

Stormwater Management Program (SWMP)

Bourne, MA - June 2019

24 Perry Avenue, Bourne, MA 02532

EPA NPDES Permit Number : MAR041094

Certification

Authorized Representative (Optional): All reports, including SWPPPs, inspection reports, annual reports, monitoring reports, reports on training and other information required by this permit must be signed by a person described in Appendix B, Subsection 11.A or by a duly authorized representative of that person in accordance with Appendix B, Subsection 11.B. If there is an authorized representative to sign MS4 reports, there must be a signed and dated written authorization.

The authorization letter is:

☒ Attached to this document (document name listed below)

THOMAS GUERINO

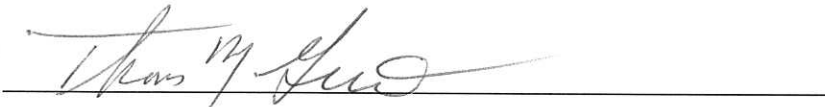
☒ Publicly available at the website below

<https://www.townofbourne.com/conservation/pages/conservation-documents>

"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."

Printed Name Thomas Guerino

Signature



Date

6/24/19

[Click Here for Revisions](#)

Background

Stormwater Regulation

The Stormwater Phase II Final Rule was promulgated in 1999 and was the next step after the 1987 Phase I Rule in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted stormwater runoff. The Phase II program expands the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted stormwater runoff. Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. Under the Phase II rule all MS4s with stormwater discharges from Census designated Urbanized Area are required to seek NPDES permit coverage for those stormwater discharges.

Permit Program Background

On May 1, 2003, EPA Region 1 issued its Final General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (2003 small MS4 permit) consistent with the Phase II rule. The 2003 small MS4 permit covered "traditional" (i.e., cities and towns) and "non-traditional" (i.e., Federal and state agencies) MS4 Operators located in the states of Massachusetts and New Hampshire. This permit expired on May 1, 2008 but remained in effect until operators were authorized under the 2016 MS4 general permit, which became effective on July 1, 2018.

Stormwater Management Program (SWMP)

The SWMP describes and details the activities and measures that will be implemented to meet the terms and conditions of the permit. The SWMP accurately describes the permittees plans and activities. The document should be updated and/or modified during the permit term as the permittee's activities are modified, changed or updated to meet permit conditions during the permit term. The main elements of the stormwater management program are (1) a public education program in order to affect public behavior causing stormwater pollution, (2) an opportunity for the public to participate and provide comments on the stormwater program (3) a program to effectively find and eliminate illicit discharges within the MS4 (4) a program to effectively control construction site stormwater discharges to the MS4 (5) a program to ensure that stormwater from development projects entering the MS4 is adequately controlled by the construction of stormwater controls, and (6) a good housekeeping program to ensure that stormwater pollution sources on municipal properties and from municipal operations are minimized.

Town Specific MS4 Background (optional)

The Town of Bourne's stormwater discharges were authorized under the 2003 MS4 Permit, and on October 1, 2018 a Notice of Intent (NOI) was submitted to US EPA to request coverage under the 2016 MS4 Permit. Due to its previous permit coverage, the Town currently implements many BMPs to demonstrate compliance with the six minimum control measures. This SWMP identifies enhancements to existing BMPs as well as new BMPs to demonstrate compliance with the 2016 MS4 Permit. The Town is in the process of revising its regulations to be certain that all development greater than one acre is reviewed by Town staff for construction and post-construction stormwater management. Existing mapping identifies known outfalls, and will be updated as needed to address 2016 MS4 Permit requirements. In addition to information included per the US EPA SWMP Template, appendices are attached to provide additional explanatory information where appropriate, as well as a schedule for implementation of BMPs throughout the five year permit term.

