

Town of Acushnet Stormwater Review Board

Regulations for Stormwater Quality and Quantity Control in Acushnet, Massachusetts

1. Authority and Effective Date:

These regulations are adopted under the provisions of the Stormwater Management Bylaw of the Town of Acushnet. These Regulations are adopted by the Stormwater Review Board (the Board) on (date) and shall become effective on (date)

2. Purpose and Goals:

The purpose of this Regulation is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-development stormwater runoff and nonpoint source pollution associated with new development and redevelopment.

3. General Requirements:

Control of stormwater runoff shall meet the design criteria as stated in the Department of Environmental Protection's Massachusetts Stormwater Handbook (regardless of the presence or absence of jurisdiction under any other General Laws of the Commonwealth), unless otherwise stated in this Regulation and Appendix A and B. The design, construction, and maintenance of Stormwater Best Management Practices (BMPs) shall be consistent with the following:

1. discharging runoff directly into rivers, streams, watercourses, or wetlands, is prohibited;
2. natural watercourses shall not be dredged, cleared of vegetation, deepened, widened, straightened, stabilized, or otherwise altered;
3. neighboring properties shall not be used in the stormwater management plan unless a recordable easement has been granted for such use, and a copy of the easement has been submitted to the issuing authority as part of the SMP;
4. the site shall be graded so that surface water shall be directed into the stormwater management system;
5. intermittent watercourses such as swales shall be vegetated;
6. prior to discharging any stormwater runoff into a BMP, the following conditions must also be met:
 - a. the BMP shall be installed according to applicable standards and specifications,
 - b. all components of the BMP shall be stabilized; and
 - c. all upland areas contributing stormwater runoff to the BMP shall be stabilized (non-erosive);
7. where stormwater basins are designed with a permanent pool depth, a post and rail fence with pressure treated posts or locust posts, with a backing of plastic coated wire fencing shall be used when the basin is in close proximity to residential units, and shall further inhibit access by a planting of rugosa rose (*Rosa rugosa*) surrounding the basin;
8. operational failure of the infiltrative capacity of the system must be manifested by

indicators that are readily visible.

4. Submittal Requirements:

The application for a stormwater discharge permit shall consist of submittal of a Stormwater Management Plan (SMP) in Appendix A and B and applicable fees to the Board. The SMP shall contain sufficient information for the Board to evaluate the environmental impact, and the effectiveness and acceptability of those measures proposed by the applicant for reducing adverse impacts from stormwater. The Stormwater Management Plan shall contain all information listed in Appendix A and B as well as any other information requested by the Board to evaluate the Stormwater Management Plan.

5. Design Requirements:

The control of stormwater runoff shall meet the design requirements for both flood (volume and peak discharge) control and nonpoint source pollution as indicated in Appendix A and B and in Volume 3 of the Massachusetts Stormwater. Design Requirements of the Massachusetts Stormwater Handbook (the Handbook) with the following exceptions and additions:

- **Standard 4 – Water Quality**
Water Quality Depth (D_{wq}) as described in Volume 3 Chapter 1, page 32 shall be 1.25 inches for all projects. Prior to discharge into all treatment BMPs, the removal of a minimum of 44% TSS is required.
- **Standard 11– Volume Control**
The volume of stormwater discharged (V_{10}) for the ten (10)-year, twenty-four (24) hour design storm shall not increase as from predevelopment conditions. If the stormwater discharge is into the ocean or estuary, the control of the discharge volume (V_2) may be limited to the predevelopment conditions of the two (2) year, twenty-four (24) hour design storm,. When using infiltration to control V_{10} or V_2 , basin sizing shall be determined utilizing the static method as described in Volume 3 Chapter 1, page 17. For the purposes of volume control, basin design does not require a drawdown time of 72 hours, and shall basins not be located on Hydrologic Group D soils.
- **Design Point:** In addition, the design points shall be at the edge of wetlands, the property line and/or the existing stormdrain system, whichever is intercepted by the flow path first. For each pre-development design point there shall be a corresponding post-development design point.
 - **LID Credits:** LID credits as stipulated in the Handbook are not recognized by this Bylaw. The Board encourages reduction of impervious areas and the disconnecting of impervious surfaces, both of which are recognized in TR-55 and TR-20 modeling. For some LID practices research is ongoing and use of RCNs not listed below should be reviewed and approved by the Buzzards Bay National Estuary Program (i.e. practices such as block pavers). For the LID landuses listed below, use the Runoff Curve Number provided:
 - Greenroofs - 88¹

¹ The RCN of 88 is based on study by Amy Moran with 4 inches of growth medium. Curve numbers for differing depths may be accepted by the Planning Board provided proper documentation is provided to and approved by the Buzzards Bay National Estuary Program.

