleaning cycle will begin with Wards 1 and 6.

In cases where a catch basin inspection or cleaning reveals abnormal, non-natural discoloration or detection of petroleum and/or chemical odors, the crew performing the inspection and cleaning shall notify supervisors for proper handling of hazardous materials and the City should implement protocols outlined in their Illicit Discharge Detection & Elimination (IDDE) Plan.

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Figure 1: Ward Map of Everett

Record Keeping

The City keeps records of catch basin cleaning performed and reports annually. Record keeping forms can be found in **Appendix C**.



7.2 STREETS AND PARKING LOTS

Regular sweeping of streets and municipally-owned parking lots is important for maintaining clean and safe roadways. It also plays a vital role in keeping pollutants like sand, trash, and leaves out of the MS4.

All streets with the exception of rural uncurbed roads with no catch basins or high speed limited access highways are required to be swept and/or cleaned a minimum of once per year in the spring. For rural uncurbed roadways with no catch basins and limited access highways, the City must either meet the minimum frequencies (including an additional fall sweeping where areas are tributary to nutrient-impaired), or develop and implement an inspection, documentation and targeted sweeping plan within year 2 of the effective date of the permit, and submit such plan with its year two annual report. The City's current practice includes street sweeping all City roads at least twice per year, once in spring and once in the fall.

Sweeping frequency is to be increased as necessary to target areas with potential for high pollutant loads for solids, oil and grease, and metals. In the tributary areas of Chelsea River, Malden River and Mystic River (MA71-03) street sweeping frequency is to be increased for all municipal owned streets and parking lots to a schedule determined by the City to target areas with potential for high pollutant loads to address solids, oil and grease, and metals impairments.

In areas that discharge to certain nutrientimpaired waters, sweeping must be performed a minimum of two times per year, once in the spring (following winter activities such as sanding) and at least once in the fall (Sept 1 – Dec 1; following leaf fall). In Everett this applies to tributary areas of the Malden River and Mystic River (MA71-02) due to phosphorus impairment. **See Map of area requiring twice/year sweeping in yellow (right).**



Record Keeping

The City will report in each annual report the number of miles cleaned and/or volume of material removed. Record keeping forms can be found in **Appendix D**.



7.3 STORAGE AND DISPOSAL OF CATCH BASIN CLEANINGS AND STREET SWEEPINGS

The City ensures proper storage of catch basin cleanings and street sweepings prior to disposal or reuse so that they do not discharge to receiving waters, in compliance with current MassDEP policies. The policies as listed in Section 2.3.7.a.iii.4 of the Permit include the following:

- Properly dispose of collected sediments and catch basin cleanings (solid material, such as leaves, sand, and twigs removed from stormwater collection systems during cleaning operations).
- Cleanings from stormwater-only drainage systems may be disposed at any landfill that is permitted by MassDEP to accept solid waste. MassDEP does not routinely require stormwater-only catch basin cleanings to be tested before disposal, unless there is evidence that they have been contaminated by a spill or some other means.
- Screenings may need to be placed in a drying bed to allow water to evaporate before proper disposal. In this case, ensure that the screenings are managed properly to prevent pollution.
- Catch Basin Cleanings disposal shall follow:

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

• Street Sweepings disposal shall follow Mass DEP Policy #BWP-94-092: Reuse & Disposal of Street Sweepings:

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

7.4 WINTER ROAD MAINTENANCE

The DPW is responsible during any snow or ice event throughout the winter season for approximately 58 miles of City owned roads and reserves the right to modify any plan as needed to adjust to various circumstances that a storm might present. The Director of Public Works and the Highway Superintendent will be responsible for carrying out this policy and distributing copies to each employee and posting it on the City website. Parking during snow removal shall comply with Sec. 18-143 of the Revised Ordinances of the City of Everett.

Priorities

- 1. The <u>first priority</u> is to ensure that police, fire and medical emergency equipment can move safely on City streets.
- 2. The **second priority** is to open main and secondary roads for use by the public.
- 3. The **<u>third priority</u>** is to open residential streets.
- 4. The <u>fourth priority</u> is to open all schools, public facilities, and clear sidewalks used to walk to schools/businesses/public transportation.

Materials Used

With safety as the priority, the City's goal is to minimize the use of salt and sand through optimization of application. This is achieved through the use, where practicable, of automated application equipment, anti-icing and pre-wetting techniques, implementation of pavement management systems, and alternate chemicals. The types of materials used by the DPW are detailed below.

- Rock Salt (Sodium Chloride): Salt is used to expedite the melting of snow and ice from the street surface and also to keep the ice from forming a bond to the street surface.
- Sand: Sand is used as an abrasive for traction on slick roadways.
- Other Materials: The City may choose to use alternative chloride-containing materials used to treat paved surfaces for deicing, including sodium chloride, calcium chloride, magnesium chloride, and brine solutions.

Materials Storage

All salt, sand and deicing compounds are properly stored under cover to ensure they are not exposed to precipitation or otherwise carried to a catch basin, resource area or waterbodies. Diversion berms and good housekeeping practices shall be used to minimize runoff from storage areas.

Application and Equipment Calibration

Each piece of application equipment owned by the City is calibrated prior to the winter season. Salt application shall be calibrated to dispense rates of 200 pounds per mile lane. Trucks equipped with prewetting brine tanks are calibrated to dispense 8 gallons of pre-wet liquid to 1 ton of salt, to be varied based on temperature.

Snow Disposal

The MS4 Permit prohibits snow disposal into waters of the United States. Snow disposal activities, including selection of appropriate snow disposal sites, will adhere to the Massachusetts Department of Environmental Protection Snow Disposal Guidance, Guideline No. BWR G2015-01 (Effective Date: December 21, 2015).



Record Keeping

The City maintains records of prioritized plow routes, miles of roads plowed annually, the quantity of salt and other materials used annually, and equipment calibration records.



7.5 STORMWATER TREATMENT STRUCTURES (STRUCTURAL BMPS) INSPECTION AND MAINTENANCE

Stormwater treatment structures, also referred to as structural BMPs, include water quality swales, retention/detention basins, infiltration structures, proprietary treatment devices or other similar structures. The City has established and implemented inspection and maintenance frequencies and procedures for all structural BMPs. All permittee-owned stormwater treatment structures (excluding catch basins) shall be inspected annually at a minimum.

The City will keep a log of stormwater management structures inspected and report on the condition and maintenance performed in each annual report. A Stormwater Treatment Structures Inspection and Maintenance Guide for BMPs is provided in **Appendix E** and BMPs are inventoried on the stormwater infrastructure map in **Appendix A** and the Facilities Inventory of **Appendix B**. The following are maintenance activities and procedure for each category of BMP based on the Massachusetts Stormwater Handbook:

STRUCTURAL PRETREATMENT BMPs

WATER QUALITY UNIT (OIL/GRIT SEPARATOR)

Water quality units, also referred to as oil/grit separators, are underground storage tanks with chambers designed to remove heavy particles, floating debris and hydrocarbons from stormwater. These units are typically considered a pretreatment BMP for land uses with higher potential pollutant loads and risk of petroleum spills. Cleaning these units is important to prevent sediment from re-suspending and discharging during future storm events. Inspection and maintenance should be conducted annually and include the following:

- Inspect and clean unit cleaning includes removal of accumulated oils and grease and sediment using a vacuum truck or other ordinary catch basin cleaning device
- Polluted water or sediments removed from an oil grit separator unit should be disposed of in accordance with all applicable local, state and federal laws and regulations including M.G.L.c. 21C and 310 CMR 30.00.

