

Long Term Stormwater Best Management Practices
Operation and Maintenance Plan

for the

Residential Development

of

79 Hill Street – Lot 11

Topsfield, Massachusetts

July 10, 2023

Revised July 18, 2023

The following operation and maintenance plan has been provided associated with development of the site and associated infrastructure. The success of the Stormwater Management Plan depends on the proper implementation, operation and maintenance of several management components. The following procedures shall be implemented to ensure success of the Stormwater Management Plan:

1. The contractor shall comply with the details of construction of the site as shown on the approved plans.
2. The drainage systems shall be inspected and maintained as indicated below.
3. Effective erosion control measures during and after construction shall be maintained until a stabilized finished surface is established on all altered areas.

Basic Information

Stormwater Management System Owner:

Paul Daniels
79 Hill Street – Lot 11
Topsfield, MA 01983
P: (603) 475-5787

Topsfield Department of Public Works:

279 Boston Street
Topsfield, MA 01983
P: (978) 887-1517

Topsfield Planning Board:

Topsfield Town Offices
8 West Common Street
Topsfield, MA 01983
P: (978) 887-1504

Erosion and Sedimentation Controls during Construction:

The site and drainage construction contractor shall be responsible for maintaining the stormwater system during construction. Routine maintenance of all items shall be performed to ensure adequate runoff and pollution control during construction.

Proposed erosion controls will be placed as shown on the Site Plan prior to the commencement of any clearing, grubbing, and earth removal or construction activity. The integrity of the erosion control barrier will be maintained by periodic inspection and replacement as necessary. The erosion control barrier will remain in place until the first course of pavement has been placed and all disturbed areas have been loamed and seeded and vegetation has been established.

General Conditions

1. The developer shall be responsible for scheduling regular inspections and maintenance of the stormwater BMP's. The BMP maintenance shall be conducted as detailed in the following long-term pollution prevention plan and illustrated on the approved design plans:

"Site Development Plan in Topsfield, Massachusetts, 79 Hill Street – Lot 11 (Assessor's Map 68, Portion of Lot 14)", prepared by The Morin-Cameron Group, Inc. dated July 10, 2023 as revised
2. The owner shall:
 - a. Maintain an Operation and Maintenance Log for the last three years. The Log shall include all BMP inspections, repairs, replacement activities and disposal activities (disposal material and disposal location shall be included in the Log);
 - b. Make the log available to the Topsfield Department of Public Works and Planning Board upon request;
 - c. Allow members and agents of the Topsfield Department of Public Works and Planning Board to enter the premises and ensure that the Owner has complied with the Operation and Maintenance Plan requirements for each BMP.
3. A recommended inspection and maintenance schedule is outlined below based on statewide averages. This inspection and maintenance schedule shall be adhered to at a minimum for the first year of service of all BMP's referenced in this document. At the conclusion of the first year of service, a more accurate inspection/maintenance schedule shall be determined based on the level of service for this site.
4. Inspections and maintenance activities for this residential development will generally be performed by the developer or future homeowner. If major repairs are required, then detailed cost estimates will be provided by local landscaping companies prior to commencement of work.

Long-Term Pollution Prevention Plan (LTPPP)

Vegetated Areas:

Immediately after construction, monitoring of the erosion control systems shall occur until establishment of natural vegetation. Afterwards, vegetated areas shall be maintained as such. Vegetation shall be replaced as necessary to ensure proper stabilization of the site.

Trench Drain:

The trench drain shall be checked regularly to ensure that the surface is free of debris such as leaves, sticks and/or trash. Remove and dispose of any debris present on grate or within the trench drain. Material removed from the trench drain shall be disposed of in accordance with all applicable local, state, and federal regulations.

Deep Sump Hooded Catch Basin/Sediment Trap:

The catch basin grate shall be checked quarterly and following heavy rainfalls to verify that the inlet openings are not clogged by debris. Debris shall be removed from the grates and disposed of properly. Deep sump catch basins and sediment trap shall be inspected four times per year and cleaned as needed when accumulated sediments exceeds 2' from the bottom of the sump (approximately 1/2 of the sump capacity). The catch basin and sediment trap shall also be inspected to check oil build-up and outlet obstructions. Material shall be removed from catch basin and sediment trap and disposed of in accordance with all applicable regulations

Cost: Estimated \$50 - \$100 per cleaning per structure as needed. The Owner shall consult local vacuum cleaning contractors for detailed cost estimates.

Public Safety Concerns: Catch basin and sediment trap shall not be left open and unattended at any time during inspection, cleaning or otherwise. Broken or missing grates or frames shall be replaced immediately. At no time shall any person enter the basin structure unless measures have been taken to ensure safe access in accordance with OSHA enclosed space regulations.