- Paved areas with tree canopy - 92²
- Gravel road or parking lot - 95
- Gravel road or parking lot with tree canopy - 89
- Subdivisions by special permit, user defined³
- Water - 100
- Bioretention facility - 80⁴
- Bioretention with tree canopy -74
- Lawn, no soil amendment - 80
- Lawn with 4" Compost Soil Amendment⁵
 - HSG A - 36
 - HSG B - 58
 - HSG C – 72
 - HSG D – 77
- **Design Storms:** Use the following rainfall amounts for the corresponding design storms (Storms are based on a 24 hour event using the “Atlas of Precipitation Extremes for the Northeastern United States and Southeastern Canada.”)⁶:
 - 2 year 3.4 inches
 - 10 year 5.1 inches
 - 25 year 6.2 inches
 - 100 year 9.0 inches
- **Impervious Cover:** Impervious cover is measured from the site plan and includes all impermeable surfaces and any other surface that is not vegetated.
- **Treatment Train Calculations:** To achieve the water quality discharge limits, treatment trains are permitted. Calculations as to the additive nature of specific BMP strategies must be documented using the Handbook, but street sweeping shall receive no credit.
- **Prohibited Practices:** The following practices are prohibited
 - Pervious pavements

² Tree canopy may be determined by documentation of species canopy size at ten years growth. For more information on the effect of trees on the RCN use CITYgreen software from American Rivers.

³ RCN for a subdivision must consider the lot itself but the lot share of the road, sidewalk etc. Since larger lots will be less than 30% impervious, a disconnected impervious design should be considered.

⁴ North Carolina State University is performing extensive research on this subject. Visit their website for the latest research results. Biofilters treat pollutants but also reduce volume through evapotranspiration.

⁵ Installed pursuant to “Hydrologic Response on Residential Scale Lawns on Till Containing Various Amounts of Soil Amendment.”

⁶ For work in or near wetlands, additional design storms may be required to meet the requirements of the Handbook

6. Inspection and Maintenance

All stormwater management systems shall be inspected and maintained in accordance with these regulations and the Handbook. The applicant shall post acceptable surety to cover the cost of maintenance of the selected stormwater management system. The cost shall cover anticipated maintenance costs (including full or partial replacement, if necessary) for a design life of twenty (20) years. The surety mechanism shall be structured to allow the Town to draw funds as necessary to conduct maintenance activities.

After the stormwater management system has been constructed and before the Performance Guarantee for the development has been released, the applicant shall submit an "as-built" plan detailing the actual stormwater management system as installed. The Consulting Engineer for the Board shall inspect the system to confirm its as-built features. This engineer shall also evaluate the effectiveness of the system in an actual storm. If the system is found to be inadequate by virtue of physical evidence of operational failure, even though it was built as called for in the Permit, it shall be corrected before the performance guarantee is released. Examples of inadequacy shall be limited to: errors in the infiltrative capability, errors in the maximum ground water elevation, failure to properly define or construct flow paths, or erosive discharges from basins.

All stormwater management facilities must undergo inspections to document maintenance and repair needs and ensure compliance with the requirements of this bylaw and accomplishment of its purposes as specified in the O&M Plan. A maintenance agreement between the owner and the Board shall be executed for privately-owned stormwater management systems that specifies the Responsible Party for conducting long term inspections. At a minimum, inspections shall occur during the first year of operation and at least once every three years thereafter.

Inspection reports shall be submitted to and maintained by the Board for all stormwater management systems. Inspection reports for stormwater management systems shall include the name of the inspector, the date of inspection; and the condition of the following:

1. Pretreatment devices
2. Vegetation or filter media
3. Fences or other safety devices
4. Spillways, valves, or other control structures
5. Embankments, slopes, and safety benches
6. Reservoir or treatment areas
7. Inlet and outlet channels and structures
8. Underground drainage
9. Sediment and debris accumulation in storage and forebay areas (including catch basins)
10. Any nonstructural practices
11. Any other item that could affect the proper function of the stormwater management system

The Responsible Parties provide records of all maintenance and repairs to the Board upon request. The responsible Parties make records of the installation and of all maintenance and repairs, and shall retain the records for at least 5 years. These records shall be made available to the Board during inspection of the facility and at other reasonable times upon request.

