OPERATION AND MAINTENANCE
&
LONG TERM POLLUTION PREVENTION PLAN
FOR POST-CONSTRUCTION STORM WATER CONTROLS

NORTHERN ESSEX COMMUNITY COLLEGE
ATHLETIC FIELD IMPROVEMENTS
HAVERHILL, MASSACHUSETTS

APRIL 15, 2026

GENERAL

The Best Management Practices (BMPs) used in the design of the Northern Essex Community College (NECC) Athletic Field project were chosen for their effectiveness at reducing peak discharge, treating the required Water Quality Volume for total suspended solids (TSS), and infiltrating groundwater. Routine maintenance is required for the BMPs, as proper maintenance is essential in achieving the desired result of improved water quality.

This Operations and Maintenance (O&M) and Long-Term Pollution Prevention Plan (LTPPP) is intended to cover the post-construction maintenance of the permanent BMPs[1] and site-specific pollution prevention.

MAINTENANCE REQUIREMENTS

Qualified personnel shall inspect all components of the stormwater management system as outlined below. To be considered "qualified", personnel should have a working knowledge of the maintenance requirements of storm water BMP's and must be approved by NECC. Qualified personnel shall be responsible for overseeing the required inspections and shall file annual reports with the City of Haverhill officials. Additionally, a copy of the Inspection/Maintenance Log, as further described herein, shall be provided to City of Haverhill officials on an annual basis, as required.

SUMMARY OF MAINTENANCE REQUIREMENTS

BMP	MIN. FREQUENCY	RESPONSIBLE PARTY
Road & Walkway Sweeping	once/quarter	NECC
Trash Removal	Inspect once/month Clean as necessary	NECC
Catch Basins	Inspect 4x/year Clean once/year	NECC
Turf Field	Inspect 4x/year Clean as necessary	NECC

[1] Operations and maintenance of temporary erosion and sedimentation controls utilized during construction will be covered by a *Stormwater Pollution Prevention Plan* as required by the National Pollutant Discharge Elimination System program of the Environmental Protection Agency, and is not part of this O&M Plan.

RESPONSIBILITY TO ADMINISTER O&M PLAN

During construction, the general contractor will be responsible for maintaining the stormwater management system in accordance with this O&M Plan until such time that ownership of the project or phases thereof are turned over to the owner. The owner is then responsible for maintaining the portions of the stormwater management system under their ownership in accordance with this O&M Plan. This section below (names and signatures) shall be updated with every change in ownership and/or person(s) responsible for administering/financing the O&M of the system.

Owner(s) of the stormwater management system:

Name: _____ Name: _____

Signature: _____ Signature: _____

Person(s) responsible for financing maintenance and emergency repairs:

_____

_____

INSPECTION AND MAINTENANCE LOG

A sample inspection and maintenance log to be used is attached to the end of this O&M Plan. At a minimum, any inspection and maintenance log used shall include the following items:

- Date activity performed
- Specific inspection/maintenance task
- Structural components inspected/maintained
- Staff person or contractor performing activity
- Supervisor verification of maintenance activity
- Recommended additional maintenance tasks

An Annual Report shall be submitted to the City of Haverhill to meet the requirements of the city's Stormwater Management and Erosion Control Regulations.

PROPOSED BMPS AND CORRESPONDING O&M REQUIREMENTS:

ROAD AND WALKAY SWEEPING:

Sweeping of impervious surfaces shall be conducted once per quarter. All sweepings shall be handled and disposed of in accordance with applicable local, state and federal guidelines and regulations.

TRASH REMOVAL:

The field areas shall be inspected for litter and trash monthly as part of overall site maintenance. Any accumulated trash, litter and discarded materials in these areas shall be removed.

No disposal of materials will be permitted within the landscaped areas or wooded areas on the Site. This prohibition applies to trash, fill material, construction debris, grass clippings, collected leaves and cut branches.

CATCH BASINS:

The catch basins shall be inspected four times per year for build-up of sediment, oil, and/or other debris which could decrease the effectiveness of the sumps. A qualified company specializing in the cleaning of catch basins shall perform the inspection of catch basins.

