Town of Westwood, MA

Stormwater Management Program (SWMP): Volume 3

NPDES Phase II Small MS4 General Permit

June 2020

GOOD HOUSEKEEPING & POLLUTION PREVENTION

315 Norwood Park South
2nd Floor
Norwood, Massachusetts 02062
781.255.1982
www.BETA-Inc.com

Stormwater Management Program (SWMP): Volume 3

Town of Westwood, MA

NPDES Phase II Small MS4 General Permit

GOOD HOUSEKEEPING & POLLUTION PREVENTION

Prepared by: BETA GROUP, INC.
Prepared for: Town of Westwood, Ma

June 2020

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 Introduction

This Good Housekeeping and Pollution Prevention Plan has been developed by the Town of Westwood (the Town) 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 town-owned facilities and maintaining town-owned MS4 infrastructure.

3.0 Statement of Responsibilities

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

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.

Erosion 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.

Hazardous materials 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 illicit discharge 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.

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

(i) Owned or operated by a State, city, town, 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.

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

Sediment 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.

SWPPP 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 Town 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 table, maps and inspection log for these facilities are 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 Town currently contracts all applications of pesticides and fertilizers to all ball fields and town properties in accordance with state regulations. Products are not stored at the 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 town are minimal and limited to mowing, tree-trimming and general landscaping on Town-owned land. The Town allows some lawn clippings to remain on mowed areas to (re)fertilize the soils and biodegrade. Anything that is removed is taken to the DPW yard for compost and is removed by a contractor who disposes of the material at their facility.

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 Town 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 Town have trash barrels that are available year round. The DPW collects from trash receptacles throughout Town on Monday and Friday every week and the day before a holiday if it falls on Monday or Friday.

Pet waste is prohibited to be left on public property or private property other than the pet owners per Town's General Code Chapter 184 Article 1 Animal Control. The following site provides advice and recommendations on installation, servicing, signage, location and quantity of dog waste stations: http://www.zerowasteusa.com/advice.asp

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 Town 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 once per year in Spring, with additional sweeping in the Fall in the tributary areas of Germany Brook and Charles River due to the phosphorus impairment and 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 catchbasins on town-owned sites are to be included in the Town catchbasin inspection and cleaning optimization program described in Section 7.1.

Stormwater BMPs for facilities are to be included in the Town 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 Town 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 Catchbasin Inspection and Maintenance Optimization

The Town has established this procedure to optimize routine inspections, cleaning and maintenance of catch basins with a goal that the frequency of routine cleaning will ensure that no catch basin at any time will be more than 50 percent full.

For the purposes of this part, an excessive sediment or debris loading is a catch basin sump more than 50 percent full. A catch basin sump is more than 50 percent full if the contents within the sump exceed one half the distance between the bottom interior of the catch basin to the invert of the deepest outlet of the catch basin.

Optimization Procedure:

As part of routine inspections/cleaning events, debris levels in catchbasins will be recorded prior to cleaning in one of three conditions (<25% full, 25-50% full, and >50%) – See Catchbasin Inspection Form in Appendix C.

Records from consecutive inspections/cleaning events will be compared to identify basins that may be cleaned every other period, basin that need clean each period and basins that will require additional interim cleaning.

Inspection and maintenance for catch basins located near construction activities (roadway construction, residential, commercial, or industrial development or redevelopment) will be prioritized. Clean catch basins in such areas more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings.

If a catch basin sump is more than 50 percent full during two consecutive cleanings the Town will document that finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the extent practicable, and abate contributing sources. The Town will describe any actions taken in its annual report.

Record Keeping

The Town will keep a log of catch basins cleaned or inspected and report in each annual report the total number of catch basins inspected and cleaned and the total volume of material removed from catch basins. 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 Town 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 Town's current practice includes street sweeping all town roads, including rural uncurbed roadways with no catch basins and limited access highways once per year, once in spring. Ongoing sweeping is done throughout the year to all main roads and any secondary roads that need it.

The entire Town is within either the Charles River or Neponset River Watershed which are both nutrient-impaired for phosphorus. This means that 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) to meet the permit requirement for street sweeping frequency. Alternatively, the Town has developed a targeted sweeping plan to supplement the spring sweeping.

Sweeping frequency is to be increased as necessary to target areas as determined by the Town on the basis of pollutant load reduction, based on inspections, pollutant loads, catch basin cleaning or inspection results, land use, water quality limited or TMDL waters or other relevant factors.

Record Keeping

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

Purpose

The purpose of this policy is to provide information on the procedures followed by the Department of Public Works (DPW) during any snow or ice event throughout the winter season. The Department of Public Works 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 Town of Westwood website.

Materials Used

Winter weather events are difficult to forecast and can often change throughout the length of the storm. The Town frequently experiences snow, sleet, rain and mixed precipitation during the same storm. Due to this unpredictability, DPW must have a variety of materials to treat these variable storm conditions.

DPW's use of materials before, during and after storms is to ensure the safety of those traveling on our roadways. With safety as the priority, the Town'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. All materials are applied to roadways based on strict application guidelines that take into account the pavement temperature and type of precipitation. The DPW maintains records of the application of materials used in winter road maintenance and provides training for municipal employees responsible for implementation of winter roadway maintenance procedures. The types of materials used by the DPW are detailed below.

Rock Salt (Sodium Chloride) – Salt is used to break the bond of the ice to the pavement or to prevent it from forming by lowering the freezing point of water. Salt is readily available and very effective. The disadvantage is salt's corrosiveness to vehicles, impact on the environment and it is not effective at low temperatures. The department does not attempt to achieve bare pavement during any storm. The practice is far too expensive and the large quantities of salt would be detrimental to the environment.

Sand – Sand is mixed with salt at low temperatures to provide traction for vehicles. It is readily available and inexpensive. Sand's disadvantage is that it does not melt snow and ice, clogs drainage structures and requires costly spring sweeping and disposal.

Other Materials – The Town 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. These will be utilized base on the local conditions and restrictions and quantities will be minimized to the extent practicable. The Town may also explore alternative compounds to spread on the roads that have the same effect but are better for the environment.

Materials Stored

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

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

Procedures

During normal working hours, prior to a predicted storm, the Director and the Highway Superintendent will be responsible for determining when snow removal operations will commence. If a storm is predicted to arrive after the normal working day a scheduled start time should be implemented.

After normal work hours the Police Department will notify the on-call staff who will proceed from his location within 30 minutes to check road conditions and take necessary action. The following conditions are possible considerations that are made by the on-call staff member.

1. If the problem appears to be only a few isolated slippery spots the on-call staff will treat those areas with a sander unit.
2. If the problem appears to intensify it will be the on-call staff's responsibility to contact the Highway Superintendent and inform him of the current situation. It is at this point where the decision to call in for additional help will be made. It is important to note that when our vehicles are treating the roads we use a combination of salt/sand and at times, when the temperature drops below a certain level, magnesium chloride applications.
3. Snow plowing will begin when 2 inches of snow has accumulated and/or the future forecast is indicative of more accumulation ahead of us. Snow plowing operations will continue throughout the storm with a combination of town vehicles/staff and local contractors hired by the town.
4. Salting applications are suspended during our plowing operations until the storm has ceased and routes have been 100% cleaned up. Roads will only be treated during plowing operations if absolutely necessary.
5. If an emergency exists during plowing operations (Police or Fire), the Senior Foreman, Foreman, or Highway Superintendant will dispatch the closest vehicle to that location to ensure the emergency vehicle access is not impeded.
6. The sidewalk plows will be dispersed as soon as the storm has subsided and main roads have been cleared. These routes are to all public schools, town center, and University Ave.
7. Once the storm has subsided and plow routes have been cleaned up then each route will be treated with an application of salt.
8. Once the storm is over cleanup and pushback can continue into the following day or two. This might result in some additional cleanup of spillage into driveways and sidewalks that will become the homeowner's responsibility to tend too.

During the course of the storm, especially overnight, the Highway Superintendent will discuss the status of snow removal and the expectation for additional accumulation with the School Superintendent so he has factual information to decide if he should declare a snow day or a delayed arrival time.

Priorities

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

Why Some Roads are Cleared Before Others

As snow begins to accumulate, the Town of Westwood concentrates on primary main roads (Route 109, Summer Street, Pond Street, Nahatan Street, Oak Street, Clapboardtree Street, Washington Street, Hartford Street, East Street, Pond Street, Canton Street, University Ave, and Gay Street.). These roads are focused on first because of their significance (i.e. hospital routes). As snow continues to accumulate, the Towns first priority is to keep the main roads open and passable. As soon as all main streets within the town are clear, equipment is immediately moved to the residential areas.