Subsurface Recharge Chambers:

The subsurface recharge chambers shall be checked for debris accumulation twice per year. Each system is equipped with an inspection port. Additional inspections should be scheduled during the first few months to make sure that the facility is functioning as intended. Trash, leaves, branches, etc. shall be removed from facility. Silt, sand and sediment, if significant accumulation occurs, shall be removed annually. Material removed from the system shall be disposed of in accordance with all applicable local, state, and federal regulations. In the case that water remains in the infiltration facilities for greater than three (3) days after a storm event an inspection is warranted, and necessary maintenance or repairs should be addressed as necessary.

Cost: Consult with local landscaping companies for associated costs if necessary.

Public Safety Concerns: The inspection port covers shall not be left open and unattended at any time during inspection, cleaning or otherwise. Broken covers or frames shall be replaced immediately. At no time shall any person enter the subsurface structure unless measures have been taken to ensure safe access in accordance with OSHA enclosed space regulations.

Rip-Rap Outfalls:

The outlet pipe and rip-rap outfall shall be inspected after every major storm event for the first 3 months after construction; a major storm event is 3.15 inches of rainfall in a 24-hour period (2 year storm). Thereafter, the system shall be inspected twice per year in April and October. Any signs of erosion shall be repaired immediately, and any trash or debris shall be removed,

Cost: Included in the routine landscaping maintenance schedule. The Owner shall consult local landscaping contractors for details.

Debris & Litter:

All debris and litter shall be removed from the driveway as necessary to prevent migration into the drainage system.

Pesticides, Herbicides, and Fertilizers:

Pesticides and herbicides shall be used sparingly. Fertilizers shall be restricted to the use of organic fertilizers only. All fertilizers, herbicides, pesticides, sand and salt for deicing and the like shall be stored in dry area that is protected from weather.

Prevention of Illicit Discharges:

Illicit discharges to the stormwater management system are not allowed. Illicit discharges are discharges that are not comprised entirely of stormwater. Pursuant to Mass DEP Stormwater Standards the following activities or facilities are not considered illicit discharges: firefighting, water line flushing, landscape irrigation, uncontaminated groundwater, potable water sources, foundation drains, air conditioning condensation, footing drains, individual resident car washing, flows from riparian habitats and wetlands, De-chlorinated water from swimming pools, water used for street washing and water used to clean residential building without detergents.

To prevent illicit discharges to the stormwater management system the following policies should be implemented:

1. Good Housekeeping Practices
 - The site shall be kept clean of litter and debris and continuously maintained as noted above. All chemicals shall be covered and stored in secured location. Any land disturbances that change drainage characteristics shall be remedied to pre-disturbance characteristics (i.e. shoulder rutting from vehicles, land disturbance from plowing, etc.) as soon as possible to ensure proper treatment of all stormwater runoff.
2. Provisions for Storing Materials and Waste Products Inside or Under Cover
 - All chemicals and chemical waste products shall be stored inside or in a secured covered location to prevent potential discharge. Any major spills shall be reported to municipal officials and a remediation plan shall be implemented immediately.
3. Vehicle Maintenance
 - Any vehicle maintenance shall be done with care to prevent discharge of illicit fluids. If fluids are accidentally spilled, immediate action shall be implemented to clean and remove the fluid to prevent discharge into the stormwater management system and/or infiltrating into the groundwater.
4. Pet Waste Management Provisions
 - Pet waste shall be picked up and disposed of in an appropriate individual waste refuse area.
5. Spill Prevention and Response Plans
 - If a major spill of an illicit substance occurs, town officials (including but not limited to the Fire Department and Police Department) shall be notified immediately. A response plan shall then be implemented immediately to prevent any illicit discharges from entering the stormwater management system and ultimately surface waters of the Commonwealth.
6. Solid waste
 - All domestic solid waste shall be disposed of in accordance with all applicable local, state and federal regulations. Waste shall be placed into covered dumpsters and/or covered waste bins to prevent water intrusion and potentially contaminated runoff. No household chemicals, hazardous materials, construction debris or non-household generated refuse shall be disposed of in the on-site waste disposal containers.

Stormwater Management Maintenance Log

79 Hill Street - Lot 11

Topsfield, MA

The Following structures shall be inspected and maintained by the owner.

<u>BMP STRUCTURE</u>	<u>INSPECTION DATE</u>	<u>DATE WORK PERFORMED</u>	<u>WORK PERFORMED</u>	<u>COMMENTS</u>
DEEP SUMP HOODED CATCH BASIN				
TRENCH DRAIN				
SEDIMENT TRAP				
ROOF RECHARGE SYSTEM 1				
ROOF RECHARGE SYSTEM 2				
RIP-RAP OUTFALL 1				
RIP-RAP OUTFALL 2				
ROOF LEADERS, GUTTERS AND DOWNSPOUTS				