Typically, a dipstick tube equipped with a ball valve, such as a Sludge Judge®, is used to measure the approximate oil and sediment depth, and a vacuum truck is used to clean out the catch basin. Catch basins shall be cleaned once per year, or sooner if the depth of sediment is found to reach 12 inches. If visual inspection observes any evidence of hydrocarbons, the material shall be immediately cleaned and disposed of in accordance with all applicable local, state and federal guidelines and regulations.

As part of the inspection, catch basins should be inspected for structural soundness. Hoods and associated hardware should be inspected to ensure that they are correctly attached and functioning properly. Catch basins shall be repaired or replaced as necessary to ensure proper operation.

Frames and grates should be inspected and repaired or replaced as necessary to ensure proper operations.

SYNTHETIC SPORTS FIELD:

The groundwater recharge system consists of a bed of crushed stone located under the field surface. The purpose of the bed is to infiltrate stormwater runoff back into the groundwater, and as such it is important to preserve the integrity of the field surface.

It is important to occasionally inspect the field to ensure it will continue to function efficiently for the long term. The owner should complete the required maintenance as recommended by the manufacturer of the field components.

The field should be inspected annually. If the inspection determines that the field fails to fully drain within 72 hours of a storm event, the party responsible shall retain a qualified engineer to assess the reason for infiltration failure and to recommend corrective action for restoring infiltration function.

The 400-meter track and field includes a perimeter trench drain with eight sump outlets and

baskets to catch debris before it enters the drainage system. The sumps and baskets must be inspected quarterly and cleaned of any debris. A visual inspection shall include reporting any debris or sediment observed in the pipe.

The subsurface drainage system for the synthetic turf field is a closed system. Stormwater must pass through several layers of Mirafi 140N filter fabric before entering the infiltration field. However, the subsurface drainage system for the turf field includes four Nyloplast manholes. Each manhole has a removable turf cover that allows for visual inspection of the manhole, weir, and sump as necessary. The catch basin and sumps must be inspected quarterly and cleaned of any debris. Visual inspections shall include reporting any debris or sediments observed in the sump.

DRAIN MANHOLES

Inspect drainage manhole locations monthly for the first three months after construction to ensure proper functioning and correct any areas that have settled or experienced washouts. Inspect drain manholes annually after initial three-month period. Annual inspections should be supplemented after large storms, when washouts may occur.

DETENTION BASIN

- Detention basins should be inspected at least twice a year to ensure proper stabilization and function.
- Light equipment, which will not compact the underlying soil, should be used to remove the top layer. Inspect extended dry detention basins at least once per year to ensure that the basins are operating as intended.
- Inspect detention basins during and after major storms to determine if the basin is meeting the expected detention times.
- Examine the outlet structure for evidence of clogging or outflow release velocities that are greater than design flow. Potential problems that should be checked include: subsidence, erosion, cracking or tree growth on the embankment; damage to the emergency spillway; sediment accumulation around the outlet; inadequacy of the inlet/outlet channel erosion control measures; changes in the condition of the pilot channel; and erosion within the basin and banks. Make any necessary repairs immediately.
- During inspections, note any changes to the extended dry detention basin or the contributing watershed, because these could affect basin performance.
- Mow the upper-stage, side slopes, embankment, and emergency spillway at least twice per year. Also remove trash and debris at this time.
- Remove sediment from the extended dry detention basin as necessary, but at least once every 5 years. Providing an on-site sediment disposal area will reduce the overall sediment removal costs.

STORMWATER OUTFALLS

- Inspect outfall locations monthly for the first three months after construction to ensure proper functioning and correct any areas that have settled or experienced washouts.

- Inspect outfalls annually after initial three month period.
- Annual inspections should be supplemented after large storms, when washouts may occur.