It is important to note that every employee of the Town of Westwood is assigned routes with vehicles that are allocated to handle those specific routes. At times it might appear that some vehicles are at locations that don't exactly match the priority list previously mentioned. The priority list works hand in hand with operator and appropriate equipment availability.

Liabilities/Restrictions

The Town is not responsible for damage to private property (cars, mailboxes, hockey nets, etc.) or private improvements (grassy areas, irrigation systems, fences, shrubs, steps, etc.) that fall within the public street layout. The public street layout is generally 40' wide but can be as much as 60' wide which usually extends beyond the pavement.

The Towns primary responsibility is to clear each travel route as soon as possible. Although we do our best to serve our residents, at times, snow removal might not coincide with snow clearing that has been done by residents. it is the responsibility of each property owner to maintain their driveways and sidewalks that are not on the town sidewalk routes described earlier.

The Town will maintain and tend to brush, limbs, or trees that fall and lie ONLY in the public way. Private brush, branches, or trees that fall and lie outside of the public way that fall during storms are the responsibility of that property owner.

It shall be unlawful for the owner or operator of any vehicle, other than one acting in an emergency, to park said vehicle on any public street or place where the traveling public has the right of access between the hours of 2:00 a.m. and 5:00 a.m. of any day during the period of December 1 through March 31.

In order to facilitate safe and orderly snow clearing operations, the Emergency Management Director may declare a snow or ice emergency based on existing or expected weather conditions. During such an emergency all parking on Town roads is prohibited. Vehicles parked on Town roadways in violation of the ban may be ticketed and/or towed at the owner's expense. When possible, advance notice will be sent out

through various media electronic means, including posting it on the Town's website: www.town.westwood.ma.us.

It is important to note that Chapter 355/5 of the Town Bylaws states: "No person shall lay, throw, place or cause to be placed any snow or ice on any paved Town street or sidewalk so as to create a hazardous condition or public safety concern. If, after having received notice from a duly authorized agent of the Town that such a condition exists, the owner of the property from which the snow or ice was removed (or his agent having charge thereof) fails to correct the condition within reasonable amount of time, the owner or agent shall be deemed to be in violation of bylaw. Violation of this section shall be punished by a fine of $300 or any cost incurre4 violation or both."

The Town of Westwood requests that residents please be patient during snow operations. Snow removal is a difficult and time consuming task. Please try to limit road travel during and immediately following a snowfall unless absolutely necessary. The less traffic on the roads during snow clearing operations, more effective the job can be the performed.

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 Town has established and implemented inspection and maintenance frequencies and procedures for all structural BMPs. Inspection frequency for all permittee-owned stormwater treatment structures (excluding catch basins) shall be determined at initial and subsequent inspections based on observed conditions. Structures that are routinely observed with accumulated sediment or other performance issues will be inspected at lease annually and Records from consecutive inspections/cleaning events will be compared to identify structures that may need to be cleaned more or less frequently than once per year.

If a structure proves to be problematic during two consecutive inspections the Town will document that finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the extent practicable, address the source. Actions taken will be described in the annual report.

The Town will keep a log of stormwater management structures inspected and report on the condition and maintenance performed in each annual report. An inventory and inspection checklist for BMPs is provided in Appendix E and identified on the stormwater infrastructure map in Appendix A. 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 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 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 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 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: http://www.mass.gov/eea/docs/dep/water/laws/i-thru-z/v2c2.pdf

8.0 Stormwater Pollution Prevention Plan (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 Town has one of these types of facilities, the DPW Facility, located at 50 Carby Street. 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 Town will 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

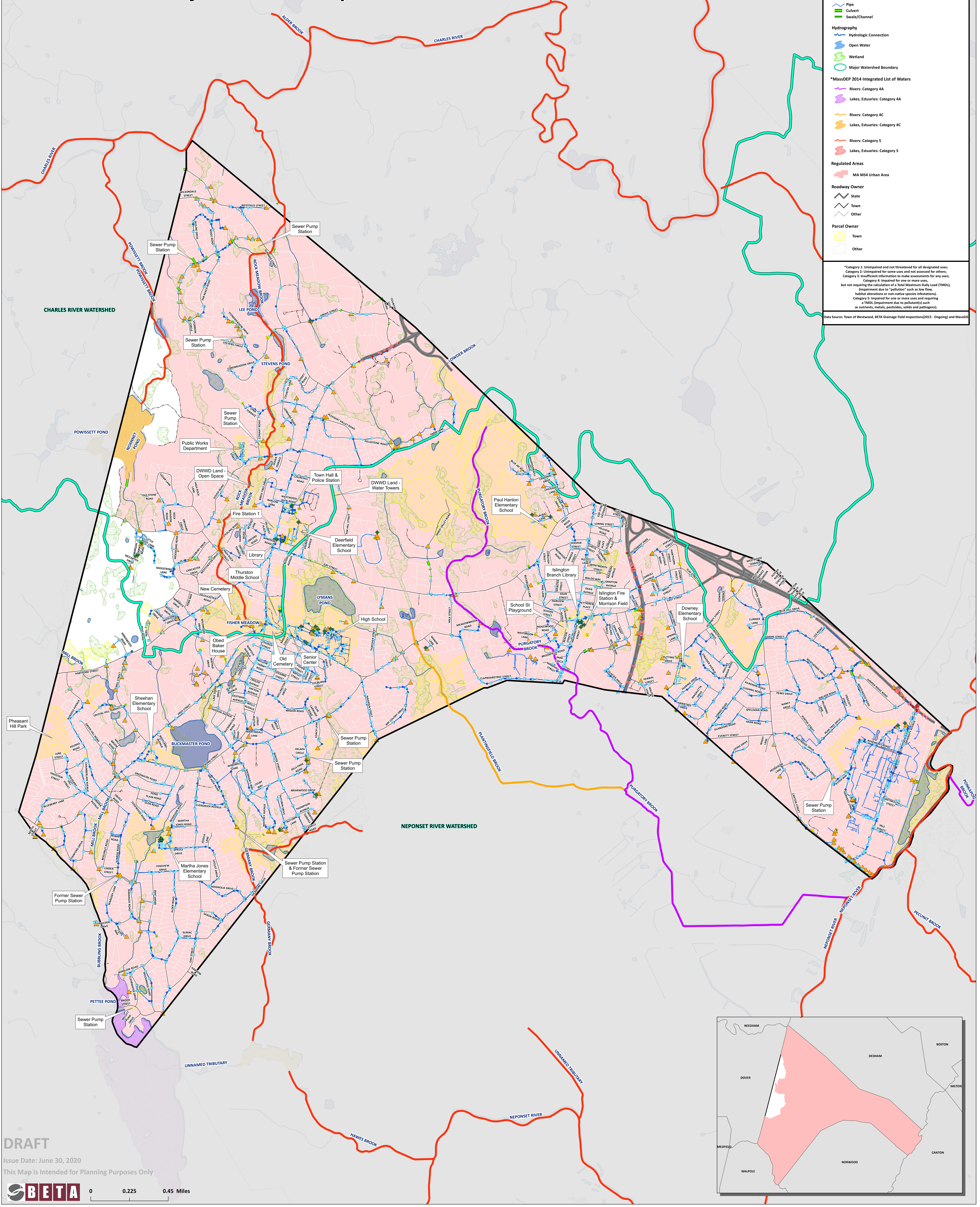
10.0 Records and Reporting

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 – Town-Owned BMPs and Stormwater Infrastructure Map

Town of Westwood, Massachusetts

Town-owned Facilities, BMPs and MS4 Stormwater Infrastructure Map



APPENDIX B – Town-owned Facilities Inventory, Maps and Inspection Log

Town of Westwood, MA
Municipal Stormwater Operations and Maintenance Program
Inventory of Permittee Owned Facilities

www.BETA-Inc.com

Notes:
1) There are no separate facilities for Vehicles and Equipment storage, these are included under Buildings and Facilities Sites
2) Inventory includes facilities and site within the designated MS4 area
3) Recommended maintenance to be conducted in accordance with the Operation and Maintenance (O&M) procedures and best management practices described in the Good Housekeeping and Pollution Prevention Plan developed by the
4) O&M Maps are provided for site with extensive drainage infrastructure and/or BMPs to clarify these features and their locations.

