Town of Hull, MA

Stormwater Management Program (SWMP): Volume 3

NPDES Phase II Small MS4 General Permit

June 2021

GOOD HOUSEKEEPING & POLLUTION PREVENTION

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GOOD HOUSEKEEPING & POLLUTION PREVENTION

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Prepared for: Town of Hull, MA

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1.0 INTRODUCTION

This Good Housekeeping and Pollution Prevention Plan has been developed by the Town of Hull (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

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

The DPW 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 and B.

6.0 Municipal Facilities Operation and Maintenance Programs

The following are Operation and Maintenance (O&M) procedures and best management practices (BMPs) for the three categories of municipally owned facilities identified in Section 5.0 to be implemented at each facility as applicable. An inventory of facilities and reporting log for maintenance is included in Appendix B. Site specific drainage plans are provided in the Appendix for sites with extensive drainage infrastructure and/or BMPs to clarify these features and their locations.

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 maintains its public spaces and parks utilizing a hired licensed landscape professional. The landscape services are contracted to apply fertilizers, lime, pesticide and herbicide on open spaces and public parks as needed. None of the chemicals used are stored in town and the landscape service provides a plan that detailing the plan and procedures used. When these chemicals are 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 lawn clippings to remain on mowed areas to (re)fertilize the soils and biodegrade.

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

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

- All vehicles and equipment receive regular maintenance and are inspected for leaks or defective parts.

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

Water Fowl

There are some fields and the cemetery in Town where waterfowl are found to congregate. 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

The Town DPW maintains trash receptacles at pathways, playgrounds, and parks. Receptacles are emptied on a weekly schedule with additional pick-ups for holidays. Trash barrels are placed around sports fields in the summer and are also emptied on a weekly basis. Beaches have a carry in/carry out policy. All schools in Town maintain trash through a private party. There currently are no separate pet waste receptacles in Town.

If it is considered in the future, 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 wash water 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 as need for specific sites. Procedures for sweeping parking lots are included in Section 7.2 Streets and Parking Lots.

Catch Basin and Stormwater Management BMP Maintenance

All catch basin on town-owned sites are to be included in the Town catch basin 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. This program applies to Town-owned streets and associated infrastructure as identified on the map and in the table in Appendix A.

7.1 Catch Basins

Catch basins help minimize flooding and protect water quality by removing trash, sediment, decaying debris, and other solids from stormwater runoff. These materials are retained in a sump below the invert of the outlet pipe (older catch basins may not have a sump). Catch basin cleaning reduces foul odors, prevents clogs in the storm drain system, and reduces the loading of trash, suspended solids, nutrients, bacteria, and other pollutants to receiving waters. The Town DPW conducts its own cleaning and inspection of Town-owned catch basins of the MS4 system. The Town tracks the volume of material removed during catch basin cleanings.

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 catch basins will be recorded if the basin is found to be more than 50% full – See tracking form in Appendix C.

The town did an inspection of all catch basins from July through December 2020 to gain a baseline of structure conditions. Records from consecutive inspections/cleaning events will be compared to identify basins that may need to be cleaned more or less frequently than once per year.

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, address the source or clean the catch basin more frequently. Actions taken will be described in the annual report.

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

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 in the spring. The Town of Hull does not have nutrient-impaired waters and therefore is meeting the requirement to sweep all municipal streets and lots the minimum once per year in the spring (following winter activities such as sanding).

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 DPW's scope of responsibilities during snow and ice events includes 55 miles of town-owned roadways, sidewalks, school and municipal parking lots, and access to fire and police stations. The DPW reserves the right to modify any plan as needed to adjust to various circumstances that a storm might present and provides detailed winter road maintenance and snowstorm procedures on their website. The Highway Director and Superintendent will be responsible for carrying out this policy to satisfy the Permit. Parking during snow removal shall comply with Town of Hull Chapter 155 Section 19 codes as referenced on the Town of Hull website.

Priorities

1. The first priority is to ensure main roads are open and ready for use by the public.
2. The second priority is to open secondary roads for use by the public.
3. The third priority is to open all schools, public facilities, and clear sidewalks used to walk to schools/businesses/public transportation.

Materials Used

With safety as the priority, the 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. The types of materials used by the DPW are detailed below.

- Rock Salt (Sodium Chloride): Salt is used to expedite the melting of snow and ice from the street surface and also to keep the ice from forming a bond to the street surface. The Town currently uses a straight salt application for all main roads and a 75/25 mix of salt and sand for severe cold temperature applications.
- Sand: Sand is used as an abrasive for traction on slick roadways. The Town only uses sand when necessary.
- 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.

Materials Storage

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

Application and Equipment Calibration

Each piece of application equipment owned by the Town is calibrated prior to the winter season. Salt application shall be calibrated to dispense at minimum rates while maintaining safety rates (EPA guidance recommends 200 pounds per mile lane). Trucks equipped with pre-wetting brine tanks are calibrated to dispense at minimum rates while maintaining safety rates (EPA guidance recommends 8 gallons of pre-wet liquid to 1 ton of salt, to be varied based on temperature).

Snow Disposal

The roads in Hull are typically plowed and the snow is left to the side of the road to melt. If snow storage is required, this occurs with permission from the Conservation Commission and Select Board at

the Hull Redevelopment Authority (HRA) parking lot on Samoset Avenue, about 300-feet from the Atlantic Ocean. The MS4 Permit prohibits snow disposal into waters of the United States. Snow disposal activities, including selection of appropriate snow disposal sites, will adhere to the Massachusetts Department of Environmental Protection Snow Disposal Guidance, Guideline No. BWR G2015-01 (Effective Date: December 21, 2015).

Record Keeping

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

7.5 Stormwater Treatment Structures (Structural BMPs) Inspection and Maintenance

Stormwater treatment structures, also referred to as structural BMPs, include water quality swales, retention/detention basins, infiltration structures, proprietary treatment devices or other similar structures. The 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. A Stormwater Treatment Structures Inspection and Maintenance Guide for BMPs is provided in Appendix E and BMPs are inventoried on the stormwater infrastructure map in Appendix A and the Facilities Inventory and Reporting Log of Appendix B. The following are maintenance activities and procedure for each category of BMP based on the Massachusetts Stormwater Handbook:

Structural Pretreatment BMPs

WATER QUALITY UNIT (OIL/GRIT SEPARATOR)

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

The permit requires a Stormwater Pollution Prevention Plan (SWPPP) be developed and implemented for each of the following permittee-owned or operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater as determined by the permittee. The Town has these types of facilities located at two properties, the Department of Public Works Garage at 9 Nantasket Avenue and the Sanitary Landfill at 111 Rockaway Avenue. The SWPPPs that has been developed and are being implemented are included in Appendix F & G.