If a responsible person fails or refuses to meet the requirements of the inspection and maintenance agreement, the Board, after thirty (30) days written notice (except, that in the event the violation constitutes an immediate danger to public health or public safety, 24 hours notice shall be sufficient), may correct a violation of the design standards or maintenance requirements by performing the necessary work to place the facility or practice in proper working condition. The Board may assess the owner(s) of the facility for the cost of repair work, which shall be a lien on the property.

After notification is provided to the person responsible for carrying out the maintenance plan of any deficiencies discovered from an inspection of a stormwater management system, the person responsible for carrying out the maintenance plan shall have 30 days or other time frame mutually agreed to between the Board and the person responsible for carrying out the maintenance plan to correct the deficiencies. The Board shall then conduct a subsequent inspection to ensure completion of repairs.

7. Definitions

Except for the following definitions, terms are defined in the MA Department of Environmental Protection's Nonpoint Source Management ("The Mega-manual"), June 1993.

BMP's - Best management practices are structural, non-structural and managerial techniques that are recognized to be the most effective and practical means to prevent and/or reduce nonpoint source pollution.

Water quality volume- the volume generated by the first 1.25 inches of stormwater runoff. This first inch of runoff carries the majority of accumulated pollutants from impervious surfaces. The first flush volume in cubic feet (V_{WQ}) is determined by the following formula:

$$V_{WQ} = (1.25/12 \text{ inches})(R_{WQV})(\text{Site Area in square feet})$$

where

$$R_{WQV} = 0.05 + 0.009(I)$$

I = the % impervious area. Impervious area is defined as any manmade cover that is not vegetated. In residential areas, the % impervious is obtained from the TR-55 table "Runoff Curve Numbers for Urban Areas, Residential District by Average Lot Size."

Peak Discharge - the maximum rate of flow during a storm, usually in reference to a specific design storm event (i.e. 2-yr, , 10-yr, 25-yr, 100-yr., 24 hour storm event).

Soil Mottling - Redoximorphic features.

Surface Water Quality Classifications - waters designated for protection under 314 CMR 4.04 (2).

Appendix A

Stormwater Management Plan

A Stormwater Management Plan must be submitted with the permit application to document compliance with the Regulations. As a minimum, the Stormwater Management Plan (SMP) must contain the design plan data and information (see The Submittal of Stormwater Design Plans checklist) and a Stormwater Report (see The Submittal of Stormwater Report checklist). The Stormwater Report (SR) must be organized into sections that correspond to the categories listed in the Report Checklist (e.g., Project Type, Standard 1 etc.).

To ensure that the SMP is complete, applicants are required to fill in the both checklists indicating that the specified information has been included in the SMP. If any of the information specified in the checklists has not been submitted, the applicant must provide an explanation. In addition the SMP must contain the engineering computations and supporting information set forth in this regulation and Volume 3 of the Handbook. The Stormwater Plan must be prepared by a Registered Professional Engineer (RPE) licensed in the Commonwealth. The Standards cited below are found in the Handbook.

The Stormwater Management Plan must include:

- Applicant name, address, and telephone number
- Project address, parcel number, and locus map
- Name of Firm and Registered Professional Engineer that prepared the Plan
- Long-Term Pollution Prevention Plan required by Standards 4-6.
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8
- Operation and Maintenance Plan required by Standard 9
- The Stormwater Checklists completed and stamped by a Registered Professional Engineer (attached) that certifies that the Stormwater Report contains all required submittals.⁷

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train.

As noted in the Checklists, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Handbook and Standard 11, or if those standards are made more stringent by these regulations. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Handbook.

⁷ The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

Stormwater Checklist and Certification

The following checklists are intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide the Board and other reviewing authorities with a summary of the components necessary to comprise a comprehensive Stormwater Report that addresses the eleven Stormwater Standards. *Note:* Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

The completed checklists must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook and the Regulations for Stormwater Quality and Quantity Control in Acushnet, Massachusetts

I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature _____
Signature, Date

Appendix B

Applicant Check-List for The Submittal of Stormwater Design Plans

- **General**

- ☐ contact information. The name, address, and telephone number of all persons having a legal interest in the property, and the tax reference number and parcel number
- ☐ locus map;

