Nitsch Engineering

www.nitscheng.com
186 Lincoln Street, Suite 200
Boston, MA 02111-2403
T: 617-338-0063
F: 617-338-6472

# Long-Term Pollution Prevention Plan and Stormwater Operation and Maintenance Plan

Project: Tahanto Regional Middle/High School
Location: 1001 Main Street, Boylston, MA 01505

Owner: Town of Boylston School Department
221 Main Street
Boylston, MA 01505

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Prepared by: Nitsch Engineering, Inc.
186 Lincoln Street, Suite 200
Boston, MA 02111-2403
(617) 338-0063

Nitsch Project: 7389.3

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## PURPOSE:

This Document has been prepared to set forth the Long-Term Pollution Prevention Plan and the Operation and Maintenance Plan for the stormwater management system for the Tahanto Regional Middle/High School. This Document has been prepared in compliance with Standards 4 and 9 of the 2008 Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards, which state:

Standard 4:

*The Long Term Pollution Prevention Plan shall include the proper procedures for the following:*

- *Good housekeeping;*
- *Storing materials and waste products inside or under cover;*
- *Vehicle washing;*
- *Routine inspections of stormwater best management practices;*
- *Spill prevention and response;*
- *Maintenance of lawns, gardens, and other landscaped areas;*
- *Storage and used of fertilizers, herbicides, and pesticides;*
- *Pet waste management;*
- *Operation and management of septic systems; and*
- *Proper management of deicing chemicals and snow*

Standard 9:

*The Long-Term Operation and Maintenance Plan shall at a minimum include:*

1. *Stormwater management system(s) owner(s);*
2. *The party or parties responsible for operation and maintenance, including how future property owners shall be notified of the presence of the stormwater management system and the requirement for operation and maintenance;*
3. *The routine and non-routine maintenance tasks to be undertaken after construction is complete and a schedule for implementing those tasks;*
4. *A plan that is drawn to scale and shows the location of all stormwater BMPs in each treatment train along with the discharge point;*
5. *A description of public safety features; and*
6. *An estimated operations and maintenance budget.*

# SECTION 1: LONG-TERM POLLUTION PREVENTION PLAN

## 1.0 INTRODUCTION

This Long-Term Pollution Prevention Plan (LTPPP) for Tahanto Regional Middle/High School, located at 1001 Main Street in Boylston, MA, was prepared by Nitsch Engineering. The plan is required under Standard 4 of the Massachusetts Stormwater Handbook (2008) to provide the information for pollution prevention and source control for implementation at Tahanto Regional Middle/High School following construction.

The Town of Boylston shall implement this Long-Term Pollution Prevention Plan and proactively conduct operations at the site in an environmentally responsible manner. Compliance with this Long-Term Pollution Prevention Plan does not in any way dismiss the Owner, property manager, or occupants of the development from compliance with other applicable Federal, State or local laws.

## 1.1 PRACTICES FOR SOURCE CONTROL AND POLLUTION PREVENTION

**Good Housekeeping:**
Occupants should follow good housekeeping procedures to reduce the possibility of accidental releases and to reduce safety hazards, which shall include but not be limited to the following:

- Proper handling and storage of solid wastes;
- Proper handling, storage and inventory of household chemicals;
- Prompt cleanup and removal of minor spills and releases; and
- The owner of the facility shall contract for solid waste disposal and recycling.

**Storing materials and waste products:**
All chemical and hazardous materials should be stored under cover or inside, to prevent leaks and spills. Drip pans or spill containment systems shall be used to prevent chemicals from entering the drainage system. The storage areas for materials and waste products shall be inspected at least once per year to determine amount and type of material on site and if the material requires disposal.

Keep liquid wastes segregated. Many fluids can be recycled through hazardous waste disposal companies, as long as they are not mixed.

Recycle motor oil, oil filters, antifreeze, batteries, solvents, lubricants, tires, and metal filings from grinding and polishing metal parts. The Owner shall separate these items from common trash items. These items are not trash, and are illegal to dump. The Owner shall contact a hazardous waste hauler for proper disposal or take any old or unwanted pesticides to a Household Hazardous Waste Collection Center.

Liquid petroleum products (gasoline/motor oil) shall be stored in approved containers and secured in the building with access limited to the janitors and principal. It is expected that only a

small amount of liquid petroleum products, approximately two (2) gallons, shall be stored onsite.

In addition, an above-ground 8,000-gallon double-walled tank shall provide fuel oil storage for the boiler system. The tank shall have an alarm for leak detection. As required in the MEPA ENF Certificate, spill prevention measures shall be utilized in case of any accidental oil spills. The outlet pipe of each catch basin in the vicinity of the above-ground tank shall have a gate valve so that any spill can be contained within the catch basins.