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.
- Highway 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 Facilities, BMPs and Stormwater Infrastructure Map

Town of Hull, Massachusetts

Town-owned Facilities, BMPs and MS4 Stormwater Infrastructure Map

NANTASKET ROADS
HULL GUT
HULL BAY
HINGHAM BAY
HINGHAM HARBOR
BROAD COVE
ALLERTON HARBOR
MASSACHUSETTS BAY
WEIR RIVER
STRAITS POND
Weir Watershed
South Coastal Watershed
HINGHAM
COHASSET

Resident Ferry Terminal Parking Lot
Public Parking Lot
Hull High School
Water Quality Unit
Lillian M. Jacobs Elementary School
Wastewater Treatment Facility
Stony Beach Parking Lot
Hull Village Cemetery
Sullivan Field
Robert B. Neal Playground
Drainage Swale
Hull Public Library
X-Y Parking Lot
Memorial Middle School Athletic Fields
Memorial Middle School
Hull Fire Department
Anne M. Scully Senior Center
George A. Jones Playground
Kenberma Street Public Parking Lot
Kingsley Playground & Park
Hull Municipal Light Plant
Lt. Joseph McLaughlin Park/ Hampton Circle Playground
Gunrock Playground
Detention Pond
Town Hall & Police Department
Weir River Estuary Center
Drainage Swale
DPW Garage (See Appendix F for SWPPP)
Sanitary Landfill (See Appendix G for SWPPP)

POINT ALLERTON AVE
KENTON AVE
TIERNEY AVE
BRADFORD AVE
FITZPATRICK WAY
Y ST
U ST
HARBOR VIEW ST
DUCK LN
NANTASKET AVE
SPRING ST
SPRAYWATER ISLAND CAUSEWAY
CHANNEL STREET
MAIN ST
ANDREW AVE
CADISH AVENUE
O STREET
L STREET
F STREET
SUNSET AVE
CENTRAL AVE
BEACH AVE
A STREET
MILFORD ST
PROSPECT AVENUE
MANOMET AVE
WARREN ST
PACKARD AVE
KENBERMA ST
BATES ST
REVERE ST
NANTASKET AVE
SAMOSET AVE
THIRD ST
EDGEWATER RD
HULL SHORE DR
NANTASKET RD
MARGINAL RD
BAY ST
HAMPTON CIRCLE
WHARF AVE
BURR ROAD
PARK AVENUE
ATLANTIC AVENUE
CHATHAM STREET
ROWLEY STREET
GEORGE WASHINGTON BOULEVARD
NANTASKET AVE (RT 228)

Map Legend

Stormwater Structures
- BMP
- Outfall
- Town to State Interconnection
- Other Interconnection
- Leaching Catch Basin
- Town Owned Catch Basin
- State Owned Catch Basin
- Town Owned Manhole
- State Owned Manhole
- Inlet

Conveyance
- Pipe
- Culvert
- Swale/Channel

Hydrography
- Hydrologic Connection
- Open Water
- Wetland
- Major Watershed Boundary

Regulated Areas
- MA MS4 Urban Area

Conservation
- NHESP Certified Vernal Pools
- NHESP Estimated Habitats of Rare Wildlife
- NHESP Priority Habitats of Rare Species
- DCR Owned Area

***MassDEP 2016 Integrated List of Waters**
- Rivers: Category 4A
- Lakes, Estuaries: Category 4A
- Rivers: Category 4C
- Lakes, Estuaries: Category 4C
- Rivers: Category 5
- Lakes, Estuaries: Category 5

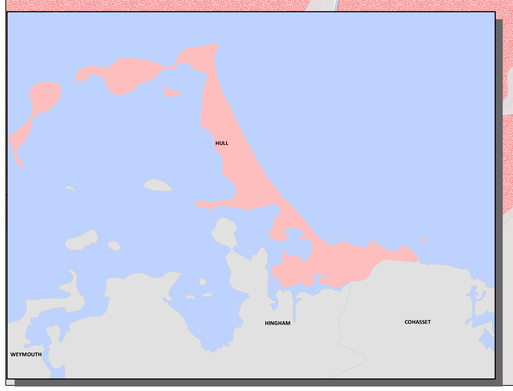
Roadway Owner
- State
- Town
- Other

Parcel Owner
- Town
- Other

Category 1: Attaining all designated uses.
Category 2: Attaining some of the designated uses and insufficient or no data and information is available to determine if the remaining uses are attained.
Category 3: Insufficient or no data and information to determine if any designated uses are attained.
Category 4A: Impaired for one or more designated uses but does not require the development of a TMDL: TMDL has been completed.
Category 4B: Impaired for one or more designated uses but does not require the development of a TMDL: Other pollution control requirements are reasonably expected to result in the attainment of designated uses.
Category 4C: Impaired for one or more designated uses but does not require the development of a TMDL: Impairment is not caused by a pollutant.
Category 5: Impaired for one or more designated uses, requires the development of a TMDL: Impairment is caused by a pollutant.

NOTE:
Call outs based on the Proposed Massachusetts year 2016 Integrated List of waters. See IDDE table 11-1 for more details on 2014 & 2016 impairments

Data Source: MassGIS



Issue Date: June 2021

This Map is Intended for Planning Purposes Only

0 0.25 0.5 Miles

BETA
IMPROVING COMMUNITIES TOGETHER

APPENDIX B – Town-owned Facilities Inventory Reporting Log and Maps

Town of Hull, MA
Municipal Stormwater Operations and Maintenance Program
Permittee Owned Facilities Inventory and Reporting Log
Reporting Period: July 1, 2020 - June 30, 2021

BETA

PARKS AND OPEN SPACE									
O&M Plan Map	Record Plans	Facility Name	Location	BMP/Feature Description	Responsible Party for Maintenance	Standard Maintenance/Inspection Items	Recommended Maintenance	Follow-Up Required (Y/N)	Inspection Date
5		Hull Village Cemetery	Duck Lane	Paved Parking Area & Roads	DPW	Sweep			
				Drainage system - 44 catch basins		Remove sediments and debris			
4		Robert B. Neal Playground	40 Main Street	Grass and woodchip surface playground and ballfield	DPW	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
				Gravel swale		Inspect condition, Remove sediment and debris, maintain vegetations			
-		Sullivan Field	109 Main Street	Mainained lawn and landscape area	DPW	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
				2 leaching catch basins		Remove sediments and debris			
				Paved Parking Area along main road		Sweep			
-		George A. Jones Playground	92 Packard Ave	Grass park with playground and walkways	DPW	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
				1 catch basin		Remove sediments and debris			
7		Memorial Middle School Athletic Fields	Nantasket Ave bewteen N & L Streets	Paved Parking Areas	DPW	Sweep			
				Ball fields, tennis and basketball courts		Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
				11 catch basins		Remove sediments and debris			
-		Gunrock Playground	207 Atlantic Avenue at Stoney Beach Rd	Grass surface playground and basketball court	DPW	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
8		Lt. Joseph McLaughlin Park/Hampton Circle Playground	137 Hampton Circle	Grass and dirt surface playground	DPW	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
				6 catch basins		Remove sediments and debris			
-		Kingsley Playground & Park	29 Kingsley Road	Tennis and basketball courts	DPW	Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
				Grass and woodchip surface playground, ballfield		Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			

Town of Hull, MA
Municipal Stormwater Operations and Maintenance Program
Permittee Owned Facilities Inventory and Reporting Log
Reporting Period: July 1, 2020 - June 30, 2021