Small MS4 Authorization

The NOI was submitted on Oct 1, 2018

The NOI can be found at the following (document name or web address):

<https://www.townofbourne.com/conservation/pages/conservation-documents>

Authorization to Discharge was granted on TBD - will be at below website

The Authorization Letter can be found (document name or web address):

<https://www.epa.gov/npdes-permits/regulated-ms4-massachusetts-communities>

Stormwater Management Program Team

SWMP Team Coordinator

Name	George Sala	Title	DPW and Stormwater Manager
Department	Department of Public Works		
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Responsibilities			

SWMP Team

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Responsibilities			

Name	Coreen Moore	Title	Town Planner
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Responsibilities			

Name	Kayla Davis	Title	Health Inspector
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Responsibilities			

Name	Tim Lydon	Title	Town Engineer
Department	Engineering		
Phone Number	508-759-0600 x1345	Email	TLydon@townofbourne.com
Responsibilities			

Add SWMP Member

Receiving Waters

The following table lists all receiving waters, impairments and number of outfalls discharging to each waterbody segment.

OR

The information can be found in the following document or at the following web address:

Waterbody segment that receives flow from the MS4	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/DO Saturation	Nitrogen	Oil & Grease/PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Buzzards Bay	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cape Cod Canal (MA95-14) Additional survey is required to determine which are Local or Federal	13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*TMDL Completed for Bacteria Note: several additional mapped outfalls that appear to be federal
Buttermilk Bay (MA95-01)	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	*TMDL Completed for Fecal Coliform. Also impaired for Estuarine Bioassessments, and Nutrient/Eutrophication Biological Indicators; the 2000 Buzzards Bay Water Quality Assessment Report identifies nitrogen as the suspected cause of impairment

		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Click here to lengthen table

Eligibility: Endangered Species and Historic Properties

*Reminder: The proper consultations and updates to the SWMP must be conducted for construction projects related to your permit compliance where Construction General Permit (CGP) coverage, which requires its own endangered species and history preservation determination, is NOT being obtained.

Attachments:

- ☒ The results of Appendix C U.S. Fish and Wildlife Service endangered species screening determination
- ☐ The results of the Appendix D historic property screening investigations
- ☐ If applicable, any documents from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other Tribal representative to mitigate effects

These attachments are required within one year of the permit effective date and are:

- ☒ Attached to this document (document names listed below)

Bourne SWMP Attachment A - Endangered Species.pdf

- ☒ Publicly available at the website listed below

<https://www.townofbourne.com/conservation/pages/conservation-documents>

Under what criterion did permittee determine eligibility for ESA?

- ☐ Criterion A ☒ Criterion B ☐ Criterion C

Under what criterion did permittee determine eligibility for Historic Properties?

- ☒ Criterion A ☐ Criterion B ☐ Criterion C ☐ Criterion D (NH only)

Below add any additional measures for structural controls that you're required to do through consultation with U.S. Fish and Wildlife Service (if applicable):

Bourne was not required to do any additional measures for structural controls as a result of consultation with USFWS. Refer to Appendix A for more information on Endangered Species

Below add any additional measures taken to avoid or minimize adverse impacts on places listed, or eligible for listing, on the NRHP, including any conditions imposed by the SHPO or THPO (if applicable):

Not applicable. No additional measures were required in order to protect historical properties.

MCM 1

Public Education and Outreach

Permit Part 2.3.2

Objective: The permittee shall implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area. The ultimate objective of a public education program is to increase knowledge and change behavior of the public so that the pollutants in stormwater are reduced.

Examples and Templates:

[EPA's Stormwater Education Toolbox](#)

[MassDEP's Stormwater Outreach Materials](#)

Other templates relevant to MCM 1 can be found here: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#peo>

BMP: Stormwater Meetings

BMP Number (Optional) 1.1

Document Name and/or Web Address:

Description:

Continue the Advisory Committee/ Community Oversight Group that distributes literature and holds meetings open to the public. This group is known as the "Selectmen's Task Force on Local Pollution and Phase II Stormwater Management." Meetings have been ongoing and will continue. Information disseminated will include information regarding proper pet waste management, noting any existing ordinances where appropriate; proper septic system management; proper disposal of grass clippings and benefits of slow release fertilizer; and proper disposal of leaf litter.