PARKS AND OPEN SPACE					
O&M Map #	**Record Plan**	**Facility Name**	**Location**	**BMP/Feature Description**	**Standard Maintenance/Inspection Items**
-	No	New Cemetery	877-881 High St	Infiltration Trench	Inspect the trench 24 hours or several days after a rain event
				Maintained Lawn	Re-seed as necessary
				Stone Chips near pond and lining roads	Refresh stone chips
				Paved driveways	Sweep
				6 Deep Sump Catch Basins	Remove sediments and debris
				Trash Receptacle	Check for leaks and spills, covers in place
-	No	Old Cemetery	Pond St/Nahatan St	Maintained Lawn	Re-seed as necessary
				Trash Receptacle	Check for leaks and spills, covers in place
				Shed for grounds maintenance equipment and supplies storage	Check for leaks and proper storage
-	No	School St Playground	44 School St	2 baseball fields, maintained lawn area	Re-seed as necessary
				Mulch playground with covered picnic tables	Refresh mulch
				Parking Area (~6 spaces)	Sweep
				Trash Receptacles	Check for leaks and spills, covers in place
				Shed for grounds maintenance equipment and supplies storage	Check for leaks and proper storage
-	Yes	Morrison Field	440-480 East St	1 Leaching Catch Basin in southerly corner near softball field	Remove sediments & debris
				1 baseball field with covered dugout and concessions and 1 softball field, 1 basketball court, maintained lawn	Re-seed as necessary
				Stone Chips	Refresh stone chips
				Parking Area (~31 spaces)	Sweep
				Trash Receptacles	Check for leaks and spills, covers in place
				2 Deep Sump Catch Basins in Parking Area	Remove sediments and debris
				Vehicle/Equipment Storage	Check for leaks and proper storage
-	No	Pheasant Hill Park (playground)	June Street	Maintained Lawn/field area	Re-seed as necessary
				Mulch playground	Refresh mulch
				Stone Chip driveway	Refresh stone chips
				Trash Receptacles	Check for leaks and spills, covers in place
-	No	DWWD Land - Water Towers	213 Fox Hill St	Maintained Lawn	Re-seed as necessary
				Stone Chip driveway and small parking area	Refresh stone chips
-	No	DWWD Land - Open Space	200 Dover Road	Woods/wetlands?	No Action Required

Town of Westwood, MA
Municipal Stormwater Operations and Maintenance Program
Inventory of Permittee Owned Facilities

www.BETA-Inc.com

BUILDINGS AND FACILITIES					
O&M Map #	**Record Plan**	**Facility Name**	**Location**	**BMP/Feature Description**	**Standard Maintenance/Inspection Items**
SWPPP	No	Public Works Department	50 Carby St	See SWPPP in Appendix F	See SWPPP in Appendix F
1	Yes	Deerfield Elementary School & Fields	72 Deerfield Ave	4 Leaching Catch Basins	Remove sediments & debris
				1 Riprap Infiltration Basin	Inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
				1 softball, 1 baseball & 2 soccer fields, basketball court, maintained lawn areas	Re-seed as necessary
				Stone Chips surrounding athletic field & mulch playground	Refresh stone chips and mulch
				Parking Areas (~80 spaces) and driveways	Sweep
				6 Deep Sump Catch Basins	Remove sediments and debris
				Dumpsters & Trash Receptacles	Check for leaks and spills, covers in place
				Multiple locations of grounds maintenance equipment and supplies storage	Check for leaks and proper storage
-	No	Paul Hanlon Elementary School & Fields	790 Gay St	1 Leaching Catch Basin in north parking lot	Remove sediments & debris
				1 baseball field, play field, 2 basketball courts, maintained lawn areas	Re-seed as necessary
				Stone Chip paths & mulch playground	Refresh stone chips and mulch
				Parking Areas (~80 spaces) and driveways	Sweep
				Dumpsters & Trash Receptacles	Check for leaks and spills, covers in place
				Multiple locations of grounds maintenance equipment and supplies storage	Check for leaks and proper storage
2	No	Thurston Middle School & Fields	850 High St	1 Stormceptor Water Quality Unit	Remove accumulated oils, grease and sediments
				1 Leaching Catch Basin	Remove sediments & debris
				1 baseball field, 2 soccer fields, maintained lawn areas	Re-seed as necessary
				Stone Chips	Refresh stone chips
				Parking Areas (~110 spaces) and driveways	Sweep
				8 Deep Sump Catch Basins	Remove sediments and debris
				Dumpsters & Trash Receptacles	Check for leaks and spills, covers in place
3	Yes	High School & Fields	200 Nahatan St	5 Vortechnics Water Quality Units	Remove accumulated oils, grease and sediments
				2 Stormwater Basins	Inspect outlets, Inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
				1 baseball & 2 softball fields, Turf football field & track, Turf practice field for soccer & lacrosse, 6 tennis courts, 1 basketball court& maintained lawn areas	Re-seed as necessary
				Parking Areas (~555 spaces), bus parking area (~20spaces) and driveways	Sweep
				63 Deep Sump Catch Basins	Remove sediments and debris
				Dumpsters & Trash Receptacles	Check for leaks and spills, covers in place
				Multiple locations of grounds maintenance equipment and supplies storage	Check for leaks and proper storage
4	No	Downey Elementary School & Fields	250 Downey St	1 baseball & 1 soccer field, 2 tennis & 2 basketball courts and maintained lawn areas	Re-seed as necessary
				Stone Chip paths & mulch playground	Refresh stone chips and mulch
				Parking Areas (~61 spaces) and driveways	Sweep
				14 Deep Sump Catch Basins	Remove sediments and debris
				Dumpsters & Trash Receptacles	Check for leaks and spills, covers in place
				Multiple locations of grounds maintenance equipment and supplies storage	Check for leaks and proper storage
5	No	Sheehan Elementary School & Fields	549 Pond St	4 Leaching Manholes	Remove accumulated oils, grease and sediments
				2 basketball courts, tennis courts, 3 soccer & 2 baseball fields, maintained lawns	Re-seed as necessary
				Stone Chip paths and batting cages & mulch playground	Refresh stone chips and mulch
				Parking Areas (~60 spaces) and driveways	Sweep
				4 Deep Sump Catch Basins	Remove sediments and debris
				Dumpsters & Trash Receptacles	Check for leaks and spills, covers in place
				Multiple locations of grounds maintenance equipment and supplies storage	Check for leaks and proper storage
				Vegetation buffer/filter around surface water	Maintain vegetation & check for erosion within 50' of water's edge

Town of Westwood, MA
Municipal Stormwater Operations and Maintenance Program
Inventory of Permittee Owned Facilities

www.BETA-Inc.com

O&M Map #	Record Plan	Facility Name	Location	BMP/Feature Description	Standard Maintenance/Inspection Items
6	Yes	Martha Jones Elementary School	80 Martha Jones Rd	2 Oil Water Separators	Remove accumulated oils, grease and sediments
				1 Stormceptor Water Quality Unit	Remove accumulated oils, grease and sediments
				1 basketball court, 1 baseball field, maintained lawn areas	Re-seed as necessary
				Mulch playground	Refresh mulch
				Parking Areas (~60 spaces) and driveways	Sweep
				17 Deep Sump Catch Basins - 3 are in field area, 1 in courtyard	Remove sediments and debris
				Dumpsters	Check for leaks and spills, covers in place
				Vegetation buffer/filter around surface water	Maintain vegetation & check for erosion within 50' of water's edge
7	Partial	Town Hall & Police Station	580-590 High St	1 Hydro International WQU	Remove accumulated oils, grease and sediments
				1 Infitration System	Inspect and clean as needed
				Maintained Lawn	Re-seed as necessary
				Parking Areas (~95 spaces) and driveways	Sweep
				9 Deep Sump Catch Basins	Remove sediments and debris
				Dumpsters	Check for leaks and spills, covers in place
-	Yes	Fire Station 1	637 High St	Maintained Lawn	Re-seed as necessary
				Parking Areas (~20+ spaces) and driveways	Sweep
				2 Deep Sump Catch Basin in High Street Driveway discharging toward drain in Hillcrest Place	Remove sediments and debris
				Vehicle, equipment and supplies storage	Check for leaks and proper storage
8	Partial	Library	660 High St	2 Contech Storm Water Quality Units	Remove accumulated oils, grease and sediments
				4 Infiltration Systems	Inspect and clean as needed
				Grassed Water Quality Swale	Mow 3"-6"
				Maintained Lawn	Re-seed as necessary
				Parking Areas (~63 spaces) and driveways	Sweep
				Deep Sump Catch Basin (9)	Remove sediments and debris
				Trash Receptacle	Check for leaks and spills, covers in place
				Multiple locations of grounds maintenance equipment and supplies storage	Check for leaks and proper storage
-	No	Senior Center/Council on Aging	60 Nahatan St	Maintained Lawn	Re-seed as necessary
				Parking Areas (~70 spaces) and driveways	Sweep
				Mulch playground	Refresh mulch
				4 Deep Sump Catch Basins	Remove sediments and debris
				Dumpster & Trash Receptacles	Check for leaks and spills, covers in place
				Vehicle, equipment and supplies storage	Check for leaks and proper storage
9	Prop.	Islington Branch Library (Under Construction)	277-283 Washington St	Maintained Lawn	Re-seed as necessary
				Parking Areas (~32 spaces) and driveways	Sweep
				2 Deep Sump Catch Basins	Remove sediments and debris
10	Yes	Islington Fire Station	300 Washington St	4 Hydroworks Water Quality Units	Remove accumulated oils, grease and sediments
				Stormtech subsurface infiltration system under parking lot	Inspect and clean as needed
				Maintained Lawn	Re-seed as necessary
				Stone Chips	Refresh stone chips
				Parking Area (~9 spaces) and driveways	Sweep
				Dumpsters & Trash Receptacles	Check for leaks and spills, covers in place
				Vehicle/Equipment stored in garage, gas/oil separator connected to sanitary	Check for leaks and proper storage
-	No	Obed Baker House	909 High St	Maintained Lawn	Re-seed as necessary
				Parking Lot	Sweep
				Trash Receptacles	Check for leaks and spills, covers in place
				Grounds maintenance equipment and supplies storage	Check for leaks and proper storage