PROPRIETARY SEPARATOR

A proprietary separator is a flow-through structure with a settling or separation unit to remove sediments and other pollutants. They typically use the power of swirling or flowing water to separate floatables and coarser sediments. Some rely solely on gravity separation and contain no swirl chamber. These units are typically considered a pretreatment BMP for land uses with higher potential pollutant loads and risk of petroleum spills. Vactor trucks are typically used to clean these units. Clamshell buckets typically used for cleaning catch basins are almost never allowed by manufacturers. Sometimes it will be necessary to remove sediment manually. Inspection and maintenance should be conducted annually and include the following:

• Inspect and clean these units in strict accordance with manufacturers' recommendations and requirements

Treatment BMPs

BIORETENTION AREAS & RAIN GARDEN

Bioretention areas and rain gardens are shallow depressions filled with sandy soil, topped with a thick layer of mulch and planted with dense native vegetation. Bioretention areas require careful attention while plants are being established and seasonal landscaping maintenance thereafter. Regular inspection and maintenance for sediment build-up, structural damage and standing water can extend the life of the soil media and prevent against premature failure of the system. Snow should never be stored or plowed into bioretention areas or rain gardens. Annual Inspection and maintenance should be conducted in the spring and include the following:

- Inspect and remove trash and sediment build-up
- Mow and/or Mulch
- Remove and replace dead vegetation
- Prune and remove invasive species as needed
- Upon failure, replace entire media and all vegetation

EXTENDED DRY DETENTION BASIN

Extended dry detention basins are designed to control both stormwater quantity and quality. These BMPs are designed to hold stormwater for at least 24 hours, allowing solids to settle and to reduce local and downstream flooding. Potential maintenance problems requiring immediate repairs include: erosion within the basin and banks, tree growth on the embankment, damage to the emergency spillway and sediment accumulation around the outlet. Annual Inspection and maintenance should be conducted in the spring and include the following:

- Inspect basin examine outlet structure for clogging or high outflow release velocities
- Mow upper stage, side slopes, embankment and emergency spillway
- Remove trash and debris
- Remove sediment from basin

Conveyance BMPs

WATER QUALITY SWALE

Water quality swales are vegetated open channels designed to treat a required water quality volume and incorporate specific features to enhance pollutant removal. Inspection and maintenance should be conducted annually and include the following:

- Inspection make sure vegetation is adequate and slopes are not eroding, check for rilling and gullying, ponding and sedimentation
- Manually remove sediment and debris
- Mow swale depending on vegetation type if grass, now when height reaches 6 inches but do not cut shorter than 3 inches



- Repair eroded areas and re-vegetate if needed
- Re-seed as necessary

Infiltration BMPs

INFILTRATION BASIN

Infiltration basins are stormwater runoff impoundments that are constructed over permeable soils. Infiltration basins are prone to clogging and failure so pretreatment BMPs are typically included to reduce maintenance requirements for the basin itself. Runoff is stored until it exfiltrates through the soil of the basin floor. Inspection and maintenance should be conducted annually and include the following:

- Inspection to ensure proper functioning look for signs of settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
- Preventative maintenance
- Mow the buffer area, side slopes, and basin bottom if grassed floor, rake if stone bottom
- Remove trash and debris, remove grass clippings and accumulated organic matter
- Remove sediment as necessary use light equipment and caution so as not to compact underlying soils
- Inspect and clean pretreatment devices associated with the basin

INFILTRATION TRENCH

Infiltration trenches are shallow excavations filled with stone capturing sheet flow or piped inflow. The stored runoff gradually exfiltrates through the bottom and/or sides of the trench into the subsoils. The visible surface of the trench may be either stone of grassed. Infiltration trenches always require a pretreatment BMP such as a vegetated filter strip for sheet flow of a sediment forebay for piped flow. Inspection and maintenance should be conducted annually and include the following:

- Inspect inspect the trench 24 hours or several days after a rain event to look for ponded water indicating that the trench is clogged or has failed
- Mow top of trench if it is grassed
- Remove accumulated sediment, trash, debris, leaves and grass clippings and tree seedlings
- Inspect and clean pretreatment BMPs -check inlets and outlets for clogging

INFILTRATION CHAMBERS (SUBSURFACE STRUCTURES)

Infiltration chambers, more generally referred to as subsurface structures, are underground systems that capture runoff and gradually infiltrate it into the groundwater through rock and gravel. The most common types include pre-cast concrete or plastic pits, chambers (manufactured pipes), perforated pipes, and galleys. Pretreatment is required for stormwater runoff from land uses or activities with the potential for high sediment or pollutant loads. Structural pretreatment BMPs for these systems include deep sump catch basins, proprietary separators, and oil/grit separators.



Because they are underground, subsurface structures are difficult to maintain with inspection of water levels through an observation well pipe at grade. Inspection and maintenance should be conducted annually and include the following:

- Inspect inlets
- Remove any debris that might clog the system
- Remove sediment from pretreatment BMPs

LEACHING CATCH BASINS

A leaching catch basin is a pre-cast concrete barrel and riser with an open bottom the allows runoff to infiltrate into the ground. These can be configured as a stand alone structure or combined with a deep sump catch basin to provide pretreatment. Leaching basins are typically set in an excavation lined with a geotextile liner to prevent fine soil particles from migrating into the void spaces of the stone surrounding it. Inspection and maintenance should be conducted annually and include the following:

- Inspect unit and remove debris
- Remove sediment when the basin is 50% full
- Rehabilitate the basin as needed if it fails do to clogging

Other BMPs

POROUS PAVEMENT

Porous pavement is a permeable paving technique that allows parking lot, driveway and/or roadway runoff to infiltrate directly into the soil and receive water quality treatment. Permeable paving techniques include porous asphalt, pervious concrete, paving stones and manufactured "grass pavers" made of concrete or plastic. The systems consist of a durable, load-bearing pervious surface overlying a stone bed that stores rainwater before it infiltrates into the underlying soil. Inspection should be conducted annually and maintenance as needed including the following:

- Inspect the surface annually for deterioration and assess exfiltration capacity- monitor after a storm to ensure the paving surface drains properly
- For porous asphalts and concrete, clean the surface using power washer to dislodge trapped particles and then vacuum sweep the area. For paving stones, add joint material (sand) to replace material that has been transported
- Re-seed grass pavers to fill in bare spots

STONE CHIP OR GRAVEL DRIVEWAYS AND PARKING AREAS

Stone chip or gravel surfaces allows parking lot, driveway and/or roadway runoff to infiltrate directly into the soil. They need to be designed and constructed with a base similar to a traditional road in order to prevent ponding of water and washout. Inspection should be conducted annually and maintenance as needed including the following:



- Inspect the surface annually for deterioration and assess exfiltration capacity- monitor after a storm to ensure the surface drains properly without ponding
- Remove debris (leaves, sticks, weeds, etc) on a weekly basis
- Regrade surface for proper drainage and add new stone/gravel where necessary to fill holes and ruts
- Apply a fresh layer of gravel to the surface every 1-2 years

Additional guidance for Structural BMP operations and maintenance can be found in the latest version of the Massachusetts Department of Environmental Protection Stormwater Handbook, Volume 2, Chapter 2, located at: <u>http://www.mass.gov/eea/docs/dep/water/laws/i-thru-z/v2c2.pdf</u>



8.0 STORMWATER POLLUTION PREVENTION PLANS (SWPPP)

The permit requires a Stormwater Pollution Prevention Plan (SWPPP) be developed and implemented 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 City has these types of facilities located at a single property, the DPW Facility. The SWPPP that has been developed and is being implemented is included in **Appendix F**.