BETA

BUILDINGS AND FACILITIES									
O&M Plan Map	**Record Plans**	**Facility Name**	**Location**	**BMP/Feature Description**	**Responsible Party for Maintenance**	**Standard Maintenance/Inspection Items**	**Recommended Maintenance**	**Follow-Up Required (Y/N)**	**Inspection Date**
-		Department of Public Works Facility - See SWPPP for this facility in Appendix F	9 Nantasket Avenue	Paved Parking Area	DPW	Sweep and plow			
				Vehicle/Equipment Storage Shed		Perform regular vehicle/equipment maintenance and inspection for leaks and proper storage			
				Construction Materials stockpiles		Inspect sediment barriers, drainage swale for stormwater diversion, sweep			
				Covered salt shed and sand piles		Check for leaks and spills, covers in place			
-		Sanitary Landfill - See SWPPP for this facility in Appendix G	End of Gosnold Street	Roads and parking areas	DPW	Sweep			
				Grass field (over capped landfill)		Inspect for erosion or bare soils conditions, Re-seed/remulch as necessary			
				Vegetated swale		Inspect condition, Remove sediment and debris, maintain vegetations			
				Trash receptacles		Check for leaks and spills, covers in place			
6	No Exposure Certification Filed with EPA	Wastewater Treatment Facility	1111 Nantasket Ave	Paved Parking Area	Sewer Department	Sweep			
				6 catch basins		Remove sediments and debris			
-		Town Hall	253 Atlantic Avenue	Paved Parking Area	DPW	Sweep and plow			
				Fuel station		Check for leaks and spills, covers in place			
				Trash receptacles		Check for leaks and spills, covers in place			
3		Lillian M. Jacobs Elementary School	18 Harborview Road	Paved Parking Area	DPW	Sweep and plow			
				Trash receptacles		Check for leaks and spills, covers in place			
				15 catch basins		Remove sediments and debris			
-		Memorial Middle School	81 Central Avenue	Paved Parking Area	DPW	Sweep and plow			
				Trash receptacles		Check for leaks and spills, covers in place			
				2 leaching catch basins		Remove sediments and debris			
1		Hull High School	180 Main Street	Paved Parking Area	DPW	Sweep and plow			
				Trash receptacles		Check for leaks and spills, covers in place			
				Water Quality Unit BMP		Remove accumulated oils, grease and sediments			
				3 catch basins		Remove sediments and debris			
-		Hull Public Library	9 Main Street	Paved Parking Area	DPW	Sweep and plow			
				Trash receptacles		Check for leaks and spills, covers in place			
-		Anne M Scully Senior Center	197A Samoset Avenue	Paved Parking Area	DPW	Sweep			
				Trash receptacles		Check for leaks and spills, covers in place			

Town of Hull, MA
Municipal Stormwater Operations and Maintenance Program
Permittee Owned Facilities Inventory and Reporting Log
Reporting Period: July 1, 2020 - June 30, 2021

BETA

BUILDINGS AND FACILITIES (CONT.)									
O&M Plan Map	Record Plans	Facility Name	Location	BMP/Feature Description	Responsible Party for Maintenance	Standard Maintenance/Inspection Items	Recommended Maintenance	Follow-Up Required (Y/N)	Inspection Date
-		Hull Municipal Light Plant	15 Edgewater Road	Paved Parking Area	DPW	Sweep			
				Trash receptacles		Check for leaks and spills, covers in place			
				1 catch basin		Remove sediments and debris			
-		Police Department	1 School Street	Paved Parking Area	DPW	Sweep			
				Trash receptacles (shared with Town Hall)		Check for leaks and spills, covers in place			
-		Fire Department	671 Nantacket Ave	Paved Parking Area	DPW	Sweep			
				Trash receptacles		Check for leaks and spills, covers in place			
				1 leaching catch basin		Remove sediments and debris			
-		Weir River Estuary Center	333 George Washington Blvd	Paved Parking Area	DPW	Sweep			
-		Kenderma St Public Parking Lot	104 Kenberma Street	Paved Parking Area	DPW	Sweep and plow			
				3 catch basins		Remove sediments and debris			
2	2	Resident Ferry Terminal Parking Lot	180 Main Street	Paved Parking Area	DPW	Sweep and plow			
				5 catch basins		Remove sediments and debris			
-		Public Parking Lot	End of Helen St	Paved Parking Area	DPW	Plow			
-		Stony Beach Parking Lot	1111 Nantasket Ave	Gravel Parking Area	DPW	Sweep			
-		X-Y Parking Lot	10 Y St	Gravel Parking Area	DPW	Plow			

Map 1 of 8

Hull High School

180 Main Street

Town of Hull, MA
O&M Plan
Facilities Maps

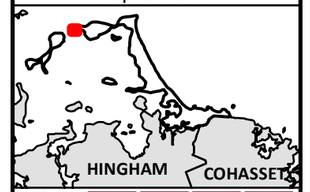
Stormwater Legend

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

0 80 Feet

N

Map Location



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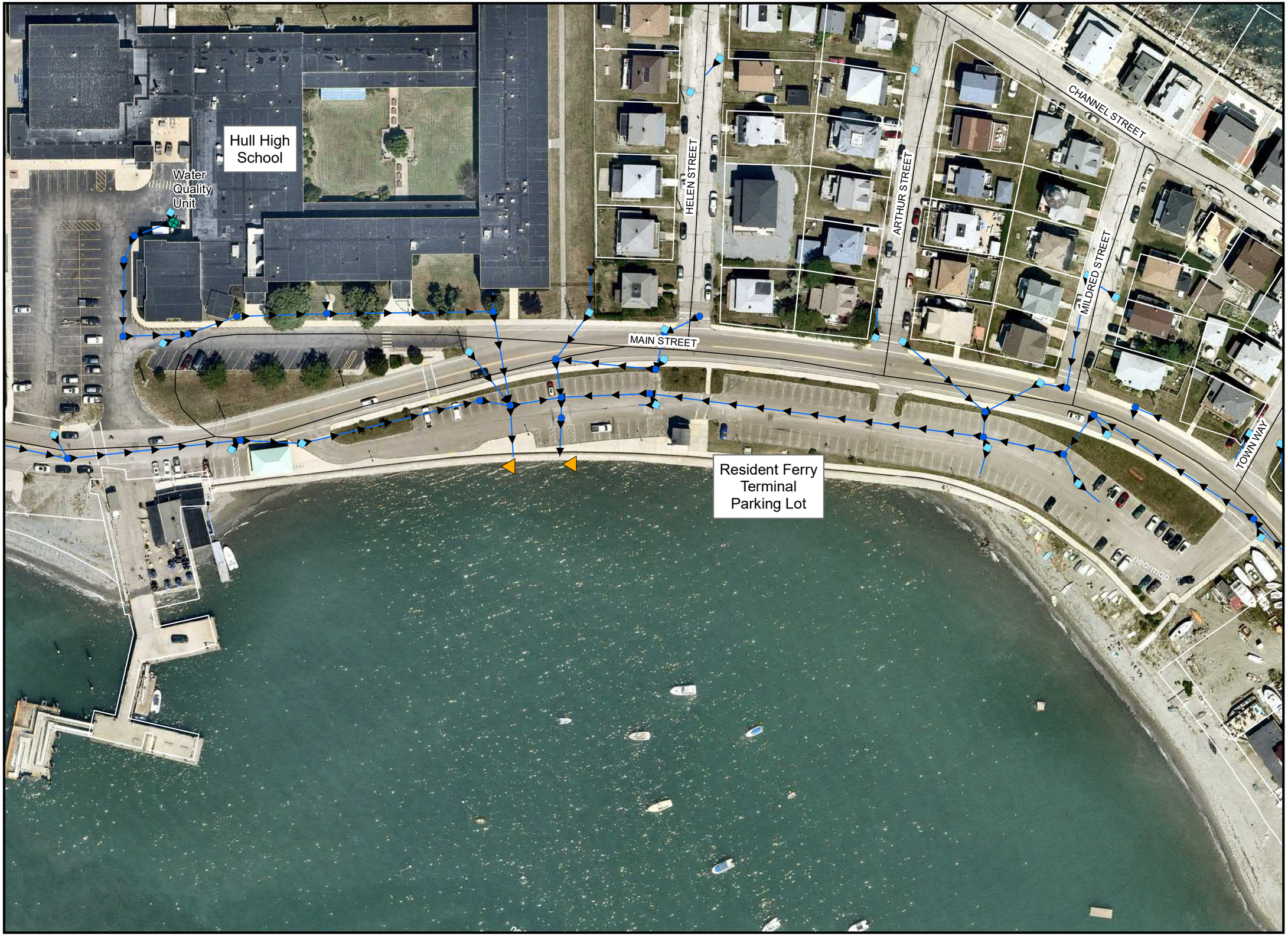