Town of Westwood, MA
Municipal Stormwater Operations and Maintenance Program
Inventory of Permittee Owned Facilities

www.BETA-Inc.com

O&M Map #	Record Plan	Facility Name	Location	BMP/Feature Description	Standard Maintenance/Inspection Items
-	No	Sewer Pump Station	177 Far Reach Rd	Maintained Lawn	Re-seed as necessary
				Paved parking area (~3 spaces) & driveway	Sweep
				Station Building - maintenance equipment and supplies storage	Check for leaks and proper storage
-	No	Sewer Pump Station	410 Summer St	Maintained Lawn	Re-seed as necessary
				Paved parking area (~3 spaces) & driveway	Sweep
				Station Building - maintenance equipment and supplies storage	Check for leaks and proper storage
-	No	Sewer Pump Station	6A Stonemeadow Dr	Maintained Lawn	Re-seed as necessary
				Stone Chips	Refresh stone chips
				Paved driveway	Sweep
				Station Building - maintenance equipment and supplies storage	Check for leaks and proper storage
-	No	Sewer Pump Station	220 Conant Rd	Maintained Lawn	Re-seed as necessary
				Stone Chips	Refresh stone chips
				Paved driveway	Sweep
				Station Building - maintenance equipment and supplies storage	Check for leaks and proper storage
-	No	Sewer Pump Station	215 Clapboardtree St	Maintained Lawn	Re-seed as necessary
				Fuel tank on concrete pad	Check for leaks
				Subsurface station with paved driveway	Sweep
-	No	Sewer Pump Station	91 Dela Park Rd	Maintained Lawn	Re-seed as necessary
				Fuel tank on concrete pad	Check for leaks
				Subsurface station with paved driveway	Sweep
-	No	Sewer Pump Station	160 Arcadia Rd	Maintained Lawn	Re-seed as necessary
				Stone Chips	Refresh stone chips
				Paved driveway	Sweep
				Station Building - maintenance equipment and supplies storage	Check for leaks and proper storage
-	No	Sewer Pump Station	86 Brook St	Maintained Lawn	Re-seed as necessary
				Paved parking area (~3 spaces)	Sweep
				Station Building - maintenance equipment and supplies storage	Check for leaks and proper storage
-	No	Sewer Pump Station	190 Partridge Drive	Subsurface station with maintained lawn	Re-seed as necessary
-	No	Former Sewer Pump Station	156 Sunrise Road	Woods/wetlands	No Action Required
-	No	Former Sewer Pump Station	165 Arcadia Road	Landscaped area with mulch	Refresh mulch

Town of Westwood, MA
Municipal Stormwater Operations and Maintenance Program
Inventory of Permittee Owned Facilities

www.BETA-Inc.com

MS4 System Drainage BMPs					
O&M Map #	**Record Plan**	**Facility Name**	**Location**	**BMP/Feature Description**	**Standard Maintenance/Inspection Items**
-	No	Roadway Stormwater Management System	4 Phillips Way	Hydro International WQU	Remove accumulated oils, grease and sediments
-	Yes	Roadway Stormwater	103 Woodland Road	Infiltration System	Inspect and clean as needed
-	Yes	Roadway Stormwater Management System	7 Little Boot Lane	Stormceptor WQU	Remove accumulated oils, grease and sediments
				Infiltration System	Inspect and clean as needed
-	No	Roadway Stormwater Management System	65 Morgan Farm Road	Stormceptor WQU	Remove accumulated oils, grease and sediments
				Detention Basin	Inspect outlets, Inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
-	Yes	Roadway Stormwater Management System	281 Grove Street	Level Spreader	Inspect joints, inspection for settlement, erosion, vegetation growth and sedimentation
-	No	Roadway Stormwater Management System	19 Fox Meadow Drive	Infiltration Basin	Inspect outlets, inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
	Yes	Roadway Stormwater Management System	3 Laura Lane	Infiltration BMP	Remove accumulated oils, grease, and sediments, inspect outlets, inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
-	Yes	Roadway Stormwater Management System	9 Laura Lane	Detention Basin	Inspect outlets, inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
-	Yes	Roadway Stormwater Management System	11 Manor Lane	Detention Basin	Inspect outlets, inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
-	Yes	Roadway Stormwater Management System	72 Dela Park Road	Detention Basin	Inspect outlets, inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
-	Yes	Roadway Stormwater Management System	28 Whitney Avenue	Detention Basin	Inspect outlets, inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
-	No	Roadway Stormwater Management System	Station Drive & University Avenue	2 Retention Basins	Inspect outlets, inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, sedimentation
-	No	Roadway Stormwater Management System	71 Thompson Avenue	Detention Basin	Inspect outlets, inspection for settlement, erosion, tree growth on embankments, condition of riprap and turf, ponding and sedimentation
-	No	Roadway Stormwater Management System	85 Elm Street	Leaching Catch Basin	Remove sediments & debris
-	No	Roadway Stormwater Management System	685 Canton Street	Leaching Catch Basin	Remove sediments & debris
-	No	Roadway Stormwater Management System	35 Carroll Avenue	2 Leaching Catch Basins	Remove sediments & debris
-	No	Roadway Stormwater Management System	5 Longmeadow Drive	Leaching Catch Basin	Remove sediments & debris
-	No	Roadway Stormwater Management System	Westbrook Lane at School Street	2 Leaching Catch Basins	Remove sediments & debris

Map 1 of 10
Deerfield Elementary School

72 Deerfield Avenue

Town of Westwood, MA
O&M Plan
Facilities Maps

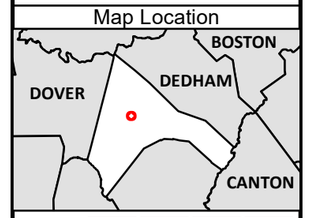
Stormwater Legend

- BMP
- Leaching Catch Basin
- Town-Owned DMH
- Town-Owned CB
- Pipe

0 80 Feet

N

Map Location



BETA

Document Path: C:\Users\HFaubert\Desktop\MS4 Year 2 Services\Working\Westwood\OM_Westwood_11x17_Working.mxd

Map 2 of 10
Thurston Middle School

850 High Street

Town of Westwood, MA
O&M Plan
Facilities Maps

Stormwater Legend

- BMP
- Leaching Catch Basin
- Outfall
- Town-Owned DMH
- Town-Owned CB
- Pipe

0 80 Feet

N

Map Location

BETA

Document Path: C:\Users\HFaubert\Desktop\MS4 Year 2 Services\Working\Westwood\OM_Westwood_11x17_Working.mxd

Map 3 of 10
High School

200 Nahatan Street

Town of Westwood, MA
O&M Plan
Facilities Maps

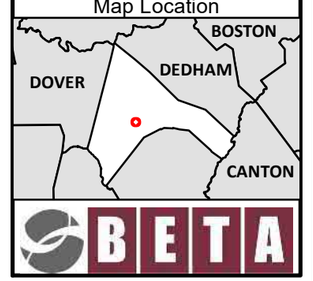
WQU
Stormwater Basin
WQU
Stormwater Basin
WQU
WQU
WQU
High School
NAHATAN STREET
BONNEY STREET
ELLIS STREET
CHURCH STREET
FRENCH STREET
FISHER STREET
WOLVERINES
WESTWOOD