9.0 TRAINING

The MS4 permit requires employee training be provided as necessary so that those responsible for use, storage, and disposal of petroleum products and other potential stormwater pollutants know proper procedures outlined in this plan. The City will, at a minimum, annually provide training to employees involved in the Good Housekeeping program as follows:

- Employees who perform maintenance or other applicable work at municipal buildings and facilities shall be trained on the handling of products and the proper operation of related equipment that has the potential to cause stormwater pollution.
- DPW employees are also trained annually on stormwater pollution prevention, illicit discharge detection and elimination (IDDE) procedures, and spill and response procedures. Employees who work in areas where materials or activities are exposed to stormwater, or who are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team are to be trained regularly. Training shall cover both the specific components and scope of the SWPPP and the control measures required, including spill response, good housekeeping, material management practices, any best management practice operation and maintenance, etc.
- Employees involved in hazardous waste handling will be made familiar with the spill response kit and spill response and cleanup procedures as outlined in the spill prevention and control plans for the building or facility.
- If outside services are contracted, the contractor should be given a copy of this and any applicable standard operating procedures to ensure compliance with MS4 regulations.

The DPW shall document the following information for each training:

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

10.0 RECORDS AND REPORTING

The progress and effectiveness of the Good Housekeeping program will be evaluated and reported on in each annual report. The success of the Good Housekeeping program will be measured by the activities completed within the required Permit timelines.



APPENDIX A – City-owned Facilities, BMPs and Stormwater Infrastructure Map

City of Everett, Massachusetts City Owned Facilities, BMPs

and MS4 Stormwater Infrastructure Map



Creation Date: June 2020 This Map is Intended for Planning Purposes Only

0.225

0.45 Miles

MALDEN REVERE MEDFORD CHELSEA

APPENDIX B – City-owned Facilities Inventory and Reporting Log

Municipal Stormwater Operations and Maintenance Program Permittee Owned Facilities Inventory and Reporting Log

Reporting Period: July 1 20____ - June 30, 20____

		Parks and Open Space			
Facility Name	Location	BMP/Feature Description	Standard Maintenance/Inspection Items	Recommence Maintenance	
Data Duth Disuground	105 Weedwille St	Turf soccer field	None		
Babe Ruth Playground	TUS WOOdVIIIe St	1 catch basin	Remove sediments and debris		
Cpl. Arthur Nelson Play Lot		Basketball court and landscaping	Inspect for erosion or bare soils conditions, Refresh mulch		
	1 Fuller St.	Playground structure with mulch	Refresh mulch		
		2 catch basins	Remove sediments and debris		
		1 Baseball and soccer field, 2 basketball court, playground and maintained lawn areas	Inspect for erosion or bare soils conditions, Re-seed as necessary		
Jacob Scharf Playground	1-21 Florence St	2 Rain Gardens	Remove sediment and debris, replace vegetation as necessary		
		6 catch basins	Remove sediments and debris		
John Gramstorf Playground	Elerance Stat Nichols St	basketball court, rubber surface playground and maintained lawn area	Inspect for erosion or bare soils conditions, Re-seed as necessary		
	FIOLENCE ST AT NICHOIS ST	1 catch basin	Remove sediments and debris		
	Henderson St & Otis St	1 baseball field, 2 basketball courts, pavers pathways, playground, spray park and maintained lawn area	Inspect for erosion or bare soils conditions, Re-seed as necessary		
Kearins Playground		2 pet waste stations	Check for cover in place, Empty Waste Bin & Stock Bags		
		14 catch basins	remove sediment and debris		
McCrapp Disugroupd	Drocton & Drugat St	2 baseball fields and maintained lawn areas	Inspect for erosion or bare soils conditions, Re-seed as necessary		
Micol ann Playground	Preston & Bryant St	4 catch basins	Remove sediments and debris		
Secremone Disuground	Tilaston & Contilli Lluor	2 baseball fields, 1 basketball court, playgrounds, hard and landscape areas	Inspect for erosion or bare soils conditions, Re-seed as necessary		
Saci amone Playgi ounu	nieston & santini nwy	12 catch basins	Remove sediments and debris		
		1 basketball court, rubber surface playground, pavement and maintained grass landscaping areas	Inspect for erosion or bare soils conditions, Re-seed as necessary		
Sidney Shapiro Playground	Hoyt St	1 catch basin	Remove sediments and debris		
		Trash receptacles	Check for leaks and spills, covers in place		
Whittier Disurround	100 4/ Swan St	2 baseball fields, practice field, playground and maintained grass landscape areas	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary		
whittier Playground	198-40 Swall St	2 catch basins	Remove sediments and debris		
Walter Morris Playground	Rd B & Cherry St	1 basketball court, playground and maintained grass and landscaping areas	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary		
Woogett Discoursed		2 basketball courts, mulch playground, maintained grass field	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary		
vvasgott Playground	5-2 I Baldwin Ave	4 catch basins			
E				· ·	



ded ce	Follow-Up Required (Y/N)	Inspection Date

Municipal Stormwater Operations and Maintenance Program

Permittee Owned Facilities Inventory and Reporting Log

Reporting Period: July 1 20____ - June 30, 20____

Facility Name	Location	BMP/Feature Description	Standard Maintenance/Inspection Items	Recommended Maintenance	Follow-Up Required (Y/N)	Inspection Date
Woodland Street Disuground	Control Aug & Woodland St	Playground, paved walkways and maintained grass and landscaping areas	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
		Trash receptacles	Check for leaks and spills, covers in place			
Tremont St Community Garden	85 Tremont St	Grass and Gardens	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
		Playground, paved walkways and maintained grass and landscaping areas	Inspect for erosion or bare soils conditions, Re-seed as necessary			
		Paved parking lot (≈28 spaces)	Sweep			
Staff Sergeant Day Park	68 Lexington St	1 Infiltrating catch basin	Remove sediments and debris			
		1 Vegetated Swale	Remove sediments & debris, inspect for erosion			
		2 Dog waste stations	Check for cover in place, Empty Waste Bin & Stock Bags			
Dark	25 Applaton St	1 basketball court and playground, currently under construction	None			
FAIN	25 Appleton St	Approx 2 catch basins	Remove sediments and debris			
It Joseph Webper Dark	Schute & Lypp St	Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Lt. Joseph Wenner Park	Schute & Lynn St	Trash receptacles	Check for leaks and spills, covers in place			
		3 baseball fields, playground, maintained lawn and landscaped areas	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Glendale Park	Ferry & Elm St	8 catch basins	Remove sediments and debris			
		Trash receptacles	Check for leaks and spills, covers in place			
Liele Dark	(0 Clandala St	Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
ndie Park	oo Giendale St	Paved parking lot (~26 spaces)	Sweep			
James Brickley Square	25 Alpine Ave	Grass lot	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
	150 Duolynom St	Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Joseph C. Fraga Square	139 DUCKHdill St	Trash receptacles	Check for leaks and spills, covers in place			
Raymond MacKinnon Park	Hancock & Gilmore St.	Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Fred Quarlone Dark	Pow & Lundo St	Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
ri eu Quai leito Paix	Bow & Lynde St	Trash receptacles	Check for leaks and spills, covers in place			
Kovin Dunn Dork	School St. & Proodway	Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
	School St. & Broadway	1 catch basin	Remove sediments and debris			



Municipal Stormwater Operations and Maintenance Program

Permittee Owned Facilities Inventory and Reporting Log

Reporting Period: July 1 20____ - June 30, 20____

Facility Name	Location	BMP/Feature Description	Standard Maintenance/Inspection Items	Recommended Maintenance	Follow-Up Required (Y/N)	Inspection Date
		Pathways, Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Thomas Rossetti Park	Tremont St.	1 rain garden	Remove sediments and debris, Replace vegetation if as necessary			
		4 catch basins	Remove sediments and debris			
Rivergreen Path & Fields		1 Playing field for soccer/football/field hockey/lacrosse; two basketball courts; a street hockey rink; playground and splash area and multiple picnic areas	; Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
		Paved parking lot (\approx 720 spaces) and driveways	Sweep			
	Air Force Road	2 Vegetated Swales	Inspect condition, Remove sediment and debris, maintain vegetation			
		4 infiltrating catch basins	Remove sediments and debris			
		Vegetated buffer along river	Inspect for erosion or bare soils conditions			
		2 Pet Waste Stations	Check for cover in place, Empty Waste Bin & Stock Bags			