Targeted Audience: Residents

Responsible Department/Parties: Selectmens Task Force on Local Pollution and Phase II SW Management

Measurable Goal(s):

Observed decrease in pet waste along roads and rails, as well as decrease in grass clippings/leaf litter dumped in wetlands and blown onto impervious surfaces.

Message Date(s): Selectmen's Task Force on Local Pollution and Phase II Stormwater Management meets monthly and posts its agendas per MA Open Meeting Law.

BMP: Residential Stormwater Flyers

BMP Number (Optional) 1.2

Document Name and/or Web Address: Only rain Down the Stormdrain.
<https://www.mass.gov/guides/stormwater-outreach-materials-to-help-towns-comply-with-the-ms4-permit>

Description:

The Bourne Staff Stormwater Working Group (SSWG) consists of department heads from DPW, Planning, Engineering, Conservation and Board of Health. The SSWG and Task Force described in BMP 1.1 will work together to distribute flyers at Town Hall and Town Meeting on residential storm water issues. Information disseminated will include an annual spring brochure regarding proper use and disposal of grass clippings and encouraging use of slow release fertilizer; an annual summer brochure regarding proper management of pet waste, including any ordinances; and an annual fall brochure regarding proper disposal of leaf litter.

Targeted Audience: Residents

Responsible Department/Parties: Staff Stormwater Working Group (SSWG) and Selectmens Task Force

Measurable Goal(s):

Observed decrease in pet waste along roads and rails, as well as decrease in grass clippings/leaf litter dumped in wetlands and blown onto impervious surfaces.

Message Date(s): Annually in April/May (grass clippings/fertilizer), June/July(pet waste), August/September/October (leaf litter management), beginning in 2019

BMP: Preventing Stormwater Pollution Announcement

BMP Number (Optional) 1.3

Document Name and/or Web Address: To be provided once available

Description:

Publish Preventing Stormwater Pollution announcement on Town website, which will include links to materials regarding proper use and disposal of grass clippings and encouraging use of slow release fertilizer; proper management of pet waste, including any ordinances; and proper disposal of leaf litter. Links will be available year-round, thus satisfying the requirements for messages during certain seasons.

Targeted Audience: Residents

Responsible Department/Parties: Staff Stormwater Working Group

Measurable Goal(s):

Observed decrease in pet waste along roads and rails, as well as decrease in grass clippings/leaf litter dumped in wetlands and blown onto impervious surfaces.

Message Date(s): Annually, beginning in 2021

BMP: Outreach Links for Businesses

BMP Number (Optional) 1.4

Document Name and/or Web Address: To be provided once available

Description:

Provide links on the Town "Doing Business" webpage regarding proper use and disposal of grass clippings and encouraging use of slow release fertilizer; proper management of pet waste, including any ordinances; and proper disposal of leaf litter. Use outreach materials and guidance from various sources (Think Blue Massachusetts, MassDEP, Cape Cod Stormwater) for posting online.

See: <https://www.thinkbluemassachusetts.org/for-businesses>. Links on Town webpage will be available year-round, thus satisfying the requirements for messages during certain seasons.

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: Staff Stormwater Working Group

Measurable Goal(s):

Observed decrease in pet waste along roads and rails, as well as decrease in grass clippings/leaf litter dumped in wetlands and blown onto impervious surfaces.

Message Date(s): Annually, beginning in 2019

BMP: Brochures for Businesses

BMP Number (Optional) 1.5

Document Name and/or Web Address: To be provided once available

Description:

Distribute brochures to businesses Institutions and commercial facilities regarding stormwater management issues. Information disseminated will include an annual spring brochure regarding proper use and disposal of grass clippings and encouraging use of slow release fertilizer; an annual summer brochure regarding proper management of pet waste, including any ordinances; and an annual fall brochure regarding proper disposal of leaf litter. Use Think Blue Massachusetts outreach materials and guidance, provided at: <https://www.thinkbluemassachusetts.org/for-businesses>.