Map 2 of 8

Resident Ferry Terminal Parking Lot

173 Main Street

Town of Hull, MA
O&M Plan
Facilities Maps

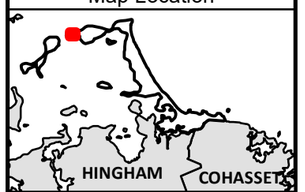
Stormwater Legend

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

0 80 Feet

N

Map Location



BETA

Map 3 of 8

Lillian M. Jacobs Elementary School

18 Harborview Road

Town of Hull, MA
O&M Plan
Facilities Maps

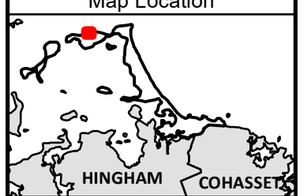
Stormwater Legend

- Town CB
- Town DMH
- Outfall
- Pipe

0 80 Feet

N

Map Location



BETA

Map 4 of 8

Robert B. Neal Playground

40 Main Street

Town of Hull, MA
O&M Plan
Facilities Maps

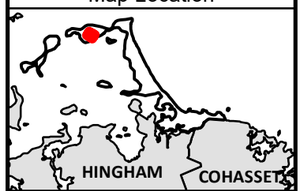
Stormwater Legend

- Town CB
- Town DMH
- BMP
- Pipe

0 75 Feet

N

Map Location



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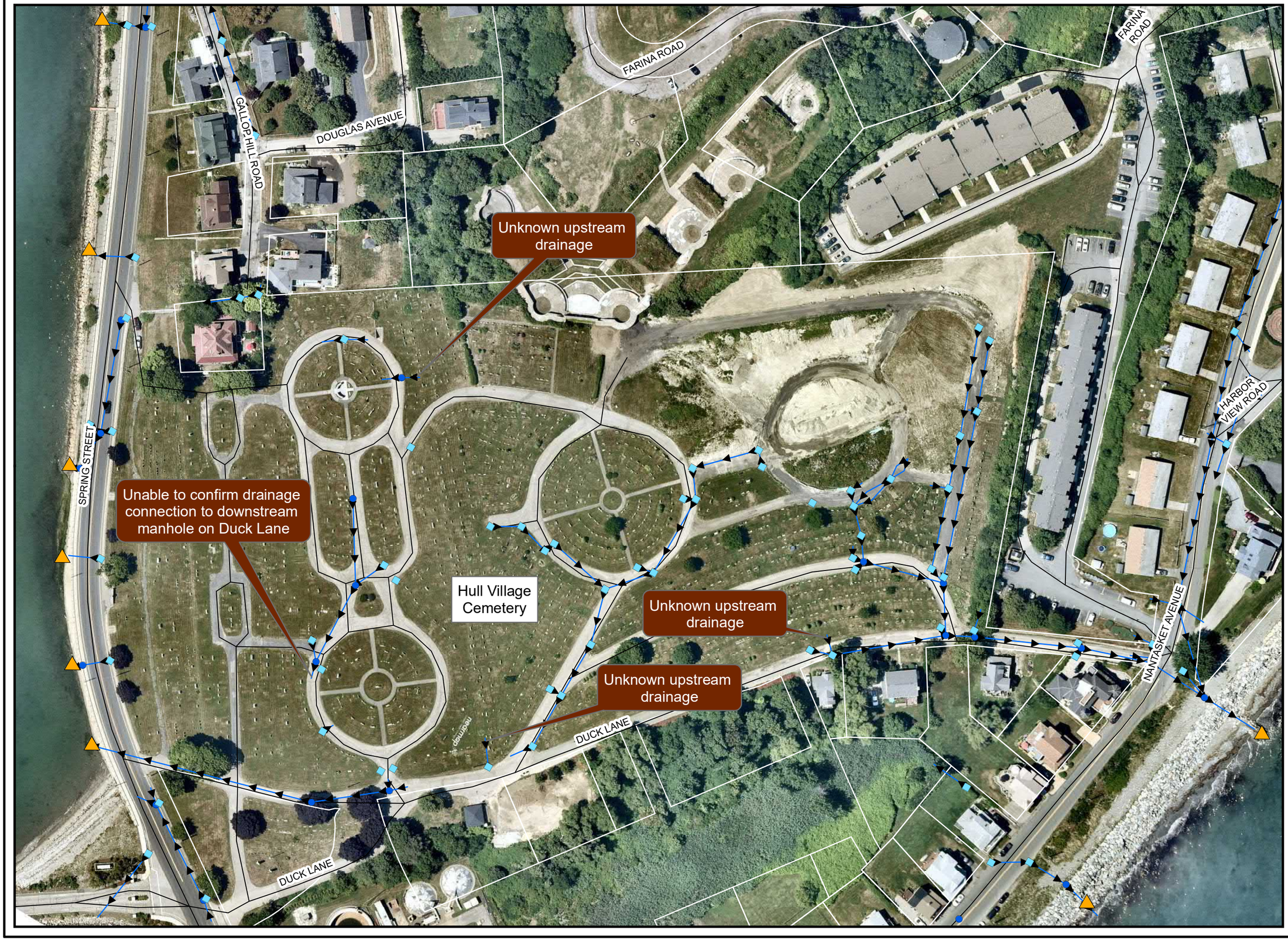