Municipal Stormwater Operations and Maintenance Program Permittee Owned Facilities Inventory and Reporting Log

Reporting Period: July 1 20____ - June 30, 20____

Facility Name	Location	BMP/Feature Description	Standard Maintenance/Inspection Items	Recommended Maintenance	Follow-Up Required (Y/N)	Inspection Date
		Paved parking	Sweep, check for leaks and spills			
Everett DPW (Highway, Parks &	10 Norman St	Materials storage areas	Check for covers or stabilization of materials			
in Appendix F	19 Norman St	Fueling area	Check for leaks and spills, spill kits in place			
		6 catch basins	Remove sediments and debris			
		Small Paved parking area and driveway	Sweep			
Edward G. Connolly Center	90 Chelsea St	Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
		1 Catch basin - Connected to Sewer	Remove sediments and debris			
		Football Stadium, Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Everett Veterans Memorial Stadium	Cabot St	Trash receptacles	Check for leaks and spills, covers in place			
	Cabor St	Paved parking lot (~45 spaces)	Sweep			
		At least 2 Catch basins, Could not access inside Stadium	Remove sediments and debris			
		Landscape areas around front of building	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Everett City Hall	484 Broadway	Paved parking lot (~48 spaces)	Sweep			
		5 catch basins	Remove sediments and debris			
		Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Everett Community Health and Wellness	548 Broadway	Paved parking areas (~33 spaces) and drivewayes	Sweep			
Center	540 Di Oddiway	Dumpsters	Check for leaks and spills, covers in place			
		10 Catch basins, 1 Window Drain	Remove sediments and debris			
Contral Fire Station	384 Broadway	Vehicle, equipment and supplies storage	Check for leaks and proper storage			
Central File Station	304 Di Oauway	1 catch basin	Remove sediments and debris			
Hancock Streat Fire Station	54 Hancock St	Vehicle, equipment and supplies storage	Check for leaks and proper storage			
Hancock Street File Station		1 Area Drain	Remove sediments and debris			
		Vehicle, equipment and supplies storage	Check for leaks and proper storage			
Ferry Street Fire Station	243 Ferry St	Paved parking areas (~11 spaces) and driveways	Sweep			
		1 Catch basin (no sump), 1 Area Drain	Remove sediments and debris			



Municipal Stormwater Operations and Maintenance Program

Permittee Owned Facilities Inventory and Reporting Log

Reporting Period: July 1 20____ - June 30, 20____

Facility Name	Location	BMP/Feature Description	Standard Maintenance/Inspection Items	Recommended Maintenance	Follow-Up Required (Y/N)	Inspection Date
		Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
911 Communications Center	43 Elm Street	Paved parking areas (~8 spaces) and driveways	Sweep			
		1 catch basin	Remove sediments and debris			
		Landscape areas	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Everett Police Department	45 Elm St	Paved parking areas (-54 spaces) and driveways	Sweep			
		6 catch basins (3 with no sump)	Remove sediments and debris			
		Community Pool, skating arena and administration building	Check for leaks and proper storage			
Everatt Decreation Department	47 Elm St	Landscape areas	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
	47 Liin St	Paved parking areas (~64 spaces) and driveways	Sweep			
		1 CB	Remove sediments and debris			
		Landscape areas	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Everett Housing Authority & Glendale Apartments	393-381 Ferry St	Paved parking areas (-53 spaces) and driveways	Sweep			
		4 Catch basins	Remove sediments and debris			
Evoratt Public Schools	121 Vine St	Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Everent rubic schools	121 Vine St	Paved parking areas (~17 spaces) and driveways	Sweep			
		Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Everett High School	100 Elm St	Paved parking areas (~17 spaces) and driveways	Sweep			
Lverett nigh School	Too Lini St	2 Stormceptor Water Quality Units	Remove sediments and debris			
		8 Catch basins and 2 Area Drains	Remove sediments and debris			
		Landscape areas around parking lot	Inspect for erosion or bare soils conditions			
George Keverian School	20 Nichols St	Paved parking lot ($pprox$ 78 spaces) and driveways	Sweep			
		8 Catch Basins	Remove sediments and debris			
		Basketball court and playground, Landscape areas around parking lot	Inspect for erosion or bare soils conditions			
Lafayette School	117 Edith St	Paved parking lot (≈78 spaces) and driveways	Sweep			
		3 catch basins	Remove sediments and debris			



Municipal Stormwater Operations and Maintenance Program

Permittee Owned Facilities Inventory and Reporting Log

Reporting Period: July 1 20____ - June 30, 20____

Facility Name	Location	BMP/Feature Description	Standard Maintenance/Inspection Items	Recommended Maintenance	Follow-Up Required (Y/N)	Inspection Date
		Landscape areas around parking lot	Inspect for erosion or bare soils conditions			
		Paved parking lot (≈95 spaces) and driveways	Sweep			
Madeline English School 105 Woodville St	105 Woodville St	2 Vegetated Swales	Remove sediments & debris, inspect for erosion			
		3 catch basins	Remove sediments and debris			
Adama Cakaal	70 Tileston St	Paved parking lot (≈16 spaces) and driveways	Sweep			
	78 Theston St	1 catch basin, 2 area draina	Remove sediments and debris			
Wahatar Sahaal	20 Dortmouth St	Playground	None			
Webster School	30 Dai thouth St	2 catch basins	Remove sediments and debris			
		Paved playareas	Sweep			
Sumner G. Whittier School	337 Broadway	Paved parking lot (≈24 spaces) and driveways	Sweep			
		6 Catch basins, 8 Area drains	Remove sediments and debris			
		Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
Parlin Junior High School	587 Broadway	Paved parking areas (~54 spaces), open pavement and driveways	Sweep			
		8 catch basins	Remove sediments and debris			
		Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary		ļ	
Parlin Memorial Library	410 Broadway	Trash receptacles	Check for leaks and spills, covers in place			
		4 Catch basins	Remove sediments and debris			
Shute Memorial Library	781 Broadway	Maintained lawn and landscape area	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
City Parking Lot	370 Broadway	Paved parking lot (≈19 spaces)	Sweep			
Dublic Darking Area	Dovone St	Paved parking lot (\approx 67 spaces) and driveways	Sweep			
rubic raiking Area	Devens 3t	2 catch basins	Remove sediments and debris			
Dublic Darking Area	Victoria St	Paved parking lot (\approx 40 spaces) and driveways	Sweep			
rubic raiking Area	Victoria St	3 catch basins	Remove sediments and debris			
Harbonwalk Darking Lot	17 Dobin St	Multiple catch basins	Remove sediments and debris		ļ	
		Paved parking lot	Sweep			
Pomboli Parking Lot	Corovst	Paved parking lot (≈80 spaces) and driveways	Sweep			
Romboli Parking Lot	corey st.	5 catch basins	Remove sediments and debris			



APPENDIX C – Catch Basin Inspection Log

MCM 6: GOOD HOUSEKEEPING - CATCH BASIN CLEANING

CATCH BASIN CLEANING LOG

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Date Range	Location(s)	# CBs Cleaned	Volume of Cleaning
Sept-Dec 2015	Scattered throughout town, especially main roads	953	1,800 yd ³
Apr-May 2019	Scattered throughout town, especially main roads	670	

Reporting Period:



RECORD OF CATCH BASINS FOUND TO BE MORE THAN 50% FULL AT CLEANING

	Reporting Peri			
Inspector:			Sheet	of
CB ID	Date	Address	Location Descriptio	n



APPENDIX D – Street and Parking Lot Sweeping Log

MCM 6: GOOD HOUSEKEEPING - STREET AND PARKING LOT SWEEPING

STREET AND PARKING LOT SWEEPING LOG

Reporting Period: _______ - ______

Spring

Date Range	Ward	Volume of Cleaning	# lots
	1		
	2		
	3		
	4		
	5		
	6		

Fall

Date Range	Ward	Volume of Cleaning	# lots
	5		
	6		

OTHER

Date Range	Ward	Volume of Cleaning	# lots



APPENDIX E – Stormwater Treatment Structures Inspection and Maintenance Guide

MCM 6: GOOD HOUSEKEEPING - STORMWATER BMP INSPECTION & MAINTENANCE

The following establishes inspection and maintenance actions for permittee-owned stormwater treatment structures to be used in conjunction with BMP inspection forms and the Permittee Owned Facilities Inspection Log.