The Tahanto Regional Middle/High School science program requires the storage and usage of chemicals for controlled science demonstrations. Laboratory safety measures shall be utilized to prevent the misuse of these chemicals. Access to the locked chemical storage room shall be limited to science teachers, custodians, and the school principal. All chemicals shall be stored in their approved containers (either glass, plastic, metal). Any chemical wastes from the school shall discharge to the on-site 5,000-gallon double walled acid waste tank that be equipped with an alarm system.

All waste materials should be collected and stored in securely lidded dumpster(s) or other secure containers as applicable to the material. Said dumpsters and containers shall be monitored by the school facilities department and emptied by a licensed waste disposal contractor on a regular basis.
Keep dumpster lids closed and the areas around them clean. Do not fill the dumpsters with liquid waste or hose them out.

Sweep areas around the dumpster regularly and put the debris in the garbage, instead of sweeping or hosing it into the parking lot.

**Vehicle Washing:**
Vehicle washing shall not occur on the property.

**Spill Prevention and Response:**
The Owner shall implement release response procedures for releases of significant materials such as fuels, oils, or chemical materials onto the ground or other area that could reasonably be expected to discharge to surface or groundwater.

- Reportable quantities shall immediately be reported to the applicable Federal, State, and local agencies as required by law.

- Applicable containment and cleanup procedures shall be performed immediately. Impacted material collected during the response must be removed promptly and disposed of in accordance with Federal, State and local requirements. A licensed emergency response contractor may be required to assist in cleanup of releases depending on the amount of the release, and the ability of the Contractor to perform the required response.

- Reportable quantities of chemicals, fuels, or oils are established under the Clean Water Act and enforced through DEP.

**Maintenance of Lawns, Gardens, and other Landscaped Areas:**
Pesticides and fertilizers shall not be used on the property. Grass clippings, pruned branches and any other landscaped waste should be disposed of or composted in an appropriate location. No irrigation shall be used in the landscaped areas for this project.

**Storage of Fertilizers, Herbicides, and Pesticides:**
No fertilizers, herbicides, or pesticides shall be stored or used on the property.

**Pet Waste Management:**
Pet waste contributes to poor water quality that affects the drainage system and surrounding water bodies. The property owner shall implement a cleanup program where pet owners must put the pet waste into bags and dispose of the waste in the trash or in the sewer system.

**Operation and Maintenance of Septic Systems:**
Sewage discharged to an onsite sanitary sewer system shall be inspected and septic tanks pumped according to DEP guidelines.

Chemicals, fertilizers, and pesticides shall not be disposed of in the onsite sanitary sewer system. These items shall be disposed of according to Federal, State, and local regulations.

**Management of Deicing Chemicals and Snow:**
The qualified contractor selected for snow plowing and deicing shall be made fully aware of the requirements of this section.

No road salt (sodium chloride) shall be stored onsite. The use of magnesium chloride de-icing product with a 0.5 to 1.0 percent sodium chloride mix for snow and ice treatment is permitted. The product shall be stored in a locked room inside the building and shall be used at exterior stairs and walkways. The snow plow contractor shall adhere to these magnesium chloride use and storage requirements.

During typical snow plowing operations, snow shall be pushed to the designated snow removal areas noted on the Snow Storage Plan (Figure A). Snow shall not be stockpiled in the bioretention basin, infiltration areas, or any other drainage system as determined by the Conservation Commission. In severe conditions where snow cannot be stockpiled on site, the snow shall be removed from the site and properly disposed of in accordance with DEP Guideline BRP601-01.

Before winter begins, the property owner and the contractor shall review snow plowing, deicing, and stockpiling procedures. Areas designated for stockpiling should be cleaned of any debris. Street and parking lot sweeping should be followed in accordance with the Operation and Maintenance Plan (Section 2).

## 1.2 COORDINATION WITH OTHER PERMITS AND REQUIREMENTS

Certain conditions of other approvals affecting the long term management of the property shall be considered part of this Long Term Pollution Prevention Plan. The Owner shall become

familiar with those documents and comply with the guidelines set forth in those documents.

# SECTION 2: OPERATION AND MAINTENANCE PLAN

## 2.0 INTRODUCTION

This Operation and Maintenance Plan (O&M Plan) for Tahanto Regional Middle/High School, located at 1001 Main Street in Boylston, MA, was prepared by Nitsch Engineering. The plan is required under Standard 9 of the 2008 MassDEP Stormwater Handbook to provide best management practices for implementing maintenance activities for the stormwater management system in a manner that minimizes impacts to wetland resource areas.

The Town of Boylston shall implement this O&M Plan and proactively conduct operations at the site in an environmentally responsible manner. Compliance with this O&M Plan does not in any way dismiss the Owner from compliance with other applicable Federal, State or local laws.