Stormwater Legend
- BMP
- Outfall
- Town-Owned DMH
- Town-Owned CB
- Culvert
- Pipe

0 80 Feet

N

Map Location



BETA

Document Path: C:\Users\HFaubert\Desktop\MS4 Year 2 Services\Working\Westwood\OM_Westwood_11x17_Working.mxd

Map 4 of 10
Downey Elementary School

250 Downey Street

Town of Westwood, MA
O&M Plan
Facilities Maps

FEARING DRIVE

SMITH DRIVE

Downey Elementary School

DOWNEY STREET

PUTTING DRIVE

Stormwater Legend

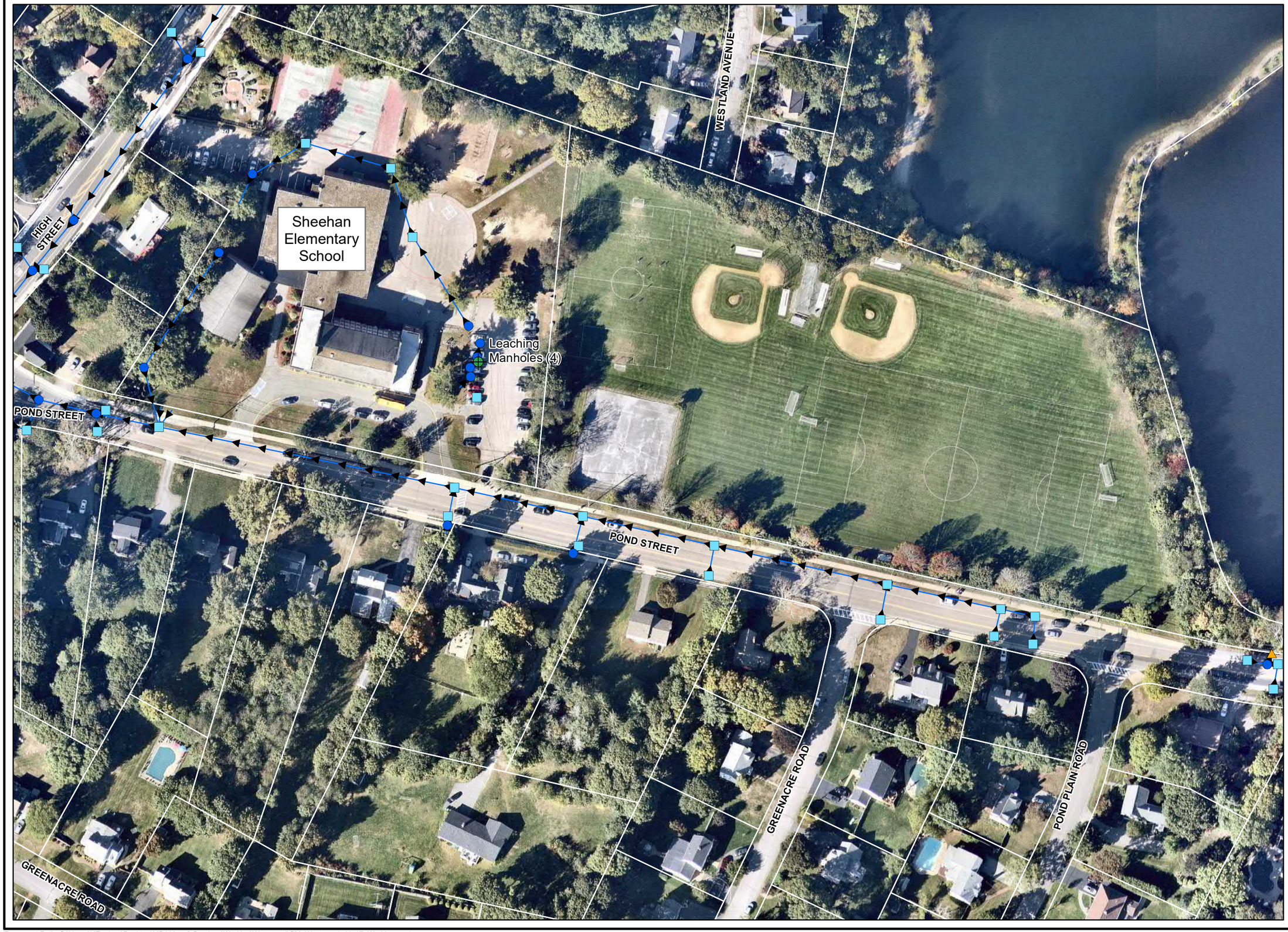
- Outfall
- Town-Owned DMH
- Town-Owned CB
- Culvert
- Pipe

0 80 Feet

N

Map Location

BETA



Map 5 of 10

Sheehan Elementary School

549 Pond Street

Town of Westwood, MA
O&M Plan
Facilities Maps

Stormwater Legend

- BMP
- Outfall
- Town-Owned DMH
- Town-Owned CB
- Pipe

0 80 Feet

N

Map Location

BETA

Map 6 of 10

Martha Jones Elementary School

80 Martha Jones Road

Town of Westwood, MA
O&M Plan
Facilities Maps

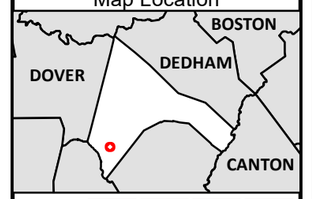
Stormwater Legend

- BMP
- Outfall
- Town-Owned DMH
- Area Drain
- Town-Owned CB
- Inlet
- Pipe

0 80 Feet

N

Map Location



BETA

Document Path: C:\Users\HFaubert\Desktop\MS4 Year 2 Services\Working\Westwood\OM_Westwood_11x17_Working.mxd

Map 7 of 10
Town Hall & Police Station

590 High Street

Town of Westwood, MA
O&M Plan
Facilities Maps

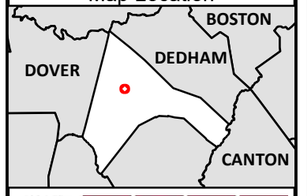
BARLOW LANE
HIGH STREET
WESTWOOD GLEN ROAD
WESTWOOD GLEN ROAD
Town Hall
Police Station
WQU
Infiltration System
A
A

Stormwater Legend
- BMP
- Town-Owned DMH
- Area Drain
- Town-Owned CB
- Inlet
- Pipe

0 50 Feet

N

Map Location



BETA

Document Path: C:\Users\HFaubert\Desktop\MS4 Year 2 Services\Working\Westwood\OM_Westwood_11x17_Working.mxd

Map 8 of 10
Library

660 High Street

Town of Westwood, MA
O&M Plan
Facilities Maps

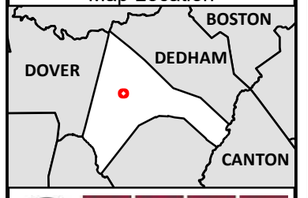
Stormwater Legend

- BMP
- Leaching Catch Basin
- Outfall
- Town-Owned DMH
- Town-Owned CB
- Pipe
- Swale

0 40 Feet

N

Map Location



BETA

Islington Library map to be created after building construction

Map 9 of 10

Islington Branch Library

280 Washington Street

Town of Westwood, MA
O&M Plan
Facilities Maps

Map 10 of 10
Islington Fire Station

300 Washington Street

Town of Westwood, MA
O&M Plan
Facilities Maps

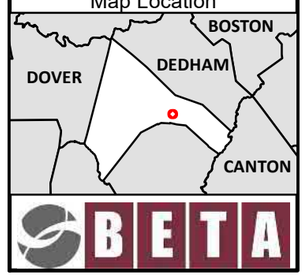
Stormwater Legend

- BMP
- Town-Owned DMH
- Town-Owned CB
- Pipe

0 40 Feet

N

Map Location



APPENDIX C –Catch Basin Inspection Log

CATCHBASIN INSPECTION FORM

Inspector: ______________________ Date: ________________ Sheet ___ of ___.

CB ID	<25%	25-50%	>50%		CB ID	<25%	25-50%	>50%		CB ID	<25%	25-50%	>50%
______________ St/Rd/Ave					______________ St/Rd/Ave					______________ St/Rd/Ave			
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐
	☐	☐	☐			☐	☐	☐			☐	☐	☐

APPENDIX D – Street and Parking Lot Sweeping Log

STREET / PAVEMENT SWEEPING RECORD FORM

Operator: ______________________ Date: ________________ Sheet ___ of ___.