#	BMP Description	Required Action
1	Water Quality Unit (Oil/Grit Separator)	a) Remove accumulated oils, grease and sediments
2	Dropriotory Congreter	a) Inspect and clean units according to manufacturers' recommendations
2	Proprietary Separator	b) Remove sediments & debris
2	Leashing Catch Desin	a) Remove sediments & debris
3	Leaching Catch Basin	b) Rehabilitate the basin if it fails due to clogging
	Bio-retention Areas &	a) Remove sediments & debris
4	Rain Garden	b) Mow and/or mulch
		c) Replace vegetation if needed
		d) Remove Invasive species as needed
	Extended Dry	a) Inspect outlets
Б	Detention Basin	b) Mow upper stage, sides slopes, embankment & spillway
5		c) Remove trash and debris
		d) Remove sediments from basin
		a) Make sure vegetation is adequate and slopes are not eroding, check for rilling and gullying, ponding and sedimentation
,	Mator Quality Swala	b) Mow 3"-6"
O VV	Water Quality Swale	c) Remove sediments & debris
		d) Repair eroded areas if needed
		e) Re-seed as necessary
		a) Inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
7	Infiltration Basin	b) Mow the buffer area, side slopes, and basin bottom if grassed floor
		c) Inspect and clean pretreatment devices associated with the basin
		d) Remove sediments & debris
		a) Inspect the trench 24 hours or several days after a rain event
o	Infiltration Tranch	b) Mow top of trench if is grassed
0		c) Inspect and clean pretreatment BMPs, check inlets and outlets for clogging
		d) Remove sediments & debris
		a) Inspect Inlets
9	Infiltration Chamber	b) Remove sediment from pretreatment BMPs
		c) Remove sediments & debris
10	Porous Pavement	a) Vacuum sweep or Power wash surface
11	Maintained Lawn	a) Re-seed as necessary



APPENDIX F – SWPPP

Everett, Massachusetts **Stormwater Pollution Prevention Plan** (SWPPP)

June 2020

DEPARTMENT OF PUBLIC WORKS 19 NORMAN STREET



315 Norwood Park South www.BETA-Inc.com

Stormwater Pollution Prevention Plan (SWPPP)

Everett, Massachusetts

DEPARTMENT OF PUBLIC WORKS **19 NORMAN STREET**

Prepared by: BETA GROUP, INC. Prepared for: City of Everett

June 2020

SWPPP Certification

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

Authorized Official

Date

Splic Works # Englineering Execotte Dir. of

Title

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INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) has been developed by BETA Group, Inc. (BETA) on behalf of the City of Everett (the City), Massachusetts, Department of Public Works (DPW) to address the requirements of the United States Environmental Protection Agency (EPA) 2016 National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts, hereafter referred to as the PERMIT. This SWPPP is outlined as follows:

- 1. Pollution Prevention Team
- 2. Description of Facility
- 3. Identification of Stormwater Controls
- 4. Management Practices
- 5. Site Inspections

1.0 POLLUTION PREVENTION TEAM

The Everett DPW has assigned a Pollution Prevention Team (PPT) for this SWPPP. PPT team members and contact information are summarized below. The role of the PPT is to develop, implement, maintain, and revise as necessary, this SWPPP. The PPT also has the following responsibilities:

Name:	Gregory S P.E.	St.	Louis,	Title:	Executive Director	Department	Department of Public Works			
Phone:	617.944.02	247		Email:	greg.stlouis@ci.everett.ma.us					

Responsibilities: MS4 Coordinator, IDDE Program, Good Housekeeping, Reporting & Record Keeping

Name:	Michael Hornig, PE	Title:	Associate	Company	BETA Group			
Phone:	781.255.1982	Email:	MHornig@beta-inc.com					
Responsibilities: MS4 Consultant to the City								



2.0 DESCRIPTION OF FACILITY

2.1 FACILITY SUMMARY

The DPW facility is located at 19 Norman Street in Everett, Massachusetts (the site) and is owned and operated by the City. Information provided in this, and the following sections is based on observations made during a site visit on April 14, 2020. During the site visit, BETA personnel were escorted by Mr. Greg St. Louis, Executive Director of Public Works and Engineering for the City, who provided a general overview and layout of facility operations, activities performed and material storage information.

The site consists of an irregular-shaped parcel that includes 4.02 acres of land improved with three buildings: a main building used for administration and vehicle maintenance and storage; a building used by the Water Department for administration and vehicle and supply storage; and a salt storage shed. Areas at the site not covered by buildings are paved. The site's location is depicted on the **Site Map** included in **Appendix A**. Pertinent site details, including layout, location of any stormwater outfalls, receiving waters and structural controls, are depicted on the **Site Map**.

2.2 SITE MAP

The facility consists of approximately 4 acres and contains the structures and other features identified above, shown on the **Site Map** and described in detail in the following sections. Components shown on the site map include as applicable:

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



2.2.1 INVENTORY OF BUILDING

The site includes the following buildings and structures and their use:

No.	Use	Floor Drain
1	Administration/Vehicle Storage and Maintenance	⊠Y □N
2	Water Department Administration and Vehicle Storage	⊠Y □N
3	Salt Storage	□Y ⊠N

Table 2.1 - Inventory of Buildings

2.2.2 PARKING AREAS

Employee parking is provided in the area adjacent to the south of Building 1.

2.2.3 INVENTORY OF VEHICLES & EQUIPMENT

The City maintains an inventory of vehicles and heavy equipment. A copy of the inventory is included in **Appendix B**.

2.3 SITE DRAINAGE & RECEIVING WATERS

Stormwater runoff at the site is collected via a series of on-site catchbasins where it is conveyed via subsurface piping along Norman Street to Kelvin Street, then south toward the Revere Beach Parkway. Stormwater runoff from the site ultimately outfalls to wetlands located approximately 0.25 miles southwest of the site. Floor drains located in Buildings 1 and 2 discharge to a water quality unit (oil/water/grit separator) which discharges to the sanitary sewer. Surface runoff flow direction, drainage structures and features are indicated on the **Site Map**.

2.4 POTENTIAL POLLUTANT SOURCES

An inventory of activities performed at the site and associated potential stormwater pollutants is provided in **Appendix C**. Locations of activities and potential stormwater pollutants are indicated in on the **Site Map**.



3.0 STORMWATER CONTROLS

Structural stormwater controls including drainage structures, pipes and conveyances; stormwater best management practices (BMPs) and outfall(s) are shown on the **Site Map**. These controls, used and maintained in accordance with good engineering practices, manufacturer's specifications and management practices detailed in **Section 4.0** below, address the quality of discharges from the site.

4.0 MANAGEMENT PRACTICES

The following sections summarize the management practices (non-structural stormwater controls) to be implemented at the site to mitigate the potential for potential pollutants to impact stormwater.

4.1 MINIMIZE OR PREVENT EXPOSURE

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

Fueling Areas

Vehicle fueling activities can result in gasoline and diesel fuel entering the storm drain system. Spills can occur by topping off fuel tanks and during deliveries. If possible, fueling areas should be placed under cover in order to minimize exposure. Best management practices for fueling areas include the following:

- Deliveries to fuel tanks and fueling of vehicles and equipment should occur on impervious surfaces with proper containment. Spill response kits should be readily accessible at fueling and maintenance areas.
- Fuel dispenser containment features (grooves in concrete pad perimeter) should be kept free of debris.
- Fueling areas owned or operated by the municipality should be covered.