Routine maintenance during construction and post-development phases of the project, as defined in the Operation and Maintenance Plan, shall be permitted without amendment to the Order of Conditions. A continuing condition in the Certificate of Compliance shall ensure that maintenance can be performed without triggering further filings under the Wetlands Protection Act.

All stormwater best management practices (BMPs) shall be operated and maintained in accordance with the design plans and the Operation and Maintenance Plan approved by the issuing authority. The responsible party (Town of Boylston) shall:

a. Maintain an operation and maintenance log for the last three years, including inspections, repairs, replacement and disposal (for disposal the log shall indicate the type of material and the disposal location). This is a rolling log in which the responsible party records all operation and maintenance activities for the past three years.

b. Make this log available to MassDEP and the Conservation Commission upon request; and

c. Allow members and agents of the MassDEP, the Department of Conservation and Recreation Division of Water Supply Protection, and the Conservation Commission to enter and inspect the premises to evaluate and ensure that the responsible party (Town of Boylston) complies with the Operation and Maintenance requirements for each BMP.

## 2.1 STORMWATER OPERATION AND MAINTENANCE REQUIREMENTS

The stormwater management system shall be maintained. The repair of any component of the system shall be made as soon as possible to prevent any potential pollutants (including silt) from entering the resource areas or the existing closed drainage system. Routine inspections shall be completed.

**Deep Sump and Hooded Catch Basins**

Catch basins shall be inspected four times per year, including after the foliage season. Other inspection and maintenance requirements include:

- Units shall be cleaned (organic material, sediment and hydrocarbons removed) four times per year or whenever the depth of deposits is greater than or equal to one half the depth from the bottom of the invert of the lowest pipe in the basin.
- Cleanout shall always occur after street sweeping. If any evidence of hydrocarbons is found during inspection, the material shall be immediately removed using absorbent pads or other suitable measures and disposed of legally. Remove other accumulated debris as necessary. Transport and disposal of accumulated sediment off-site shall be in accordance with applicable local, state and federal guidelines and regulations.

**Area Drains**

Area drains shall be inspected and/or cleaned at least once per year.

**Water Quality Units (Proprietary Separators)**

Maintenance of proprietary separators shall be performed according the recommendations set forth by the manufacturer. Inspection and maintenance procedures for proprietary devices are provided below:

Units shall be inspected post-construction, prior to being put into service. Units shall be inspected not less than twice per year following installation and no less than once per year thereafter. Units shall be inspected immediately after any oil, fuel or chemical spill. All inspections shall include checking the oil level and sediment depth in the unit. Removal of sediments/oils shall occur per manufacturer recommendations. A licensed waste management company shall remove captured petroleum waste products from any oil, chemical or fuel spills and dispose. OSHA confined space entry protocols shall be followed if entry into the unit is required.

**Sediment Forebay**

A sediment marker shall be installed in the sediment forebay to determine the depth of sediment accumulation. At a minimum, inspect the sediment forebay monthly and clean out at least four times per year. Stabilize the flood and sidewalls of the forebay before making it operational. When mowing grasses, keep the height no greater than 6 inches. Check for signs of erosion and repair as needed. After removing sediment, replace any vegetation damaged during the clean-out by either reseeding or re-sodding. When reseeding, incorporate practices such as hydroseeding with a tackifier, blanket, or similar practice to ensure that no scour occurs in the forebay.

**Bioretention Area**

Annual maintenance of all components of the bioretention area, including plants, soil, and

mulch, shall be performed to ensure the overall success. Table 1, below, outlines required maintenance activities.

**Table 1. Bioretention area maintenance recommendations**

| Location | Description | Frequency | Time of Year |
|---|---|---|---|
| Surface | Inspect and remove trash | Monthly | Year round |
| Soil | Inspect and repair erosion | Monthly | Year round |
| Organic Layer | Remulch void areas | Annually | Spring |
| | Remove previous mulch layer before applying new layer (optional) | Annually | Spring |
| Plants | Water vegetation at end of day for 14 consecutive days after planting | Immediately after planting | As needed |
| | Remove and replace all dead and diseased vegetation that cannot be treated | Annually | Spring |
| | Treat all diseased trees and shrubs | As needed | Variable |

During and after storm events, the length of time standing water remains in the bioretention area shall be recorded.

- If the time is greater than 72 hours, thoroughly inspect the basin for signs of clogging.
- A corrective action plan shall be developed by a qualified professional to restore infiltrative function. The owners of the site shall take immediate action to implement these corrective measures.