Map 5 of 8

Hull Village Cemetery

Duck Lane

Town of Hull, MA
O&M Plan
Facilities Maps

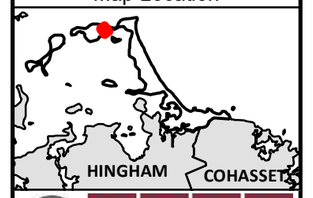
Stormwater Legend

- Town CB
- Town DMH
- Outfall
- Pipe

0 80 Feet

N

Map Location



BETA

Map 6 of 8

Wastewater Treatment Facility

1111 Nantasket Avenue

Town of Hull, MA
O&M Plan
Facilities Maps

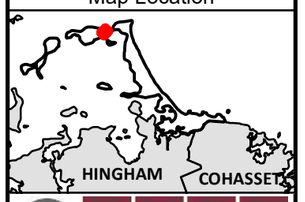
Stormwater Legend

- Town CB
- Town DMH
- Outfall
- Pipe

0 60 Feet

N

Map Location



BETA

Map 7 of 8

Memorial Middle School Athletic Fields

31 - 49 L Street

Town of Hull, MA
O&M Plan
Facilities Maps

O STREET

N STREET

M STREET

L STREET

CENTRAL AVENUE

NANTASKET AVENUE

MEMORIAL SCHOOL ROAD

Memorial Middle School

Memorial Middle School Athletic Fields

Unknown downstream drainage connection from catch basins in field

Unknown downstream drainage connection from catch basin in field

Stormwater Legend

- Town CB
- Town DMH
- Pipe

0 80 Feet

N

Map Location

HINGHAM COHASSET

BETA

Map 8 of 8

Lt. Joseph McLaughlin Park

137 Hampton Circle

Town of Hull, MA O&M Plan Facilities Maps

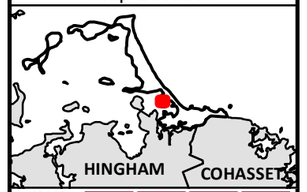
Stormwater Legend

- Town CB
- Town DMH
- Outfall
- Pipe

0 80 Feet

N

Map Location



BETA

APPENDIX C – Catch Basin Inspection Log

MCM 6: Good Housekeeping - Catch Basin Cleaning

Catch Basin Cleaning Log

Reporting Period: _____ – _____

Date Range	Location(s)	# CBs Cleaned	Volume of Cleaning

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

Reporting Period: _____ – _____

Inspector: _____ Sheet _____of _____

CB ID	Date	Address	Location Description

APPENDIX D – Street and Parking Lot Sweeping Log

MCM 6: Good Housekeeping - Street and Parking Lot Sweeping

Street and Parking Lot Spring Sweeping Log

Reporting Period: _____ – _____

Date Range	Area	Volume of Cleaning	# lots

STREET AND PARKING LOT FALL SWEEPING LOG

Reporting Period: _____ – _____

Date Range	Area	Volume of Cleaning	# lots

STREET AND PARKING LOT ADDITIONAL SWEEPING LOG

Reporting Period: _____ – _____

Date Range	Area	Volume of Cleaning	# lots

APPENDIX E – Stormwater Treatment Structures Inspection & Maintenance Guide

MCM 6: Good Housekeeping - Stormwater Treatment Structures Inspection & Maintenance

The following establishes inspection and maintenance actions for permittee-owned stormwater treatment structures.

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

APPENDIX F – SWPPP

Hull, MA

Stormwater Pollution Prevention Plan (SWPPP)

Department of Public Works

June 2021

DEPARTMENT OF PUBLIC WORKS
9 NANTASKET AVENUE

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

Stormwater Pollution Prevention Plan (SWPPP)

Hull, MA

Department of Public Works

DEPARTMENT OF PUBLIC WORKS
9 NANTASKET AVENUE

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

June 2021

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.

Christopher Gardner — Authorized Official

DPW Director — Title

6·21·21 — Date

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INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) has been developed by BETA Group, Inc. (BETA) on behalf of the Town of Hull (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 Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts, hereafter referred to as the PERMIT. This SWPPP is outlined as follows:

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

1.0 POLLUTION PREVENTION TEAM

The Hull 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:	Chris Gardner	Title:	Director	Department:	DPW
Phone:	781-925-0900	Email:	cgardner@town.hull.ma.us		
Responsibilities: MS4 Coordinator, IDDE Program, Good Housekeeping, SWPPP Training, Reporting & Record Keeping					

Name:	Melissa Recos, PE	Title:	Project Manager	Company	BETA Group
Phone:	781-255-1982	Email:	MRecos@beta-inc.com		
Responsibilities: MS4 Consultant to the Town					

2.0 DESCRIPTION OF FACILITY

2.1 FACILITY SUMMARY

The Town of Hull DPW facility is located at 9 Nantasket Avenue in Hull, Massachusetts (the site) and is owned and operated by the Town. Information provided in this, and the following sections is based on observations made during a site visit on January 26, 2021. During the site visit, BETA personnel were escorted by Hull DPW staff who provided a general overview and layout of facility operations, activities performed and material storage information.

The site consists of one irregular-shaped parcel that includes approximately 3.15 acres of land improved with two buildings. The site buildings are located along the northern and eastern portion of the property, which is primarily earthen surfaces. The front and southern portions of the DPW Garage are surrounded by paved surface. The northern and western portions of the site have an earthen surface and beyond that are wooded areas. To the south and west of the site, a salt marsh resource is present and to the south the Weir River costal bank. The site is within an Area of Critical Environmental Concern (ACEC) for the Weir River. The site is located in an area primarily used for commercial purposes with a mix of residential properties. 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 operates on approximately 2.5 acres out of the 3.15 acres available and contains the structures and other features identified above, shown on the Site Map and described in detail in the following sections. Components shown on the site map include as applicable:

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

2.2.1 *Inventory of Building*

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

Table 2.1 - Inventory of Buildings

No.	Use	Floor Drain
1	Administration Office	☐Y ☒N
2	DPW Garage	☒Y ☐N

2.2.2 *Parking Areas*

Parking areas located at the front of the DPW Garage.

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 at the site generally follows surface topography and flows in a southeasterly direction over earthen areas to direct discharges to the Weir River on site without pretreatment. Floor drains located in the vehicle storage garage are collected and pumped to the Town's sanitary sewer. Surface runoff flow direction, drainage structures and features are indicated on the Site Map.

2.3.1 *Receiving Waters*

The final point of discharge is Weir River, which is listed as a Category 5 Surface Water and is assigned the unique identifier MA74-02, indicating that more than one designated use is impaired and that a TMDL will be required. Impairments of this water body are shown in Table 2-2, below.

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

Water Body Name	ID	Category	Impairment(s)
Weir River	MA74-02	5	Fecal Coliform Escherichia Coli (E. Coli)

The types of impairments documented for this surface water body are related to human and animal waste. These impairments are not likely related to stormwater operations at the site.

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 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 bacteria impairment in the downstream waterbody:

- Parking lot sweeping

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.

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 are connected to sanitary sewer.
- 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 or temporary seed.
- Temporary sediment perimeter controls, including silt fence, filters socks, or fiber rolls, may be placed a short distance from the base of the stockpile. Maintaining a short distance from the base of the stockpile to the perimeter control is important as it allows water to pond, if needed.