Vehicle Storage¹

Rainfall on vehicles and equipment storage areas has the potential to collect pollutants and result in high loads of nutrients, metals, and hydrocarbons in stormwater runoff. To prevent this, best management practices include the following:

- All vehicles, equipment and hazardous waste storage containers should receive regular maintenance and be inspected for leaks or defective parts.
- Vehicles and equipment should be stored on a covered slab or within a building with a common drain that discharges to an oil/water separator.
- Outdoor storage of vehicles and equipment should not occur in areas that drain to the storm drain system unless adequate devices are in place to remove oil, sediment and other pollutants.
- Vehicles with fluid leaks should be stored indoors or containment be provided until repaired.

Vehicle and Equipment Maintenance¹

Vehicle and equipment maintenance shall be conducted in a manor to reduce the discharge of pollutants by following these best management practices:

¹ Buildings 2 and 3 are used for vehicle storage and maintenance. Floor drains in these buildings are connected to a water quality unit for oil and grit separation. This unit discharges to the sanitary sewer.



- Conduct routine inspections of heavy equipment and vehicles to proactively identify maintenance needs or potential leaks.
- Use drip pans as needed until repairs can be performed and when drip pans are used, avoid overtopping.
- Drain fluids from leaking or wrecked vehicles and parts as soon as possible. Dispose of fluids properly.
- Perform routine preventive maintenance to ensure heavy equipment and vehicles are operating optimally.
- Recycle or dispose of waste properly and promptly.
- Conduct all body repair and painting work indoors.
- Minimize waste from paints and thinners. Calculate paint needs based on surface area.
- Do not wash or hose down storage areas unless there is prior approval to collect and discharge the water into the sanitary sewer. Use dry cleanup methods (vacuum, sweep) to clean up metal filings and dust and paint chips from grinding, shaving and sanding. Sweep debris from wet sanding after allowing it to dry overnight on the shop floor. Dispose of waste properly; never dump waste into storm or sanitary sewers.
- Do not dump any liquids or other materials outside, especially near or in storm drains or ditches.
- Store materials and waste in labeled containers under cover and in secondary containment.
- Chemicals should not be combined in containers.
- Carefully transfer collected fluids from containers into designated storage areas as soon as possible.
- Waste liquids (oil, antifreeze, etc.) should be properly stored on-site and routinely disposed by licensed waste haulers at licensed disposal facilities.
- Store new and used batteries securely to avoid breakage. Store indoors or in secondary containment to contain potential acid leaks. Recycle used batteries.

Parts Cleaning

Cleaning of parts can transport pollutants into the storm drain system or surface waters. The MS4 Permit does not authorize these types of discharges. Best management practices to avoid this include the following:

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



Vehicle and Equipment Wash Waters

Washing down of maintenance and fueling areas, as well as equipment and vehicles can transport pollutants into the storm drain system or surface waters. The MS4 Permit does not authorize these types of discharges. Best management practices to ensure that vehicle wash waters are not discharged to the municipal system or surface waters include the following:

- Vehicles and equipment should be washed inside whenever possible to reduce runoff to the stormwater system.
- Grassy and pervious (porous) surfaces may be used to promote direct infiltration of wash water, providing treatment before recharging groundwater and minimizing runoff to an adjacent stormwater system. Pervious surfaces or other infiltration-based systems should not be used within wellhead protection areas or within other protected resources.
- Avoid discharge of any wash water directly to the storm drainage system or surface water (e.g., stream, pond, or drainage swale)
- Do not use solvents except in dedicated solvent parts washer systems.
- Wash vehicles with non-toxic, phosphate-free, biodegradable cleaners
- Wash vehicles on an asphalt lot using a collection system with containment berms and discharge to water quality devices that will remove pollutants. Detergents should not be used in areas where oil/water separators provide pre-treatment of drainage.
- Floor drains should be connected to a sanitary sewer or tight tank. Floor drains discharging to adjacent surface water bodies or engineered storm drain systems should be permanently plugged or otherwise abandoned before any vehicle wash activities are completed.
- Designate separate areas for routine maintenance and vehicle cleaning. This helps prevent contamination of wash water by motor oils, hydraulic lubricants, greases, or other chemicals.

Earth Material Stockpile Areas

Stockpiling material on the site may be needed temporarily or permanently depending on the time or year or City projects. BMPs for protecting stockpiles include adequate cover or temporary stabilization as well as temporary sediment perimeter controls at the base of the stockpile.

- Divert stormwater runoff around stockpile areas.
- Cover stockpiles with plastic, geotextile or temporary seed.
- Temporary sediment perimeter controls, including silt fence, filters socks, or fiber rolls, may be placed a short distance from the base of the stockpile. Maintaining a short distance from the base of the stockpile to the perimeter control is important as it allows water to pond, if needed.

4.2 GOOD HOUSEKEEPING

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



Sweeping and Cleaning of Parking Lots

Vehicle surfaces can collect a variety of contaminants such as sediments, oil, grease, and metals during daily activities. The MS4 permit requires that parking lots are swept, and surrounding areas of the facility are kept clean to reduce runoff of pollutants.

Parking lot sweeping and cleaning follows the same schedule as street sweeping, at least twice per year in Spring and Fall, with additional sweeping as need for specific sites.

Waste Management

All liquid and solid waste must be disposed of properly. Some of the most common sources of pollution at municipal facilities are a result of littering, improper collection of debris, and improper disposal of solid or liquid waste. Best management practices for handling, storage, transfer and disposal of trash and recyclables include the following:

- All waste and recycling receptacles must be leak-tight with tight-fitting lids or covers.
- Keep lids on dumpsters and containers closed at all times unless adding or removing material. If using an open-top roll-off dumpster, cover it and tie it down with a tarp unless adding materials.
- Place waste or recycling receptacles indoors or under a roof or overhang whenever possible.
- Locate dumpsters on a flat, paved surface and install berms or curbs around the storage area to prevent run-on and run-off.
- Do not locate dumpsters over or adjacent to catch basins.
- Prior to transporting waste, trash, or recycling, ensure that containers are not leaking (double bag if needed) and properly secure containers to the vehicle.
- Clean up any liquid leaks or spills with dry cleanup methods.
- Arrange for waste or recycling to be picked up regularly and disposed of at approved disposal facilities.
- Never place hazardous materials, liquids, or liquid-containing wastes in a dumpster or recycling or trash container.
- Do not wash trash or recycling containers outdoors or in parking lots.
- Conduct periodic inspections of solid and liquid waste storage areas to check for leaks and spills.
- Conduct periodic inspections of work areas to ensure that all wastes are being disposed of properly.
- In dumpster areas, regularly pick up surrounding trash and debris and regularly sweep the area.
- In compactor areas, regularly check the hydraulic fluid hoses and reservoir to ensure that there are no cracks or leaks. Regularly sweep the area.

4.3 PREVENTATIVE MAINTENANCE

All equipment and systems shall be regularly inspected, tested, maintained, and repaired to avoid situations that may result in leaks, spills, and other releases of pollutants to stormwater and receiving waters. Inspections shall occur at a minimum once per quarter.