## Infiltration Basin

The infiltration basin shall be inspected and maintained after major storm events (rainfall totals greater than 2.5 inches in 24 hours) during the first three months of operation and twice a year and when there are discharges through the outlet control structure thereafter. Additionally, all pretreatment BMPs shall be inspected in accordance with the minimal requirements specified for those practices and after all major storm events. Inspections shall include the following measures:

- During and after major storm events, the length of time standing water remains in the basin shall be recorded.
    - If the time is greater than 72 hours, thoroughly inspect the basin for signs of clogging.
    - A corrective action plan shall be developed by a qualified professional to restore infiltrative function. The Site Owner shall take immediate action to implement

these corrective measures.

- Examine the outlet structure for evidence of clogging or outflow release velocities that are greater than the design velocity.
-

Identify areas of sediment accumulation, differential settlement, cracking, and erosion within the basin.

- Inspect embankments for leakage and tree growth.
- Examine the health of the vegetation within the basin and on the embankments.

Corrective measures shall be taken immediately as warranted by the inspections. If any evidence of hydrocarbons is found during inspection, the material shall be immediately removed using absorbent pads or other suitable measures and legally disposed.

- Preventative maintenance shall include the following activities:
- Mow the buffer area and basin bottom and side slopes, if vegetated.
- Remove trash, debris, and accumulated

**Subsurface Infiltration Structures and Dry Wells**

- Subsurface infiltration structures shall be inspected twice per year. The inlets shall be inspected, and all debris that may clog the system shall be removed.

**Stormwater Outfalls**

- Flared end sections and associated riprap spillways shall be inspected at least once per year and after major storm events (rainfall totals greater than 2.5 inches in 24 hours) to ensure that the stability of the outlet area is maintained. The outfall area shall be kept clear of debris such as trash, branches, and sediment. Repairs shall be made immediately if riprap displacement or downstream channel scour is observed.

**Porous Pavement**

Porous pavement is proposed in the new parking lot at the west end of the site.

Frequent cleaning and maintenance of the porous pavement surface is critical to prevent clogging. Frequent vacuum sweeping along with jet washing of porous pavement is required.

No winter sanding shall be conducted on the porous surface. For proper maintenance:

- Minimize salt use during winter months.
- No winter sanding is allowed.
- Keep landscaped areas well maintained to prevent soil from being transported onto the pavement.
- Regularly monitor the porous pavement surface to check for deterioration and make sure that it drains properly after storm events.
- Clean the surface of each porous pavement area using vacuum sweeping as required to keep the pavement functioning as designed. At a minimum, the porous pavement shall be cleaned after the winter season and every three months thereafter. This requirement may be adjusted as needed, based on regular visual inspections of the porous pavement surface.

- Never reseal or repave with impermeable materials.
- Once per year, the infiltrative capacity of the porous pavement should be tested by running a hose over the porous pavement area for 30 minutes.
- Sections of damaged porous asphalt (rutting, etc.) can be repaired by heating and rerolling the asphalt.
- When infiltrative capacity of porous pavement is reduced to less than the design rate, the porous pavement shall be replaced by milling to the choker course.

## 2.2 STREET SWEEPING

Street sweeping shall be performed anytime there is significant debris present on roads and parking lots that could negatively impact any component of the stormwater management system. Sweepings must be handled and disposed of properly according to the Boylston Conservation Commission. At the very minimum, two street sweepings shall be done per year. The first sweeping of the year shall be done in for March (or earlier if deemed necessary by the Owner) before spring rains wash sand and salt from winter applications into any component of the stormwater management system. The last sweeping of the year shall be done in November (or before the first snow storm) to remove leaves and other tree debris before significant snow falls.

## 2.3 REPAIR OF THE STORMWATER MANAGEMENT SYSTEM

The stormwater management system shall be maintained. The repair of any component of the system shall be made as soon as possible to prevent any potential pollutants including silt from entering the resource areas or the existing closed drainage system.

## 2.4 REPORTING

The Owner shall maintain a record of drainage system inspections and maintenance (per this Plan) and submit a yearly report to the Boylston Conservation Commission and the Department of Conservation and Recreation Division of Water Supply Protection.

## STORMWATER MANAGEMENT SYSTEM INSPECTION FORM

Tahanto Regional Middle/High School
Boylston, MA
Date:_____

Inspected by:_____

| Component | Status/Inspection | Action Taken |
|---|---|---|
| Deep Sump Catch Basins, Area Drains and Drain Manholes | | |
| Sediment Forebay | | |
| Bioretention Basin | | |
| Subsurface Infiltration System and Dry Wells | | |
| Water Quality Inlet | | |
| Stormwater Outfalls | | |
| Infiltration Basin including inlets and outlets | | |
| Porous Asphalt | | |
| General site conditions – evidence of erosion, etc. | | |

**SUBMIT COPIES OF STORMWATER MANAGEMENT SYSTEM INSPECTION FORM TO THE BOYLSTON CONSERVATION COMMISSION WITH THE YEARLY REPORT**

Nitsch Engineering

**FIGURE A. SNOW STORAGE PLAN**