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: Staff Stormwater Working Group

Measurable Goal(s):

Observed decrease in pet waste along roads and rails, as well as decrease in grass clippings/leaf litter dumped in wetlands and blown onto impervious surfaces.

Message Date(s): Annually in April/May (grass clippings/fertilizer), June/July(pet waste), August/September/October (leaf litter management), beginning in 2021

BMP: Web Page for Developers

BMP Number (Optional) 1.6

Document Name and/or Web Address: To be provided once available

Description:

Develop a web page containing stormwater education materials posted on the Town webpage marked as "Important Stormwater Management Information for Developers" – with a collection of links to relevant educational material.

Targeted Audience: Developers (construction)

Responsible Department/Parties: Staff Stormwater Working Group

Measurable Goal(s):

Improved use of sediment and erosion controls on construction sites and observed decrease in sedimentation in receiving waters.

Message Date(s): Target is 2020

BMP: Stormwater Education for Developers

BMP Number (Optional) 1.7

Document Name and/or Web Address: To be provided once available

Description:

Provide education on recommended stormwater / erosion control practices by providing fact sheets and brochures and verbal guidance to each developer that applies for a permit.

Targeted Audience: Developers (construction)

Responsible Department/Parties: SSWG, Planning Board, and Conservation Commission

Measurable Goal(s):

Improved use of sediment and erosion controls on construction sites and observed decrease in sedimentation in receiving waters.

Message Date(s): Target is 2022

BMP: Websites for Industrial

BMP Number (Optional) 1.8

Document Name and/or Web Address: To be provided once available

Description:

Post web links and guidance from various sources (Think Blue Massachusetts, MassDEP, Cape Cod Stormwater, etc.) specific to industrial facilities on the town website.

Targeted Audience: Industrial facilities

Responsible Department/Parties: Staff Stormwater Working Group

Measurable Goal(s):

Observed increase in proper storage of industrial materials and decreased runoff of sediment-laden stormwater from industrial sites.

Message Date(s): Target is 2020

BMP: Industrial Outreach Materials

BMP Number (Optional) 1.9

Document Name and/or Web Address: To be provided once available

Description:

Distribute brochures to industrial sites in Town, based on outreach materials and guidance from various web sources (for example, Think Blue Massachusetts, www.thinkbluemassachusetts.org/for-industry, MassDEP, Cape Cod Stormwater).

Targeted Audience: Industrial facilities

Responsible Department/Parties: Staff Stormwater Working Group

Measurable Goal(s):

Observed increase in proper storage of industrial materials and decreased runoff of sediment-laden stormwater from industrial sites.

Message Date(s): Target is 2022

BMP: Dog Waste

BMP Number (Optional) 1.10

Document Name and/or Web Address: Bourne dog waste disposal bags

Description:

The Town staff have realized over the years that very few people actually read the flyers so we will be distributing items with a simple message that people might actually use. At time of dog license issuance or other appropriate time, disseminate waste bags and holders as well as educational material to dog owners within receiving waters covered by Buzzards Bay Pathogen TMDL, in regard to appropriate disposal of pet waste, and penalties for non-compliance. Relevant receiving waters include: Phinneys Harbor (MA 95-15), Buttermilk Bay (MA95-01), Pocasset Harbor (MA95-17), Red Brook Harbor (MA95-18), Buzzards Bay (MA 95-62), Back River (MA95-47), Pocasset River (MA95-16), Cape Cod Canal (95-14), Eel Pond (MA95-48)

Targeted Audience: Residents

Responsible Department/Parties: Staff Stormwater Working Group

Measurable Goal(s):

Presence of dog waste bags on leashes. See Appendix B for photo.

Message Date(s): Distribution Scheduled for September 2019 at Cape Cod Canal Day.

BMP:[BMP name here]

BMP Number (Optional) _____

Document Name and/or Web Address:

Description:

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Message Date(s):

Add BMP

MCM 2

Public Involvement and Participation

Permit Part 2.3.3

Objective: The permittee shall provide opportunities to engage the public to participate in the review and implementation of the permittee's SWMP.