4.2 GOOD HOUSEKEEPING

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

Sweeping and Cleaning of Parking Lots

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

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

Waste Management

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

- All waste and recycling receptacles must be leak-tight with tight-fitting lids or covers.
- Keep lids on dumpsters and containers closed at all times unless adding or removing material. If using an open-top roll-off dumpster, cover it and tie it down with a tarp unless adding materials.
- Place waste or recycling receptacles indoors or under a roof or overhang whenever possible.

- Locate dumpsters on a flat, paved surface and install berms or curbs around the storage area to prevent run-on and run-off.
- Do not locate dumpsters over or adjacent to catch basins.
- Prior to transporting waste, trash, or recycling, ensure that containers are not leaking (double bag if needed) and properly secure containers to the vehicle.
- Clean up any liquid leaks or spills with dry cleanup methods.
- Arrange for waste or recycling to be picked up regularly and disposed of at approved disposal facilities.
- Never place hazardous materials, liquids, or liquid-containing wastes in a dumpster or recycling or trash container.
- Do not wash trash or recycling containers outdoors or in parking lots.
- Conduct periodic inspections of solid and liquid waste storage areas to check for leaks and spills.
- Conduct periodic inspections of work areas to ensure that all wastes are being disposed of properly.
- In dumpster areas, regularly pick up surrounding trash and debris and regularly sweep the area.

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.
- 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.

Stormwater Management BMP Maintenance

Stormwater BMPs for this facility (excluding catch basins) are to be inspected quarterly and maintained as necessary to provide optimum treatment of stormwater runoff. The 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 BMP on the site based on the Massachusetts Stormwater Handbook:

Other BMPs

CRUSHED STONE BERM

A crushed stone berm or sediment forebay are implemented to slow incoming stormwater and to filter out suspended solid within the peak flow period. Inspection and maintenance should include the following:

- Inspect the crushed stone berm at least once a month
- Clean out sediment from the berm at least 4 times per year
- Check for rilling and gullying and fix when necessary

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 January 26, 2021 site visit, we are providing the following recommendations to attain or maintain compliance with the MS4 permit requirements.

1. Stormwater runoff at the site generally flows across paved and unpaved surfaces at the site towards the directly adjacent Weir River and salt marsh. Hay bales and a stone berm have been placed along surface discharge points prior to the Weir River and salt marsh as erosion and sediment control measures. We recommend installing a more permanent structural BMP to control stormwater runoff from the parking area and prevent pollutants and sediments from the pavement from entering the Weir River. Due to the proximity of the site to the water body and resource area it is important to adhere to non-structural BMPs summarized in Section 4.0 of this report including:
    a. Routine inspection, maintenance and/or cleaning of the haybales and stone berm erosion berm erosion controls along southern and western property lines.
    b. Routine sweeping of the paved areas at the site to remove accumulated sediment and debris.
    c. Inspection and inventory of stored materials and equipment on-site. Materials and equipment that are potential stormwater pollutants should be stored in covered locations when possible and if not in use and removed from the site if not being used.

2. There are several uncovered material stockpiles on the property. Those adjacent to resource areas are contained by walls on 3 sides provide for erosion and sediment control. These are generally contained on pervious surfaces where stormwater runoff would be expected to infiltrate into the ground. We recommend following BMPs summarized in Section 4.1 to address potential impacts to stormwater runoff resulting from these stockpiles.

3. The Salt Shed is aging. Holes were observed on the sides and roof that could allow stormwater to enter the structure. Evaluate for replacement. Currently, loading operations are conducted outside the shed due the limited size of the shed and facility. If possible avoid loading during rain events and any spills should be immediately cleaned to prevent migration to the resource areas.

APPENDIX A – Site Map

Map 1 of 1

DPW

9 Nantasket Avenue

Town of Hull, MA
SWPPP Map

Stormwater Legend

- Surface Water Flow Direction
- Manhole

N

0 30 60

Feet

Plot Date: 3/8/2021

Map Location

BETA

APPENDIX B – Vehicle Inventory

APPENDIX B

VEHICLE INVENTORY

DEPARTMENT OF PUBLIC WORKS

9 NANTASKET AVENUE

HULL, MASSACHUSETTS

ITEM #	DEPARTMENT	YEAR	MANUFACTURER & MODEL	VIN	PLATE #	TYPE
0	DPW	2016	INTERNATIONAL 700SER	3HAWESTR7GL271910	M4400	Municipal
1	DPW	2016	INTERNATIONAL 700SFA	3HAWESTR2GL271913	M4401	Municipal
2	DPW	2016	INTERNATIONAL 700SER	3HAWESTR9GL271911	M4402	Municipal
4	DPW	2018	CHEVY SILVERADO 2500	1GCOKUEG7J2204072	M99070	Municipal
5	DPW	2015	INTERNATIONAL 700SER	1HTWDAAR5FH726077	M4405	Municipal
6	DPW	2003	INTERNATIONAL 700SER	1HTWBAAR13J069937	M4406	Municipal
8	DPW	2005	CHEVY SILVERADO	1GBJC34U45E186067	M4408	Municipal
10	DPW	2020	CHEVY SILVERADO 3500	1GB4WRE77LM306614	M4410	Municipal
11	DPW	2015	CHEVY SILVERADO 3500	1GB3CYCGIFF553214	M4411	Municipal
12	DPW	2019	CHEVY SILVERADO 3500	1GB3KBCG1KF171986	M4412	Municipal
13	DPW	2015	CHEVY SILVERADO 3500	1GB3CYCGXFF552532	M4413	Municipal
15	DPW	2019	CHEVY SILVERADO 3500	1GB3KBCG1KF171986	M4415	Municipal
16	DPW	2021	INTERNATIONAL HV507	3HAEDTAR7ML373839	M9073A	Municipal
17	DPW	2000	INTERNATIONAL 400SER	1HTSCAAMOYH315341	M83000	Municipal
20	DPW	2012	FORD F-250	1FT7X2B61CEC99190	M85901	Municipal
Roll off	DPW	1982	MAC REFUSE	1M2B120C6CA051184	M70527	Municipal
Beach Car	DPW	2009	FORD ESCAPE	1FMOV93739KC30708	M49404	Municipal
Sweeper	DPW	2011	ELGIN PELICAN	NP213OD	M4394	Municipal
Sewer Jet	DPW	2015	INTERNATIONAL 400SER	3HAMKAAR8FL726033	M43494	Municipal
Loader	DPW	2007	JOHN DEERE LOADER	DW544J2614503	M4399	Municipal
Backhoe	DPW	2013	CASE 580	JJGN585NLDC85554	M85922	Municipal
MI	DPW	2007	FORD F-250	1FT5X21547EA41111	MS6574	Municipal
Volvo	DPW	2019	VOLVO EXCAVATOR	VCEEW60EL00312203	M6274A	Municipal