Street/Location		Street/Location		Street/Location

APPENDIX E – Stormwater Treatment Structures Inspection and Maintenance Guide

MCM 6: GOOD HOUSEKEEPING - STORMWATER TREATMENT STRUCTURES INSPECTION & MAINTENANCE

Purpose

The following establishes inspection and maintenance frequencies and actions for permittee-owned stormwater treatment structures (excluding catch basins) which shall be inspected annually at a minimum.

Procedure

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

Record Keeping

Inspection and maintenance of municipal stormwater structures within the MS4 system and those associated with Town Facilities will be recorded using the Stormwater BMP Inspection Form (below). The Town will keep a log of inspections and report on the condition and maintenance performed in each annual report as follows:

STORMWATER TREATMENT STRUCTURE (BMP) INSPECTION LOG

Reporting Period: _____ – _____

Report #	Date	Inspector	BMP/Location	Status & Comments
1			4 Phillips Way	
2			103 Woodland Rd	
3			7 Little Boot Ln	
4			65 Morgan Farm Rd	
5			281 Grove St	
6			19 Fox Meadow Dr	
7			3 Laura Ln	
8			9 Laura Ln	
9			11 Manor Ln	
10			72 Dela Park Rd	
11			28 Whitney Ave	

APPENDIX F – SWPPP

Westwood, Massachusetts

Stormwater Pollution Prevention Plan (SWPPP)

.

June 2020

DEPARTMENT OF PUBLIC WORKS - 50 CARBY ST

BETA
315 Norwood Park South
2nd Floor
Norwood, Massachusetts 02062
781.255.1982
www.BETA-Inc.com

Stormwater Pollution Prevention Plan (SWPPP)

Westwood, Massachusetts

.

DEPARTMENT OF PUBLIC WORKS - 50 CARBY ST

Prepared by: BETA GROUP, INC.
Prepared for: Town of Westwood

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

Title

6/29/2020

Date

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) has been developed by BETA Group, Inc. (BETA) on behalf of the Town of Westwood (the Town), 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 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 Westwood 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:	Todd Korchin	Title:	Director	Department	Department of Public Works
Phone:	781-326-8661	Email:	tkorchin@townhall.westwood.ma.us		
Responsibilities: MS4 Coordinator, IDDE Program, Good Housekeeping, Reporting & Record Keeping					

Name:	Brendan Ryan	Title:	Superintendent	Department:	Highway & Grounds
Phone:	781-320-1038	Email:	bryan@townhall.westwood.ma.us		
Responsibilities: MS4 Co-Coordinator IDDE Program, Good Housekeeping, SWPPP Training, Reporting & Record Keeping					

Name:	Jim McCarthy	Title:	Manager	Department:	Facilities
Phone:	781-320-1024	Email:	jmccarthy@townhall.westwood.ma.us		
Responsibilities: Good housekeeping, O&M of facilities, SWPPP					

Name:	Philip Paradis, PE	Title:	Associate	Company	BETA Group
Phone:	781-255-1982	Email:	pparadis@beta-inc.com		
Responsibilities: MS4 Consultant to the Town					

2.0 DESCRIPTION OF FACILITY

2.1 FACILITY SUMMARY

The Town of Westwood DPW facility is located at 50 Carby Street in Westwood, Massachusetts (the site) and is owned and operated by the Town. Information provided in this, and following sections is based on observations made during a site visit on March 9, 2020. During the site visit, BETA personnel were escorted by Mr. Brendan Ryan and Mr. James McCarthy of the Town of Westwood. Mr. Ryan and Mr. McCarthy provided a general layout of facility operations, activities performed and material storage information.

The site is primarily covered by buildings and paved parking areas with landscaped areas located around the administration building. Wooded areas are located to the north, west and south of the site. A residential neighborhood is located to the east of the site. Rock Meadow Brook is located to the east of the site and wetlands are located to the south of the site, beyond Carby Street. 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 2 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:

- 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)
- Chemical storage areas
- 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:

Table 2.1 - Inventory of Buildings

No.	Use	Floor Drain
1	Municipal offices and meeting space	☒Y ☐N
2	Employee break area	☐Y ☒N
3	Miscellaneous equipment storage (seasonal)	☐Y ☒N
4	Asphalt cold patch storage	☐Y ☒N
5	Vehicle storage and wash bay	☒Y ☐N

No.	Use	Floor Drain
6	Equipment and materials storage	☐Y ☒N
7	Equipment, materials and waste storage	☒Y ☐N
8	Vehicle Repair	☒Y ☐N
9	Salt storage	☐Y ☒N
10	Sand storage	☐Y ☒N

2.2.2 Parking Areas

There are two primary designated parking areas at the facility: the Administration Building parking area provides parking for approximately 15± vehicles and the employee parking area (located between Buildings 2 and 3) provides parking for an additional 15± vehicles. Town-owned heavy equipment and larger vehicles are stored in the various garages at the facility.

2.2.3 Inventory of Vehicles & Equipment

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

2.3 Site Drainage & Receiving Waters

Drainage from the on-site impervious surfaces is directed to an engineered drainage system including sixteen (16) catch basins and five (5) manholes. Maintenance of the drainage system is completed by the Department of Public Works.

2.3.1 Receiving Waters

The final point of discharge for stormwater from this site is Rock Meadow Brook. Based on field reconnaissance, the outfall location is where Rock Meadow Brook flows beneath Dover Road, between Conant Road and Dover Terrace. Rock Meadow Brook has been categorized as a 303(d) List (Impaired) surface water. Impaired water or "impaired condition" means a water body that does not meet applicable water quality standards or fully support applicable beneficial uses, due in whole or in part to water pollution from point or nonpoint sources. This receiving water is assigned the unique identifier MA72-21 and is considered a Category 5, meaning that one or more designated use is impaired for a particular pollutant. Impairments of this water body are shown in Table 2-1, below.

Table 2-2. Impaired Waters Receiving Drainage from the Facility

Water Body Name	ID	Category	Impairment(s)
Rock Meadow Brook	MA72-21	5	Phosphorus (Total) (TMDL)

The types of impairments documented for this surface water body are related to nutrients, for example fertilizer, grass clippings and leaf litter. The activities and stored materials at the site do have the potential to affect these impairments. The good housekeeping practices, preventative maintenance and Best Management Practices implemented at the facility are methods to limit potential negative impacts to stormwater. These practices are discussed in Section 6 of this SWPPP.

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.

3.1 WATER QUALITY LIMITATION CONTROLS

The following control measures are used specifically to address the pollutants contributing to the phosphorus impairment in the downstream waterbody:

- Parking lot sweeping
- Catch basin cleaning
- Routine leaf-litter and debris collection
- Storage of potential stormwater pollutants (phosphorus sources, fertilizers, etc.) covered areas

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 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.
- 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 town 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 of 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 keep 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 Town 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 Structural 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 Town 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 structural 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 re-suspending 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: http://www.mass.gov/eea/docs/dep/water/laws/i-thru-z/v2c2.pdf

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 March 9, 2020 site visit, we are providing the following recommendations to attain or maintain compliance with the MS4 permit requirements

6.1 STRUCTURAL COMPONENTS

Structural components of stormwater management include those that are physically constructed and/or implemented such as catchbasins, material enclosures, drainage swales or berms. The following structural components are recommended for the site.

1. The current fueling area is uncovered and exposed to rain. If a petroleum release were to occur during a storm event, this could result in a discharge of petroleum to the stormwater system. We recommend that a cover be installed over 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. Modify the current vehicle wash station such that washwaters are contained in the existing sump beneath wash bay. This can be accomplished by creating barriers or berms at the limits of the wash bay to direct washwater to the containment sump.
    b. 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.
3. Current material storage (aggregate, loam, fill, debris) is stored in uncovered areas where stormwater run-off discharges to the stormwater system. We recommend that these material storage bins be placed under cover to address this.

6.2 NON-STRUCTURAL COMPONENTS

Non-structural components of stormwater management include administrative controls, planning, routine maintenance and cleaning operations. Based on BETA's site visit we recommend the following:

1. Several empty barrels, recycling materials, miscellaneous equipment and other items were observed in the northeastern portion of the site. We recommend that these items be inventoried and if not being used (empty barrels) be removed from the site. We recommend that any potential stormwater pollutants (used batteries, tires, gas cans, etc.) be placed under covered areas to reduce the potential for discharge to the stormwater system. We recommend that these areas be inspected and maintained routinely to reduce the potential for stormwater impacts
2. The spill kit and emergency contact information at the vehicle fueling area appeared outdated. We recommend providing current, legible emergency contact information and also inspecting and replacing as necessary the content of the spill kit.