BMP: Public Review of Stormwater Management Program

BMP Number (Optional) 2.1

Location of Plan and/or Web Address:

Responsible Department/Parties:

Measurable Goal(s):

BMP: Public Participation in Stormwater Management Program Development

BMP Number (Optional) 2.2

Description:

Responsible Department/Parties:

Measurable Goal(s):

BMP: Advisory Committee/Community Oversight Group

BMP Number (Optional) _____

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

Add BMP

MCM 3

Illicit Discharge Detection and Elimination (IDDE) Program

Permit Part 2.3.4

Objective: The permittee shall implement an IDDE program to systematically find and eliminate illicit sources of non-stormwater discharges to its municipal separate storm sewer system and implement procedures to prevent such discharges.

Examples and Templates:

[IDDE Program Template and SOPs](#)

Other templates relevant to IDDE can be found here: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#idde>

BMP: IDDE Legal Authority

BMP Number (Optional) 3.1

Completed (by May 1, 2008) ☒

Ordinances Link or Reference: https://www.townofbourne.com/sites/bournema/files/pages/illegal_discharge_regulation.pdf

Department Responsible for Enforcement: Board of Health

BMP: Sanitary Sewer Overflow (SSO) Inventory

BMP Number (Optional) 3.2

Completed (by year 1) ☒

Document Name and/or Web Address: No current SSO's - to be updated if any are identified.

Description:

Develop Sanitary Sewer Overflow (SSO) inventory in accordance with permit conditions. Currently, Bourne has no identified SSO's; most of the Town is served by septic systems. However, the possibility of SSO's will continue to be tracked and any future SSO's will be documented.

Responsible Department/Parties: Engineering, Consultant, DPW, Board of Health

Measurable Goal(s):

Annually track and report the following SSO information: the location; a clear statement of whether the discharge entered a surface water directly or entered the MS4; date(s) and time(s) of each known SSO occurrence; estimated volume(s) of the occurrence; description of the occurrence indicating known or suspected cause(s); mitigation and corrective measures completed with dates implemented; and mitigation and corrective measures planned with implementation schedules. Update inventory as needed.

SSO Reporting:

In the event of an overflow or bypass, a notification must be reported within 24 hours by phone to MassDEP, EPA, and other relevant parties. Follow up the verbal notification with a written report following MassDEP's Sanitary Sewer Overflow (SSO)/Bypass notification form within 5 calendar days of the time you become aware of the overflow, bypass, or backup.

<p>The MassDEP contacts are:</p> <p>Northeast Region (978) 694-3215 205B Lowell Street Wilmington, MA 01887 Central Region (508) 792-7650 8 New Bond Street Worcester, MA 01606 Southeast Region (508) 946-2750 20 Riverside Drive Lakeville, MA 02347 Western Region (413) 784-1100 436 Dwight Street Springfield, MA 01103 24-hour Emergency Line 1-888-304-1133</p>	<p>The EPA contacts are:</p> <p>EPA New England (617) 918-1510 5 Post Office Square Boston, MA 02109</p>
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BMP: Map of Storm Sewer System

BMP Number (Optional) 3.3

Phase I Completed ☐
(by year 2)

Phase II Completed ☐
(by year 10)

Document Location and/or Web Address: <https://www.townofbourne.com/conservation/pages/conservation-documents>

Description:

Outfall mapping was completed under the 2003 MS4 Permit and is located at the website address above. The outfall map created under the 2003 permit will be updated to reflect requirements of 2016 permit in accordance with goals and dates described below. The most updated map is included as Appendix D.

Responsible Department/Parties: Engineering, Consultant, Department of Public Works

Measurable Goal(s):

By June 30, 2020, update map to include: open channel conveyances, interconnections with other MS4s and other storm sewer systems, municipally-owned stormwater treatment structures, waterbodies identified by name and indication of all use impairments, and initial catchment delineations. By June 30, 2028, update map to include: outfall spatial locations (lat/long +/- 30 feet) pipes, manholes, catch basins, refined catchment delineations, municipal sanitary sewer system, and municipal combined sewer system (if applicable).