Use Storage and Disposal of Potential Pollutants

Potential pollutants or hazardous wastes that may be used and stored in or around municipal building and facilities include pesticides, paints, cleaners, petroleum products, fertilizers, and solvents. Careful handling and proper storage of these products are the best means of preventing spills and pollution to the environment. Best management practices include the following:

- Storage and handling areas should be covered or enclosed to reduce potential contact with stormwater and wind.
- Potential pollutants should be transported using approved methods and containers to minimize the chance of spillage, and by employees that have familiarity with the potential environmental and human health hazards of the products.
- Proper spill kits applicable to the products being used at each specific building or facility should be easily accessible and marked clearly so employees can follow procedures quickly and effectively. Leaks or spills should be cleaned up in a timely manner.
- Establish separate storage areas for these types of products with measures in place to contain any spill leaking out of the storage area.
- A designated person should be responsible for these areas.
- The storage area should be inspected frequently, kept clean and in good order with proper labels and signs, and consistent disposal practices.
- Floor drains in storage areas should be disconnected from the stormwater system.
- Routinely inspect buildings and facilities for areas of potential leaks.
- Paint and other chemicals should not be applied on the outside of buildings when it is raining or prior to expected rain.
- When sanding, painting, power washing, etc., ensure that sites are properly prepared (e.g., use tarps) and cleaned (e.g., use dry cleaning methods) especially if they are near storm drains. Protect catch basins when maintenance work is conducted upgradient of them.
- When painting, use a drop cloth and clean up any spills immediately.
- Do not leave open containers on the ground where they may accidentally tip over.
- Do not discharge chlorinated pool water into the stormwater system. Water must be properly dechlorinated and tested before it is discharged.
- Ensure that the washwater does not flow into the storm system. Containment or filtering systems should be provided.

4.4 SPILL PREVENTION AND RESPONSE

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

• Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling.



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

Spill Prevention Plans

The City has spill kits and prevention and control plans in place for all buildings and facilities where hazardous wastes are stored or used. These are coordinated with the fire department as necessary.

Per the Massachusetts Clean Water Toolkit Fact Sheet for Spill Prevention and Control Plans, it is recommended that Spill Prevention and Control Plans (SPCP) clearly state measures to stop the source of a spill, contain the spill, clean up the spill, dispose of contaminated materials, and train personnel to prevent and control future spills. The SPCP should define material handling procedures and storage requirements and outline actions necessary to reduce spill potential and impacts on stormwater quality. The plan can be a procedural handbook, or a poster placed in several locations at the site.

4.5 EROSION AND SEDIMENT CONTROL

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

Erosion Control

Site maintenance activities include erosion control, specifically with respect to poor vegetation cover and particularly within 50 feet of surface water. Best management practices include the following:

- Prevention of erosion and sedimentation is preferable to installing treatments devices.
- Protect vegetated and wooded buffers and leave vegetated areas undisturbed to the extent possible.
- Inspect sites regularly for locations of poor vegetation cover, erosion and sedimentation and channelization. If stabilization is required, corrective actions should be identified and implemented as soon as possible.



- If exposed, soils should be stabilized by mulching, seeding with fast-growing native grass and/or planted with native tree and shrubs. Use erosion control blankets when seeding slopes.
- If necessary, slow stormwater runoff velocities with conveyance measures such as riprap channels or vegetated swales, check dams, level spreaders and outlet protection, etc.
- A buffer/filter strip should be left around surface waters. No fertilizers or pesticides should be applied in the buffer/filter strip except where necessary.

4.6 MANAGEMENT OF RUNOFF

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

Catchbasin Cleaning Program

All catchbasins on the site are to be included in the catchbasin inspection and cleaning optimization program.

Stormwater Management BMP Maintenance

Stormwater BMPs for this facility (excluding catch basins) are to be inspected quarterly and maintained as necessary to provide optimum treatment of stormwater runoff. The City will keep a log of stormwater management structures inspected and report on the condition and maintenance performed. BMPs are included in the SWPPP inspection form provided in **Appendix D**.

The following are maintenance activities and procedures for each type of BMP on the site based on the Massachusetts Stormwater Handbook:

STRUCTURAL PRETREATMENT BMPs

WATER QUALITY UNIT (OIL/GRIT SEPARATOR)

Water quality units, also referred to as oil/grit separators, are underground storage tanks with chambers designed to remove heavy particles, floating debris and hydrocarbons from stormwater. These units are typically considered a pretreatment BMP for land uses with higher potential pollutant loads and risk of petroleum spills. Cleaning these units is important to prevent sediment from resuspending and discharging during future storm events. Inspection and maintenance should include the following:

- Inspect and clean unit cleaning includes removal of accumulated oils and grease and sediment using a vacuum truck or other ordinary catch basin cleaning device
- Polluted water or sediments removed from an oil grit separator unit should be disposed of in accordance with all applicable local, state and federal laws and regulations including M.G.L.c. 21C and 310 CMR 30.00.



Additional guidance for Structural BMP operations and maintenance can be found in the latest version of the Massachusetts Department of Environmental Protection Stormwater Handbook, Volume 2, Chapter 2, located at: <u>http://www.mass.gov/eea/docs/dep/water/laws/i-thru-z/v2c2.pdf</u>

4.7 SALT STORAGE PILES OR PILES CONTAINING SALT

For storage piles of salt or piles containing salt used for deicing or other purposes (including maintenance of paved surfaces) for which the discharge during precipitation events discharges to the permittee's MS4, any other storm sewer system, or to a Water of the US, the permittee shall prevent exposure of the storage pile to precipitation by enclosing or covering the storage piles. As of July 1, 2020, such piles shall be enclosed or covered. The permittee shall implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. The permittee is encouraged to store piles in such a manner as not to impact surface water resources, ground water resources, recharge areas, and wells.

4.8 EMPLOYEE TRAINING

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

The permittee shall document the following information for each training:

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

4.9 MAINTENANCE OF CONTROL MEASURES

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



5.0 SITE INSPECTIONS

Inspect all areas that are exposed to stormwater and all stormwater control measures. Inspections shall be conducted at least once each calendar quarter (winter, spring, summer and fall). The quarters begin on January 1, April 1, July 1 and October 1. More frequent inspections may be required if significant activities are exposed to stormwater. Inspections shall be performed when the facility is in operation. At least one of the quarterly inspections shall occur during a period when a stormwater discharge is occurring.

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

- The inspection date and time
- The name of the inspector
- Weather information and a description of any discharge occurring at the time of the inspection
- Identification of any previously unidentified discharges from the site
- Any control measures needing maintenance or repair
- Any failed control measures that need replacement
- Any SWPPP changes required as a result of the inspection

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

A SWPPP inspection form is provided in **Appendix D**. The permittee shall report the findings from the Site Inspections in the annual report.



6.0 RECOMMENDATIONS

Based on BETA's April 14, 2020 site visit, we are providing the following recommendations to attain or maintain compliance with the MS4 permit requirements.

- The current vehicle fueling area is uncovered. Petroleum is a potential stormwater pollutant and releases during vehicle fueling may enter the storm drain if occurring during a rain event. We recommend that a cover or roof structure be installed over the vehicle fueling area to mitigate potential stormwater pollutants from entering the storm drainage system. We also recommend that a spill kit be placed in close proximity to the vehicle fueling area.
- 2. Current vehicle washing at the site results in washwater discharge directly to the stormwater drainage system at the site. Such discharges are not authorized under the MS4 permit. We recommend one or more of the following be performed to eliminate this discharge:
 - a. Construct a wash rack to collect and discharge washwaters to the sanitary sewer system (with authorization from the local sewer authority) via a water quality system such as an oil/water or grit separator.
 - b. Procure 3rd party vehicle washing services. These operations are equipped to handle fleet vehicle washing and resulting washwater. This would eliminate the discharge of washwater to the storm drain system at the site.
- 3. Construction, landscaping material and debris stockpiles located on the northwestern portion of the site are uncovered and located upgradient of on-site catchbasins. Stormwater runoff in this area could potentially contain stormwater pollutants such as sediment, debris and nutrients that impact stormwater. We recommend implementing procedures described in Section 4.1 to mitigate this issue.
- 4. In order to address the concerns of items 1-3 noted above, the City may consider installing a water quality unit near the west driveway or further downstream (before the wetlands) to treat all of the stormwater on the site and/or replace select catch basins with stormwater treatment devices.
- 5. Several empty barrels were observed during our site inspection. We recommend that these barrels either be placed under covered area, or removed from the site if not in use.