- **Pre-development conditions:**

- ☐ location of existing watersheds and subwatersheds on the property, as well as upgradient areas contributing runoff to the property;
- ☐ location of all surface waters and wetlands on or adjacent to the site;
- ☐ location of all utilities and easements,
- ☐ location of all public/private wells and/or wastewater treatment facilities on or within 100 feet of the property
- ☐ the delineation of the 100 year flood elevation as indicated on the FIRM maps. If FIRM maps do not exist or if the waterbody or watercourse 100-year flood elevation is not indicated on the map, the elevation shall be calculated utilizing an appropriate methodologies such as NRCS TR-55 or TR-20 or HEC2. **Note: The floodplain location determined by the FIRM maps are approximate. When a specific elevation is given, the location of the floodplain shall correspond to that elevation. .**
- ☐ the existing land uses and principal vegetation types sufficient to determine an appropriate curve number;
- ☐ the topography described at 1 foot intervals with areas of steep slopes over 15% highlighted;
- ☐ the soil types on the site and the hydrological soil groups based the most current Natural Resource Conservation Service soils map of the site (available at the NRCS office in Wareham) and verified as required by the Volume 3 of the Handbook or on sites less than 5 acres, a high intensity soil survey performed by a certified soil scientist with a minimum soil map unit of 0.04 acres;
- ☐ any areas on the site where infiltration rate is greater than 2.4 inches per hour.
- ☐ the flow path(s). The flow length for pre-development sheet flow to determine the time of concentration (Tc) or travel time (Tt) shall not exceed 50 feet;
- ☐ the design points for each watershed; The design points shall be at the edge of wetlands, the property line and/or the existing storm drain system, whichever is intercepted by the flow path first. For each pre-development design point there shall be a corresponding post-development design point.
- ☐ areas of ponding or swamping.

• **Postdevelopment conditions:**

- ☐ location of existing watersheds and subwatersheds on the property, as well as upgradient areas contributing runoff to the property.
- ☐ location of all surface waters and wetlands on or adjacent to the site;
- ☐ changes in topography at 1 foot intervals;
- ☐ location of all utilities and easements,
- ☐ location of all public/private wells and/or wastewater treatment facilities on or within 100 feet of the property
- ☐ areas where vegetation will be cleared or otherwise altered;
- ☐ the proposed development layout including locations of:
 - ☐ roadways, buildings, common parking areas, other impervious surfaces, and undisturbed lands,
 - ☐ land Uses with Higher Potential Pollutant Loads (LUHPPL) and,
 - ☐ drainage systems and stormwater treatment facilities.
- ☐ areas to be utilized in overland flow, i.e. grass swales and filter strips, showing:
 - ☐ proposed vegetation and,
 - ☐ the soil susceptibility to erosion (using the NRCS classification).
- ☐ the flow path(s) for the 2-, 10-, 25-, and 100-year 24 hour storm event. The flow length for post-development sheet flow shall not exceed 50 feet
- ☐ the design points for each watershed and or subwatershed;
- ☐ location and elevation of soil test pits.
- ☐ maximum groundwater levels at the proposed BMPs locations.

**Applicant Check-List
for
The Submittal of Stormwater Management Report**

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

- ☐ New Development
- ☐ Redevelopment
- ☐ Mix of New Development and Redevelopment

Standard 1: No New Untreated Discharges

- ☐ No new untreated discharges
- ☐ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Standard 2: Peak Rate Attenuation

- ☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

- ☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm
- ☐ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-, 10-, and 25-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

- ☐ Soil logs and test results for each proposed BMPs control system site (flood, volume and pollution control BMP's) in accordance with the Handbook.
- ☐ Sizing the infiltration, BMPs is based on the following method: Circle the method used.

Static Simple Dynamic Dynamic Field⁸

- ☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.
- ☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- ☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
- ☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume only to the maximum extent practicable for the following reason:
 - ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
 - ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
 - ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable
- ☐ Calculations showing that the DEP recharge infiltration BMPs will drain in 72 hours are provided.
- ☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.
- ☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- ☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

- ☐ A Long-Term Pollution Prevention Plan (included with the SMR and with the Wetlands NOI). This plan typically includes the following:
 - Good housekeeping practices;
 - Provisions for storing materials and waste products inside or under cover;
 - Vehicle washing controls;
 - Requirements for routine inspections and maintenance of stormwater BMPs;
 - Spill prevention and response plans;

⁸ 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

- Provisions for maintenance of lawns, gardens, and other landscaped areas;
 - Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - Pet waste management provisions;
 - Provisions for operation and management of septic systems;
 - Provisions for solid waste management;
 - Snow disposal and plowing plans relative to Wetland Resource Areas;
 - Winter Road Salt and/or Sand Use and Storage restrictions;
 - Street sweeping schedules;
 - Provisions for prevention of illicit discharges to the stormwater management system;
 - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
 - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
 - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- ☐ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
- ☐ Calculations documenting that the treatment train meets the 80% TSS removal requirement and the 44% TSS removal pretreatment requirement, are provided. Note: Street sweeping will receive no TSS removal credit