INFILTRATION TRENCH

- Inspect and clean pretreatment BMPs every six months and after every major storm event (2 year return frequency). Check inlet and outlet pipes to determine if they are clogged. Remove accumulated sediment, trash, debris, leaves and grass clippings from mowing. Remove tree seedlings, before they become firmly established.
- Inspect the infiltration trench after the first several rainfall events, after all major storms, and on regularly scheduled dates every six months. If the top of the trench is grassed, it must be mowed on a seasonal basis. Grass height must be maintained to be no more than four inches. Routinely remove grass clippings leaves and accumulated sediment from the surface of the trench.

CONTECH STC 450i WATER QUALITY UNIT

The Contech STC 450i Water Quality Unit targets hydrocarbons and total suspended solids (TSS) in stormwater runoff. It improves water quality by removing contaminants through the gravitational settling of fine sediments and floatation of hydrocarbons while preventing the re-suspension or scour of previously captured pollutants. CDS Units shall be inspected monthly and maintained quarterly or as necessary.

LONG TERM POLLUTION PREVENTION:

MAINTENANCE OF LANDSCAPED AREAS:

Fertilizers used for landscaping and lawn areas shall be slow release, low-nitrogen types (<5%) and shall not be used within 25 feet of a wetland resource area, and pesticides/herbicides shall not be used within 100 feet of a wetland resource area. Furthermore, the use of any fertilizers, pesticides, and herbicides shall be in accordance with the manufacturer's recommendations.

WINTER MAINTENANCE OF WALKS AND DRIVES:

Snow storage shall take place on pervious surfaces to the extent practicable to allow the snowmelt to filter through the soil, leaving behind sand and debris that can be removed in the springtime. Snow shall not be stockpiled in drainage collection areas or conveyance channels as this may block the system causing flooding. Furthermore, snow shall not be stored in or within 25 feet of a wetland resource area. No road salt, sodium chloride, or other deicing chemicals shall be used on paved surfaces within 25 feet of a wetland resource area.

STORAGE OF WASTE PRODUCTS:

Any outdoor storage of waste products shall be covered to prevent rainfall from picking up contaminants from the waste. This requirement should include any dumpster(s) which shall

have the lid(s) closed when not being loaded or unloaded.

ILLICIT DISCHARGES:

There shall be no illicit discharges to the stormwater management system. Illicit discharges are defined by 310 CMR 10.04 as follows:

"Illicit discharge means a discharge that is not entirely comprised of stormwater. Notwithstanding the foregoing, an illicit discharge does not include discharges from the following activities or facilities: firefighting, water line flushing, landscape irrigation, uncontaminated ground water, potable water sources, foundation drains, air conditioning condensation, footing drains, individual resident car washing, flows from riparian habitats and wetlands, dechlorinated water from swimming pools, water used for street washing and water used to clean residential buildings without detergents."
Prior to the discharge of stormwater runoff to the post-construction stormwater best management practices, an Illicit Discharge Compliance Statement shall be submitted to the Haverhill Conservation Commission verifying that no illicit discharges exist on the site.

EMERGENCY SPILLS

The owner shall provide personnel with a list of emergency contact phone numbers to use to report a spill. At a minimum the list should include the DEP Emergency Response Section, an environmental cleanup contractor such as Clean Harbors, Inc., the Haverhill Fire Department, and a contact person/phone number for the owner:

- DEP Emergency Response **1(888)304-1133**
- Clean Harbors, Inc. **1(800)645-8265**
- Haverhill Fire Department **911 or (978) 373-3833**
- Owner (Northern Essex Community College) **(978) 556-3922**

While the above-listed phone numbers are current as of the writing of this O&M Plan, the owner shall be responsible for verifying these numbers prior to distribution to the homeowners. Additionally, the owner shall update and redistribute a list of emergency contact phone numbers to the homeowners every other year, or sooner should any changes occur.

STORMWATER MANAGEMENT SYSTEM INSPECTION/MAINTENANCE LOG
Northern Essex Community College Lower Field

Date: _____

Name: _____

Supervisor Sign off: _____

STRUCTURAL COMPONENT	SPECIFIC MAINTENANCE OR INSPECTION TASK	REPAIR NEEDED?	RECOMMENDED ADDITIONAL MAINTENANCE AND COMMENTS