APPENDIX A – Site Map



APPENDIX B – Vehicle Inventory

APPENDIX C – Summary of Site Activities and Potential Stormwater Pollutants

APPENDIX C: Summary of Site Activities and Potential Stormwater Pollutants

Activity Description		Building Reference	ne Material Inventory	Potential Stormwater Pollutants	Quantity	Potential Exposure to Stormwater	Management Practices	
Activity	Description	Building Reference	Waterial inventory	Totential stormwater Fondtants	Quantity	Potential Exposure to Storniwater	Structural	Non-structural
Vehicle Fueling	Fueling of Town-owned and operated vehicles	N/A	Diesel Fuel Gasoline	– Petroleum Hydrocarbons	10,000-gal UST 10,000-gal UST	High - during a spill, uncovered fueling area	N/a	Spill Kit in Close Proximity
Vehicle Maintenance			Motor Oil	Petroleum Hydrocarbons	-			
			Hydraulic Fluid	Petroleum Hydrocarbons				
	Maintonanaa and Storage of Town		Lubricants	Petroleum Hydrocarbons			Elear Drains to ail (water/arit	Maintananaa aanduatad incida building, good
	owned and operated vehicles and	1	Transmission Fluid	Petroleum Hydrocarbons	Varios	low in covered bldg	FIOOI DI all'IS to oll/water/grit	bousekeeping, catchbasin and oil/water separater
	owned and operated vehicles and	I	Waste Oil	Petroleum Hydrocarbons	varies	Low - In covered blag	separator, discharges to sariitary	cleaning
	equipment		Antifreeze	Ethylene glycol			Sewei	clearing
			Coolant	Ethylene glycol				
			Brake Fluid	Glycols				
Vehicle Washing	Washing of Town-owned and	1	Detergents	Surfactants	Varios	High webicle washwater disbearges directly to satebbasing and storm drain	N/A	Good housekeeping practices
	operated vehicles	I	Detergents	Washwater	varies	right - vehicle washwater dishcarges directly to catchbasins and storm drain	N/A	
Construction Materials	Storage and handling of construction		Aggregate	Sediment, debris				
	materials and miscellaneous maintenance products (gravel, loam, aggregates, etc.)		Fill	Sediment, debris	Varies	High - materials not covered and stored upgradient of catchbasins	N//A	Routine inspection and maintenance, sweeping and good housekeeping practices
		(gravel, loam, N/A	Mulch	Sediment, debris				
			Brush/Compost	Nutrients, debris			N/A	
			Castings, blocks	Metals				
			Scrap Metal	Metals				
Salt Storage	Storage and handling of salt for winter roadway applications	3	Salt	Chlorides	1,300 ton (approx.) Low - covered storage	Covered storage	Routing sweeping Good housekeeping practices
		3	Brine		1.500-gal	low - stored in covered area		
Above Ground Storage	Deicing materials	3	Magnesium Chloride	-Sediment/chlorides	1,500-gal	low - stored in covered area	Covered storage	Spill Kit in Close Proximity
Tanks	Waste oil	1	Waste Oil	Petroleum Hydrocarbons	500-gal	Low - stored in covered area with secondary containment		Good housekeeping practices
Emergency Generators	Multiple mobile generators	N/A	Diesel Fuel	Petroleum	Varies	Low - petroleum products are stored in generator in a covered building	Covered storage	Spill Kit on-site
								Solid waste removal
Solid Waste Management	Multiple trash trucks	N/A	Solid waste Debris, metals	Debris, metals	Varies	Low - potential pollutants are covered and contained. Routinely removed	Covered storage	Good housekeeping practices
Parking Areas			1 N/A S	Sediment, oil from vehicles				Routine sweeping
	Parking for Town employees	1			Varies	High - stormwater discharges to on-site catchbasins	Catchbasin maintenance	Good housekeeping practices
Administration	Town administrative offices, and public meeting space	1	Miscellaneous equipment and supplies	Cleaning supplies	Varies	Low - stored in covered areas	Covered storage	Good housekeeping practices

APPENDIX D – SWPPP Inspection Form

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) INSPECTION FORM

Report No. _____

Location:	Department of Public Works: 19 Norman Street	Date:		Last Insp:	
		Arrive:		Leave:	
Inspector:					
Recent Rainfall:		Current Weather	:		
Unidentified Discharges? Spills?					
Add. Info:					

Control Measures/Action Required: \Box yes \Box no

(INSPECT FOR ALL APPLICABLE CONTROLS LISTED)

Control	Condition	Required Action	Completed (by)	Date			
Fuel Dispensing Area BMPs							
□ Vehicle Washing Area BMPs							
□ Vehicle Repair Indoors							
Pavement Sweeping							
Trash Management							
□ Spill Prevention & Response							
Erosion & Sediment Controls							
Manage Runoff							
□ Salt Storage Area							
Oil/Grit Separator							
□ Other							
Failer	CONTROL MEASURES RE	QUIRE REPLACEMENT: 🗆 YE	S 🗆 NO				
Control	Condition	Required Action	Completed (by)	Date			
SWPPP Changes: Ves NO							
Control	Change		Completed (by)	Date			



MANAGEMENT PRACTICES

- <u>Minimize or Prevent Exposure</u>: To the extent practicable either locate materials and activities inside, or protect them with storm-resistant coverings in order to prevent exposure to rain, snow, snowmelt and runoff (although significant enlargement of impervious surface area is not recommended). Materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged directly or indirectly to surface waters or to the MS4 or if discharges are authorized under another NPDES permit.
- 2. <u>Good Housekeeping:</u> Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals. Ensure that trash containers are closed when not in use, keep storage areas well swept and free from leaking or damaged containers; and store leaking vehicles needing repair indoors.
- 3. <u>Preventative Maintenance:</u> Regularly inspect, test, maintain, and repair all equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater to receiving waters. Inspections shall occur at a minimum once per quarter.
- 4. <u>Spill Prevention and Response</u>: Minimize the potential for leaks, spills, and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, the permittee shall have procedures that include:
 - a. Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling.
 - Response procedures that include notification of appropriate facility personnel, emergency agencies, and regulatory agencies, and procedures for stopping, containing, and cleaning up leaks, spills and other releases. Measures for cleaning up hazardous material spills or leaks shall be consistent with applicable Resource Conservation and Recovery Act (RCRA) regulations at 40 CFR section 264 and 40 CFR section 265. Employees who may cause, detect, or respond to a spill or leak shall be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the Pollution Prevention Team; and
 - c. Contact information for individuals and agencies that shall be notified in the event of a leak, spill, or other release. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under 40 CFR section 110, 40 CFR section 117, or 40 CFR section 302, occurs during a 24-hour period, the permittee shall notify the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR section 110, 40 CFR section 117, and 40 CFR section 302 as soon as the permittee has knowledge of the discharge. State or local requirements may necessitate reporting spills or discharges to local emergency, public health or drinking water supply agencies, and owners of public drinking water supplies. Contact information shall be in locations that are readily accessible and available.
- 5. <u>Erosion and Sediment Control</u>: Use structural and non-structural control measures at the facility to stabilize and contain runoff from exposed areas and to minimize or eliminate onsite erosion and sedimentation.
- 6. <u>Management of Runoff</u>: Manage stormwater runoff from the facility to prevent or reduce the discharge of pollutants. This may include management practices which divert runoff from areas that are potential sources of pollutants, contain runoff in such areas, or reuse, infiltrate or treat stormwater to reduce the discharge of pollutants.
- 7. <u>Salt Storage Piles or Piles Containing Salt</u>: Prevent exposure of the storage pile to precipitation by enclosing or covering the storage piles. Such piles shall be enclosed or covered within two (2) years of the permit effective date. Implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Store piles in such a manner as not to impact surface water resources, ground water resources, recharge areas, and wells.