APPENDIX C – Activities & Material Storage

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 Maintenance	Maintenance of Town-owned and operated vehicles	DPW Garage	Motor Oil	Petroleum Hydrocarbons	Varies	Low - in covered bldg	Floor Drains to sanitary sewer	Maintenance conducted inside building, good housekeeping
			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				
Vehicle Washing	Washing of Town-owned and operated vehicles	DPW Garage	Detergents	Surfactants	Varies	Low - in covered bldg	Floor Drains to sanitary sewer	Washing conducted inside building, good housekeeping
				Wastewater				
Construction Materials Storage and Handling	Storage and handling of construction materials and miscellaneous maintenance products (gravel, loam, aggregates, wood, infield mix etc.)	N/A	Asphalt	Petroleum Hydrocarbons	Varies	High - not covered, not stored in paved areas	Three sided block containment walls for some stockpiles	Routine sweeping and good housekeeping
			Gravel	Sediment		High - not covered, not stored in paved areas		Routine sweeping and good housekeeping
			Loam	Sediment		High - not covered, not stored in paved areas		Routine sweeping and good housekeeping
			Sand	Sediment		High - not covered, not stored in paved areas		Routine sweeping and good housekeeping
			Scrap Metal	Metals		High - not covered, not stored in paved areas		Removed from site when full
Sand/Salt Storage and Handling	Storage and handling of sand/salt for winter roadway applications	Salt Shed	Sand	Sediment	1000 y (approx.)	High - not covered	Covered storage for salt	Routing sweeping
			Salt	Chlorides	500 tons (approx.)	Low - covered storage		Good housekeeping practices
Above Ground Storage Tanks	Waste oil - routine pick-up and disposal by an outside party	DPW Garage	Waste Oil	Petroleum Hydrocarbons	100-gal	Low - stored in covered area with secondary containment	Secondary containment pallets	Good housekeeping practices
Emergency Generators	Facility back-up generator	DPW Garage	Gas-fired	Natural gas	N/A	Low - petroleum products are stored in covered building	Covered storage	Spill Kit on-site
Solid Waste Management	Taken to landfill	N/A	Solid waste	Debris, metals	Varies	Low - potential pollutants are covered	Covered storage	Solid waste removal
								Good housekeeping practices
Parking Areas	Parking for Town employees at the DPW Garage	Front of DPW Garage	N/A	Sediment, oil from vehicles	Varies	High - uncovered parking area, direct discharge to Weir River during storms	Crushed Stone Berm to catch trash/debris & prevent erosion	Routine sweeping
								Good housekeeping practices
Adminstration	DPW Offices	DPW Garage	Miscellaneous equipment & supplies	Cleaning supplies	Varies	Low - stored in covered areas	Covered storage	Good housekeeping practices

APPENDIX D – SWPPP Inspection Form

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) INSPECTION FORM

Report No. _____

Location:	Department of Public Works: 9 Nantasket Ave.	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
☐ Vehicle Repair Indoors	☐ Good ☐ Fair ☐ Poor		☐	
☐ Pavement Sweeping	☐ Good ☐ Fair ☐ Poor		☐	
☐ Spill Prevention & Response	☐ Good ☐ Fair ☐ Poor		☐	
☐ Erosion & Sediment Controls	☐ Good ☐ Fair ☐ Poor		☐	
☐ Manage Runoff	☐ Good ☐ Fair ☐ Poor		☐	
☐ Salt Storage Area	☐ Good ☐ Fair ☐ Poor		☐	

PLANNING CONSIDERATIONS: ☐ YES ☐ NO

Control	Change
☐ Salt Storage Area	
☐ Manage Runoff	

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.

APPENDIX G – SWPPP

Hull, MA

Stormwater Pollution Prevention Plan (SWPPP)

Hull Sanitary Landfill

June 2021

HULL SANITARY LANDFILL
111 ROCKAWAY AVENUE

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

Stormwater Pollution Prevention Plan (SWPPP)

Hull, MA

Hull Sanitary Landfill

HULL SANITARY LANDFILL
111 ROCKAWAY AVENUE

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

June 2021

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.

Christopher Cardoza — Authorized Official

DPW Director — Title

6.21.21 — Date

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INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) has been developed by BETA Group, Inc. (BETA) on behalf of the Town of Hull (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 Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts, hereafter referred to as the PERMIT. This SWPPP is outlined as follows:

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

1.0 POLLUTION PREVENTION TEAM

The Hull 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:	Chris Gardner	Title:	Director	Department:	DPW
Phone:	781-925-0900	Email:	cgardner@town.hull.ma.us		
Responsibilities: MS4 Coordinator, IDDE Program, Good Housekeeping, SWPPP Training, Reporting & Record Keeping					

Name:	Melissa Recos, PE	Title:	Project Manager	Company	BETA Group
Phone:	781-255-1982	Email:	MRecos@beta-inc.com		
Responsibilities: MS4 Consultant to the Town					

2.0 DESCRIPTION OF FACILITY

2.1 FACILITY SUMMARY

The Town of Hull Sanitary Landfill facility is located at 111 Rockaway Avenue in Hull, Massachusetts (the site) and is owned and operated by the Town. Information provided in this, and the following sections is based on observations made during a site visit on January 26, 2021. During the site visit, BETA personnel were escorted by Hull DPW staff who provided a general overview and layout of facility operations, activities performed and material storage information.

The site consists of one irregular-shaped parcel that includes approximately 9.6 acres of land improved with no buildings on site. This landfill is closed to the public and most of it is capped and maintained under a landfill closure plan with facilities for leachate monitoring and pumping that is discharged to the sanitary sewer. There is vegetated ground cover and dirt roads throughout. The southern side of the site is bordered by salt marsh and the Weir River coastal bank which is an Area of Critical Environmental Concern (ACEC). On the west side of the entrance driveway, an upland area is used to seasonally store materials and has a dumpster for dropping off trash by Town staff. The active landfill portion of the site is in the upland area containing open top dumpsters for daily trash disposal and sorting and storage of recyclables for transport off-site. Trash dumped in the landfill area itself is covered with dirt each night. The uses surrounding the site are primarily for residential purposes. 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 operates on approximately 3 acres out of the total 9.6 acres and contains the structures and other features identified above, shown on the Site Map and described in detail in the following sections. Components shown on the site map include as applicable:

- Location of the engineered drainage system, including catch basins, ditches, drain manholes, and treatment BMPs
- Outfalls to a receiving water, and the name of the receiving water
- Direction of surface water flow
- Structural stormwater pollution control measures
- Materials stockpiles
- Waste disposal areas

2.2.1 Inventory of Building

No buildings on site.

2.2.2 Parking Areas

Parking along roadway.

2.2.3 Inventory of Vehicles & Equipment

There is no inventory of vehicles and equipment applicable for the Sanitary Landfill.

2.3 Site Drainage & Receiving Waters

Drainage at the site generally follows surface topography and flows in a southeasterly or southwesterly direction over earthen surfaces to the water quality swale on site. Western and central portions of the site are used for material stockpiling and waste storage. Eventually the flow makes it to the Weir River. Surface runoff flow direction, drainage structures and features are indicated on the Site Map.

2.3.1 Receiving Waters

The final point of discharge is the Weir River, which is given the unique identifier MA74-02 and listed as a Category 5 Surface Water, indicating that more than one designated use is impaired and that a TMDL will be required. Impairments of this water body are shown in Table 2-2, below.