APPENDIX A – Site Map

Map 1 of 1

Public Works Department

50 Carby Street

Town of Westwood, MA

SWPPP Map

CARBY STREET

Building 2 Break Room/ Employee Meeting Area

Vehicle Fueling

Emergency Generator

Solid Waste Disposal

Building 4 Asphalt Storage

Building 1 Administration

Employee Parking

Building 3 Seasonal Equipment Storage

2 Magnesium Chloride ASTs

Building 10 Sand Storage

Employee Parking

Building 5 Vehicle Washing & Storage

Building 8 Mechanics Garage

Building 9 Salt Storage

Fuel Oil AST

Building 6 Equipment & Materials Storage

Building 7 Vehicle Storage

2 Oil Water Separators

Propane AST

Vehicle Storage

DOVER ROAD

Equipment & Supplies Storage

Materials Storage

Waste Oil Storage

Vehicle Storage

Recycling, Waste & Scrap Metal Storage

Stormwater discharges to Rock Meadow Brook 91 Dover Road

DRIVEWAY

Stormwater Legend

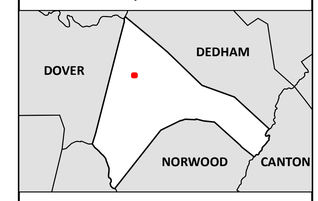
- Town-Owned DMH
- Town-Owned CB
- Inlet
- Pipe

N

0 30 60 Feet

Plot Date: 6/26/2020

Map Location



BETA

APPENDIX B – Vehicle Inventory

APPENDIX B
VEHICLE INVENTORY
DEPARTMENT OF PUBLIC WORKS
50 CARBY STREET
WESTWOOD, MASSACHUSETTS

ITEM #	DEPARTMENT	YEAR	MANUFACTURER & MODEL	VIN	PLATE #	TYPE
Car 1	HIGHWAY (Todd)	2017	Ford F350	1FT8X3BT9HED22481	7GN718	LIGHT
Car 2	Facility Div. (Jimmy)	2013	FORD EXPLORER	1FM5K8D88DGC96425	M90095	SUV
Car 3	HIGHWAY (Brendan)	2017	Ford F350	1FT8X3BT7HED14394	M98945	LIGHT
Car 4	HIGHWAY (Spare)	2014	FORD EXPLORER	1FM5K8D89EGB25359	M90084	SUV
Car 5	SEWER (Rich)	2013	FORD EXPLORER	1FM5K8D89DGB21018	M9591	SUV
Elect. 1	Health	2016	Nissan Leaf	1N4AZ0CP3GC311469	M77209	LIGHT
Elect. 2	Building	2016	Nissan Leaf	1N4AZ0CP9GC301481	M77222	LIGHT
Truck 02	HIGHWAY	2015	FORD F350 PICKUP	1FT8X3BT9GEA92861	M94048	LIGHT
Truck 04	HIGHWAY	2012	Pelican Sweeper	NP2513D	M87411	HEAVY
Truck 05	HIGHWAY	2014	FORD F-350	1FTRF3BT1EEB09110	M89270	LIGHT
Truck 06	HIGHWAY	2014	MACK DUMP	1M2AX01C1EM002053	M88808	HEAVY
Truck 07	HIGHWAY	2018	FORD F450	1FD0X4HT4JEC65179	M3240A	MEDIUM
Truck 08	HIGHWAY	2013	MACK DUMP	1M2AX01C6DM001799	M85868	HEAVY
Truck 09	CEMETERY	2017	FORD F550	1FDUF5HTXHEB18241	M96322	HEAVY
Truck 10	HIGHWAY	2012	MACK DUMP	1M2AX01C8CM001642	M84011	HEAVY
Truck 11	HIGHWAY	2013	F550 Rack Body	1FDV5HT3CEC96033	M85867	MEDIUM
Truck 12	HIGHWAY	2016	MACK DUMP	1M2AX01CXGM002510	M95417	HEAVY
Truck 13	HIGHWAY	2012	Ford F650	3FRNF6GE2CV418177	M84130	MEDIUM
Truck 14	HIGHWAY	2018	MACK DUMP	1M2AX01CXJM003003	M99930	HEAVY
Truck 15	HIGHWAY	2009	Ford F550	1FDAF57R39EA00588	M76549	MEDIUM
Truck 16	HIGHWAY	2014	FORD F550	1FDUF5HT2EEA98272	m89269	MEDIUM
Truck 17	HIGHWAY	2011	FORD F550	1FDUF5HT2BEB96049	M84395	MEDIUM
Truck 18	HIGHWAY	2015	FORD F550 (Chip Truck)	1FDUF5HT7EC46871	M93591	HEAVY
Truck 19	HIGHWAY	2012	INTERNATIONAL	1HTWDAAR3CJ672170	M84010	HEAVY
Truck 20	HIGHWAY	2013	MACK DUMP	1M2AX01C4DM001798	M85879	HEAVY
Truck 21	SEWER	2018	FORD F450	1FD0X4HT0JEC65180	M3241A	MEDIUM
Truck 22	FACILITY DIVISION	2014	FORD F350	1FD7X3BT9EEB36443	M92344	MEDIUM
Truck 23	HIGHWAY	2013	MACK DUMP	1M2AX01C2DM001797	M85867	HEAVY
Truck 24	SEWER/HIGHWAY	2009	INTERNATIONAL GIANT VAC	IHTWCA2R39J130423	M76544	HEAVY
Truck 25	SEWER	2017	FORD F450	1FD0X4HT4HEB18242	M98124	MEDIUM
Truck 26	HIGHWAY	2013	FORD F 550	1FDUF5HT7CEC96035	M85041	MEDIUM
Truck 27	HIGHWAY	2013	MACK DUMP	1M2AX04CXDM018326	M87422	HEAVY
Truck 28	HIGHWAY	2018	FORD F550	1FDUF5HT6JDA03079	M1834A	MEDIUM
Truck 29	HIGHWAY	2018	FORD F550	1FDUF5HT4JDA03078	M1833A	MEDIUM
Truck 30	Fields and Grounds	2013	FORD DUMP F 550	1FDVF5HT5CEC96034	M85039	MEDIUM
Truck 31	Fields and Grounds	2012	FORD 350 PICKUP	1FT8X3BT5CEA59415	M88266	MEDIUM
Truck 32	Fields and Grounds	2009	FORD F-550	1FDAF57R19EA00587	M76548	MEDIUM
Truck 33	HIGHWAY	2002	FORD 750 BUCKET	3FDXF75Y62MA12721	M87409	HEAVY
Truck 35	Fields and Grounds	2019	FORD F350 PICKUP	1FT8X3BTXKEE38800	M5033A	MEDIUM
Truck 55	HIGHWAY	2009	E 350 VAN	1FTSE34PO9DA14618	M78207	LIGHT
Truck 55	HIGHWAY	2019	FORD F350 PICKUP	1FT8X3BT7KEF56299	M5027A	MEDIUM
F1	FACILITY DIVISION	2018	Transit Van	1FTYR1YM3JKB12493	M1925A	VAN
F2	FACILITY DIVISION	2018	Transit Van	1FTYR1YM3JKA04913	M1953A	VAN
Roadside	HIGHWAY	2020	TRACKLESS	--	--	--
Roadside	HIGHWAY	2012	TRACKLESS	MT61540	M87416	LIGHT
Compress.	Highway	2013	Doosan Compressor	V4FVCBBAA6DU455155	M93600	LIGHT
Generator	SEWER	2014	Portable Generator	--	M93214	LIGHT
B1	HIGHWAY	2011	BOMBARDIER SW TRACTOR	U107440V	M88264	MEDIUM
B2	HIGHWAY	2004	BOMBARDIER SW TRACTOR	900200072	M80326	MEDIUM
B3	HIGHWAY	2019	BOMBARDIER SW TRACTOR	900200776	M5038A	MEDIUM
K1	PARK	2000	KUBOTA - TRACTOR	L4310	M69131	TRACTOR
K2	PARK	2002	KUBOTA - M5700 -TRACTOR	M60014	M68014	TRACTOR