- ☐ The BMP is sized (and calculations provided) based on the volume generated by the first 1.25 inches of stormwater runoff. The first flush treatment volume in cubic feet (V_{WQ}) is determined by the following formula:

$$V_{WQ} = (1.25/12 \text{ inches})(R_{WQV})(\text{Site Area in square feet})$$
 where $R_{WQV} = 0.05 + 0.009(I)$ I = the % impervious area. Impervious area is defined as any manmade cover that is not vegetated. In residential areas, the % impervious is obtained from the TR-55 table "Runoff Curve Numbers for Urban Areas, Residential District by Average Lot Size."
- ☐ If the applicant proposes to use proprietary BMPs, documentation supporting use of proprietary BMP and proposed TSS removal rate must be provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- ☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- ☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted *prior to* the discharge of stormwater to the post-construction stormwater BMPs.
- ☐ The NPDES Multi-Sector General Permit does *not* cover the land use.
- ☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- ☐ All exposure has been eliminated
- ☐ All exposure has *not* been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- ☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- ☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- ☐ Critical areas and BMPs are identified in the Stormwater Report.

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

- ☐ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
 - ☐ Bike Path and/or Foot Path
 - ☐ Redevelopment Project
 - ☐ Redevelopment portion of mix of new and redevelopment
- ☐ Certain standards are not fully met (Standard No. 1, 8, 9, 10, and 11 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

- ☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
 - Construction Period Operation and Maintenance Plan;
 - Names of Persons or Entity Responsible for Plan Compliance;
 - Construction Period Pollution Prevention Measures;
 - Erosion and Sedimentation Control Plan Drawings;
 - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
 - Vegetation Planning;
 - Site Development Plan;
 - Construction Sequencing Plan;
 - Sequencing of Erosion and Sedimentation Controls;
 - Operation and Maintenance of Erosion and Sedimentation Controls;
 - Inspection Schedule;
 - Maintenance Schedule;
 - Inspection and Maintenance Log Form.
- ☐ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.
- ☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- ☐ The project is **not** covered by a NPDES Construction General Permit.
- ☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- ☐ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

An Operation and Maintenance plan (O&M Plan) is required at the time of application. The O&M Plan shall be designed to ensure compliance with the Permit, this Regulation and that the Massachusetts Surface Water Quality Standards, 314, CMR 4.00 are met in all seasons and throughout the life of the system. The O&M Plan shall remain on file with the Board and shall be an ongoing requirement. The O&M Plan shall include:

- ☐ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
 - ☐ Name of the stormwater management system owners;
 - ☐ Party responsible for operation and maintenance and the person(s) responsible for financing maintenance and emergency repairs;
 - ☐ Schedule for implementation of routine and non-routine maintenance tasks;
 - ☐ Plan showing the location of all stormwater BMPs maintenance access areas;
 - ☐ Description and delineation of public safety features;
 - ☐ Estimated operation and maintenance budget; and
 - ☐ Operation and Maintenance Log Form.
- ☐ When the responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
 - ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
 - ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.
 - ☐ Easements shall be recorded with the Bristol County Registry of Deeds prior to issuance of a Certificate of Completion by the Board.

Standard 10: Prohibition of Illicit Discharges

- ☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- ☐ An Illicit Discharge Compliance Statement is attached;
- ☐ NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.

Standard 11: Volume Control

- ☐ Sizing the infiltration, BMPs is based on the following method: Circle the method used.

Static Simple Dynamic Dynamic Field⁹

- ☐ Recharge BMPs alone (without using Greenroofs or Biofiltration) have been sized to infiltrate the Required Volume. V_{10} or V_2
- ☐ Adequate information has been submitted for strategies used to reduce volume other than infiltration.

⁹ 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Stormwater Management Summary Form

Applicant: _____ Project Name _____

Stormwater Plan Prepared by: _____

Subwatershed # _____

| ITEM | Pre-development | Post- Development |
|-----------------------|--------------------|-------------------|
| Runoff Curve Number | | |
| Time of Concentration | | |
| Rate 1 yr | | |
| Rate 2 yr | | |
| Rate 10 yr | | |
| Rate 25 yr | | |
| Rate 100 yr | | |
| Volume 10 yr | | |
| Sq. ft. impervious | XXXXXXXXXXXXX | |
| Water Quality Volume | XXXXXXXXXXXXX X | |