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

Water Body Name	ID	Category	Impairment(s)
Weir River	MA74-02	5	Fecal Coliform Escherichia Coli (E. Coli)

The types of impairments documented for this surface water body are related to human and animal waste. These impairments are not likely related to stormwater operations at the site.

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 on the Site Map.

3.0 STORMWATER CONTROLS

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

4.0 MANAGEMENT PRACTICES

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

4.1 MINIMIZE OR PREVENT EXPOSURE

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

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

4.2 GOOD HOUSEKEEPING

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

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.

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.

Stormwater Management BMP Maintenance

Stormwater BMPs for this facility (excluding catch basins) are to be inspected quarterly and maintained as necessary to provide optimum treatment of stormwater runoff. The 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 BMP on the site based on the Massachusetts Stormwater Handbook:

Conveyance BMPs

DRAINAGE SWALE

Drainage swales are vegetated open channels designed to prevent erosion while directing the flow of stormwater. They are not installed to infiltrate water from storm events. 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, mow 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

Other BMPs

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

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 January 26, 2021 site visit, we are providing the following recommendations to attain or maintain compliance with the MS4 permit requirements.

1. There are uncovered storage and stockpiles and an open trash dumpster in the area west of the entrance driveway as well as in the active landfill area. These are on upland pervious areas where stormwater runoff would be expected to infiltrate the ground. We recommend following BMPs summarized in Section 4.1 and 4.2 to address any potential impacts to stormwater runoff from these areas.

APPENDIX A – Site Map

Map 1 of 1

Sanitary Landfill

111 Rockaway Avenue

Town of Hull, MA
SWPPP Map

Plot Date: 3/8/2021

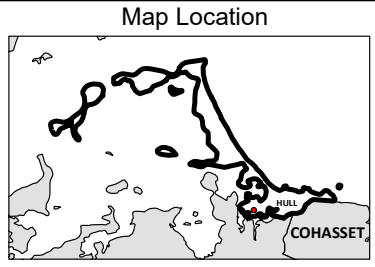
Stormwater Legend

- Surface Water Flow Direction
- Leaching Tank
- Swale

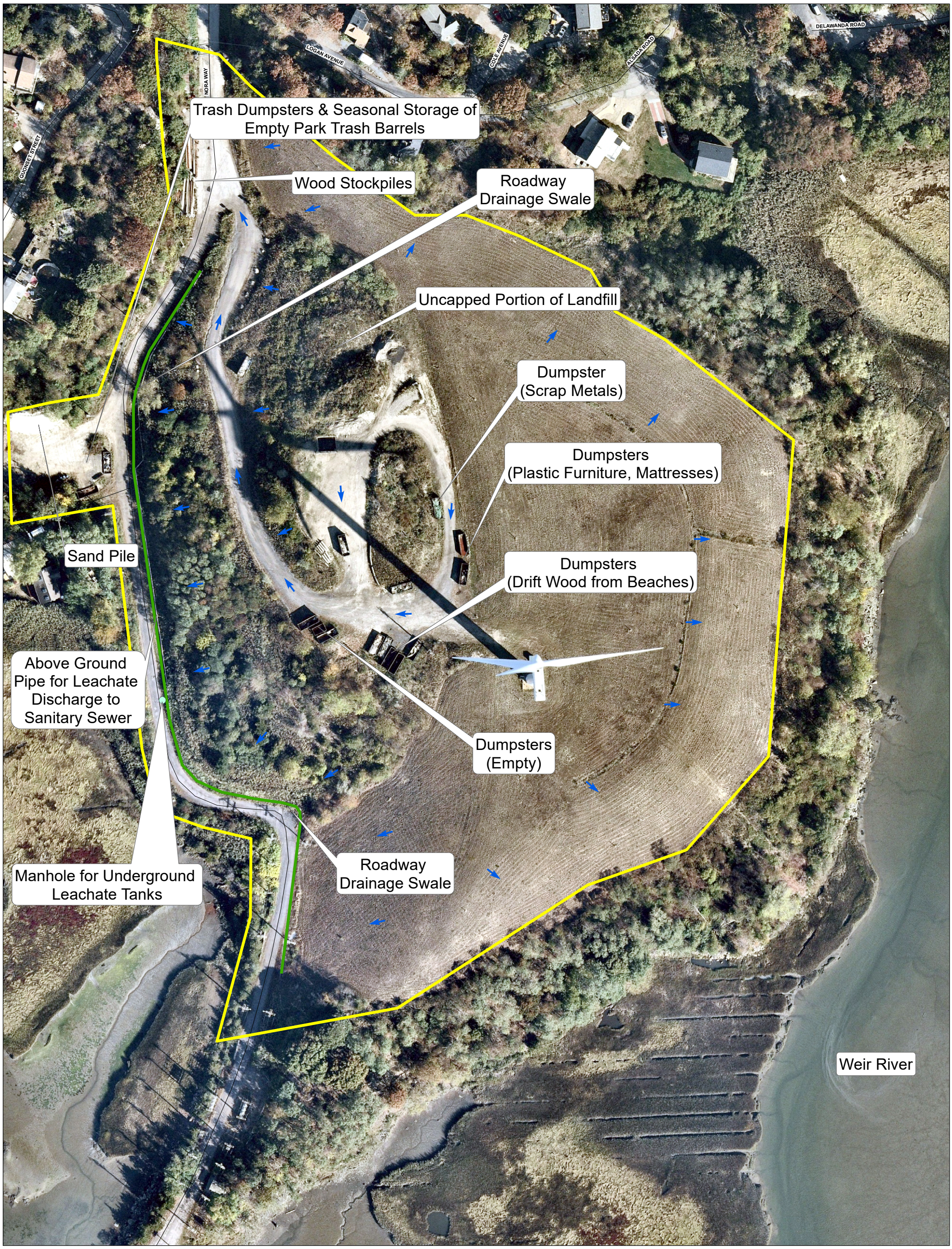
N

0 30 60
Feet

Map Location



BETA



APPENDIX B – Vehicle Inventory

No vehicles currently at this site

APPENDIX C – Activities & Material Storage

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
Construction Materials	Sand stockpile	N/A	Sand Stockpile	Sediment	Varies	High - outside storage	None	Good housekeeping practices
Solid Waste Management	On-site dumpsters for soild waste collection and transfer	N/A	Scrap metal, plastic furniture, drift wood, trash	Debris and metals	Varies	Low - potential pollutants are contained in dumpsters	Contained storage located away from resource areas	Good housekeeping practices

APPENDIX D – SWPPP Inspection Form

STORMWATER POLLUTION PREVENTION PLAN (SWPPP) INSPECTION FORM

Report No. _____

Location:	Hull Sanitary Landfill: 111 Rockaway Ave.	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
☐ Trash Management	☐ Good ☐ Fair ☐ Poor		☐	
☐ Erosion & Sediment Controls	☐ Good ☐ Fair ☐ Poor		☐	
☐ Manage Runoff	☐ Good ☐ Fair ☐ Poor		☐	
☐ Roadway Drainage Swale	☐ Good ☐ Fair ☐ Poor		☐	

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.