APPENDIX B
VEHICLE INVENTORY
DEPARTMENT OF PUBLIC WORKS
50 CARBY STREET
WESTWOOD, MASSACHUSETTS

ITEM #	DEPARTMENT	YEAR	MANUFACTURER & MODEL	VIN	PLATE #	TYPE
L1	HIGHWAY	2013	JOHN DEERE - 624K	1DW624KHCCE648687	M85042	HEAVY
L2	HIGHWAY	2016	VOLVO LOADER	VCEL120HV0S632163	M95920	HEAVY
JD	HIGHWAY	2015	410K BACKHOE/LOADER	1T0410KXHEE273112	M93045	HEAVY
JCB-2	HIGHWAY	2009	J.C.B. BACKHOE/LOADER	SLP214FC9U0912503	M76545	HEAVY
Skid	HIGHWAY	2014	JOHN DEERE - 320 SKID STEER	T00260E925352	M93047	--
Chipper 1	HIGHWAY	2003	MOBARK	1R1752	M69835	--
Chipper 2	HIGHWAY	2014	MOBARK	4S8SZ161XEW040847	M91552	--
RM-1	SEWER/HIGHWAY	2009	Sewer Rod Machine/Trailer	1S9HU16179C381653	M76542	TRAILER
Leaf Vac	HIGHWAY	2006	T-GIANT-VAC	2000544434	M79396	--
Roller	HIGHWAY	2006	ROLLER	332996082	NONE	--
Stumper	HIGHWAY	1994	T-RAYCO STUMP CUTTER	1665AC/D015492	M51177	--
Trailer	HIGHWAY	2013	Car Utility Trailer	5A3C612S9DL001451	M84141	--
Trailer 1	F&G	2000	TRAILER	431FS14642000223	M58135	MEDIUM
Trailer 2	F&G	2004	TRAILER WELCH	1W9U5141N189500	M71552	MEDIUM
Trailer 3	HIGHWAY	2002	MAGNU LIGHT TRAILER	5AJLS16192B000180	M69128	--
Trailer 4	F&G	2017	Homesteader	5HABE1621JND65490	M98795	MEDIUM
Trailer 6	Rec Dept.	1994	TRAILER - RECYCLING	RDiOCB351R1850056	M52205	MEDIUM
Trailer 7	HIGHWAY (Babs)	2011	Homesteader	5HABE1820BN011337	M88258	MEDIUM
Trailer 8	F&G	2005	TRAILER WELCH	1W9US14225N189504	M72520	MEDIUM
Trailer 9	HIGHWAY	2007	Cement mixer Trailer	262007004	M79491	MEDIUM
Trailer 10	HIGHWAY	2005	Big Tex Trailer	16VEX182152H51818	M71941	--
Trailer 12	HIGHWAY Roller trailer	2019	CAM Trailer	5JWCD121XKP502645	M3167A	--
Trailer 13	Board of Health trailer	2010	Haulmark	16HCB12146POS9112	M75531	--
Trailer 14	Sewer Generator	2016	Superior	HOMEMADE Unit	M92729	--
Mess. Brd	HIGHWAY	2019	WANCO	5F12S1016J1004338	M1937A	--
HOT BOX	HIGHWAY	2016	ASPHALT TRAILER	4S9PD1826GM097972	M93803	--

APPENDIX C –Summary of Site Activities and Potential Stormwater Pollutants

APPENDIX C: Summary of Site Activities and Potential Stormwater Pollutants

Activity	Description	Building Reference	Material Inventory	Potential Stormwater Pollutants	Quantity	Potential Exposure to Stormwater	Management Practices	
							Structural	Non-structural
Vehicle Fueling	Fueling of Town-owned and operated vehicles	2	Gasoline	Petroleum Hydocarbons	5,000-gal UST	Low - underground storage and pipinig	Dispenser pad containment	Spill Kit in Close Proximity
			Diesel Fuel		10,000-gal UST	High - spill during fueling		
Vehicle Maintenance	Maintenance of Town-owned and operated vehicles	8	Motor Oil	Petroleum Hydrocarbons	Varies	Low - in covered bldg	Floor Drains to Sewer System via an oil/water separator	Maintenance conducted inside building, good housekeeping, catchbasin and oil/water separator cleaning
			Hydraulic Fluid	Petroleum Hydrocarbons				
			Lubricants	Petroleum Hydrocarbons				
			Transmission Fluid	Petroleum Hydrocarbons				
			Waste Oil	Petroleum Hydrocarbons				
			Antifreeze	Ethylene glycol				
			Coolant	Ethylene glycol				
			Brake Fluid	Glycols				
			Used Batteries	Acid				
			Used Tires	Solids, polycyclic aromatic hydrocarbons		High - not covered		Routine sweeping and good housekeeping
Vehicle Washing	Washing of Town-owned and operated vehicles	5/7	Detergents	Surfactants	Varies	High - direct discharge of uncontained washwater to stormwater system	Containment sump (Bldg. 5)	Good housekeeping practices
				Wastewater				
Construction Materials Storage and Handling	Storage and handling of construction materials and miscellaneous maintenance products (gravel, loam, aggregates, chemical, fertilizers etc.)	5	Detergents	Sufactant	Varies	High - direct discharge of uncontained washwater to stormwater system	Covered storage	Catchbasin cleaning and good housekeeping
		6	Asphalt	Petroleum Hydrocarbons		Low - covered storage	Covered storage	Routine sweeping and good housekeeping
		6	Aggregate	Sediment		High - not covered	N/A	Routine sweeping and good housekeeping
		6	Loam	Sediment		High - not covered	N/A	Routine sweeping and good housekeeping
		6	Fertilizers	Nutrients		Low - stored in bags in covered areas	Covered storage	Good housekeeping practices
		6	Brush	Nutrients		High - not covered	N/A	Routine sweeping and good housekeeping
		6	Castings	Metals		High - not covered	N/A	Routine sweeping and good housekeeping
		7	Scrap Metal	Metals		Low - containerized in dumpster	Container storage	Removed from site when full
Sand/Salt Storage and Handling	Storage and handling of sand/salt for winter roadway applications	9	Sand	Sediment	100 cy (approx.)	Low - covered storage	Coverage storage	Routing sweeping
		10	Salt	Chlorides	5,000 cy (approx.)			Good housekeeping practices
Above Ground Storage Tanks	Building 7 and 8 heating	7/8	Propane	N/A	1,000-gal	Low - propane vaporizes at standard temp and pressure	N/A	Spill Kit in Close Proximity Good housekeeping practices
	Admin building heating	1	Fuel oil	Petroleum Hydrocarbons	2,500-gal	Low - tank is in grass area, spill would not impact stormwater system	N/A	
	Building 8 heating	8	Fuel oil	Petroleum Hydrocarbons	250-gal	Low - stored in tank	Covered storage	
	Building 2 heating	2	Fuel oil	Petroleum Hydrocarbons	250-gal	Low - tank is in a covered building	Covered storage	
	Waste oil	7	Waste Oil	Petroleum Hydrocarbons	Varies	Low - stored in tank	N/A	
	De-icing	3	Magnesium Chloride	Chlorides	2 x 2,500-gal	High - uncovered area, spill would result in discharge to stormwater	N/A	
Emergency Generators	Facility back-up generator	1	Diesel Fuel	Petroleum	10-gal (approx.)	Low - stored in covered container. In grass area, spill would not result in discharge to stormwater	Coverage storage	Spill Kit in Close Proximity
Solid Waste Management	Dumpsters	3	Solid waste	Debris, metals	Varies	Low - potential pollutants are covered	Coverage storage	Solid waste removal
	Recycling	7	Misc. items for recycling					Good housekeeping practices
Parking Areas	Parking for Town employees at the Administration Building and DPW Yard	2/3	N/A	Sediment, oil from vehicles	Varies	High - uncovered parking area, direct discharge to catchbasins during storm event	Catchbasin maintenance	Routine sweeping
								Good housekeeping practices
Adminstration	Town administrative offices, and plublic meeting space	1	N/A	N/A	N/A	N/A	N/A	N/A

APPENDIX D – SWPPP Inspection Form

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) INSPECTION FORM

Report No. _____

Location:	Department of Public Works – 50 Carby Street	Date:		Last Insp:	
		Arrive:		Leave:	
Inspector:					
Recent Rainfall:		Current Weather:			
Unidentified Discharges? Spills?					
Add. Info:					

CONTROL MEASURES/ACTION REQUIRED: ☐ YES ☐ 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			☐	
☐ Proprietary Separator			☐	
☐ Other			☐	

FAILED CONTROL MEASURES REQUIRE REPLACEMENT: ☐ YES ☐ NO

Control	Condition	Required Action	Completed (by)	Date
☐			☐	

SWPPP CHANGES: ☐ YES ☐ NO

Control	Change	Completed (by)	Date
☐		☐	

MANAGEMENT PRACTICES

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.
2. Good Housekeeping: 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. Preventative Maintenance: 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. Spill Prevention and Response: 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.
    b. 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. Erosion and Sediment Control: 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. Management of Runoff: 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. Salt Storage Piles or Piles Containing Salt: 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.