BMP: IDDE Program

BMP Number (Optional) 3.4

Written Document Completed (by year 1) ☐

Document Name and/or Web Address: This will be identified when the IDDE plan is complete and included as an appendix to this SWMP or linked on the Conservation Commission website.

Description:

Create written Illicit Discharge Detection and Elimination (IDDE) program. IDDE document shall include

assessment and ranking (problem, high priority, low priority) of outfalls and interconnections, as well as written procedures describing sampling protocols.

Responsible Department/Parties: SSWG, Engineering, Consultant, DPW, Health Department

Measurable Goal(s):

Complete written document describing Illicit Discharge Detection and Elimination (IDDE) Procedures for inclusion in the September 2019 annual report.

An inventory of all known outfalls and an initial ranking can be found in Appendix E.

The outfall/interconnection inventory and initial ranking and the dry weather outfall and interconnection screening and sampling results can be found:

This information will be referenced once available, in either hard copy or electronic format.

BMP: Employee Training

BMP Number (Optional) 3.5

Description:

Develop and implement program to train municipal employees involved in the IDDE program. Training shall include discussion of how to recognize illicit discharges and SSOs. Frequency and type of training shall be reported in the annual report.

Responsible Department/Parties: Engineering, Department of Public Works

Measurable Goal(s):

A training date for conservation and DPW staff occurred on June 26, 2019 and future training will occur annually.

BMP: Implement Catchment Investigations portion of IDDE Program

BMP Number (Optional) 3.6

Completed ☐

Document Name and/or Web Address: To be supplied once completed

Description:

Prepare written catchment investigation procedure and include in IDDE Plan, and then proceed to implement catchment investigations based on the procedures. Investigations shall include inspection of junction manholes for evidence of connections with sanitary system and visual/olfactory signs of sewage and/or other illicit connections. Review catchments for System Vulnerability Factors (SVF) which would indicate higher potential for illicit connections. Catchments with 1 or more SVF must be further evaluated with wet weather sampling at the catchment outfall. For any illicit discharges identified during the catchment investigation procedure, identify the source of illicit discharge and eliminate the illicit source.

Responsible Department/Parties: Staff Stormwater Working Group, Engineering, Consultant, DPW

Measurable Goal(s):

Implement catchment investigations as follows: initiate problem outfall catchment investigation by June 30, 2020 and complete by 2027; and complete low and high priority catchment investigations by June 30, 2029, which is within 10 years after the permit effective date.

BMP: Conduct Dry Weather Screening**BMP Number (Optional)** 3.7**Completed** ☐**Document Name and/or Web Address:** To be supplied once completed**Description:**

Conduct dry weather screening of high and low priority outfalls using the procedures outlined in the written IDDE program. Conduct sampling after 24-hours of no more than 0.1 inches of rainfall or significant snow melt. Any flow observed should be sampled for: ammonia, chlorine, conductivity, salinity, E.coli (freshwater) or enterococcus (saline/brackish water), surfactants and temperature. In addition, outfalls discharging to the following receiving waters shall be sampled for nitrogen: Phinneys Harbor (MA 95-15), Buttermilk Bay (MA95-01), Little Buttermilk Bay (MA95-76), Squeteague Harbor (MA95-55) and Pocasset Harbor.

Responsible Department/Parties: Engineering, DPW, Health Department, Conservation**Measurable Goal(s):**

Complete dry weather screening on all outfalls by June 30, 2021, which is three years after the permit effective date.

BMP: Conduct Wet Weather Screening**BMP Number (Optional)** 3.8**Completed** ☐**Document Name and/or Web Address:** To be supplied once completed**Description:**

Conduct outfall sampling using the procedures outlined in the written IDDE program and permit conditions. Wet weather screening shall be conducted for all catchments with 1 SVF or more.

Responsible Department/Parties: Engineering, Consultant, DPW, Health Department**Measurable Goal(s):**

Complete in accordance with the catchment investigation schedule identified above under BMP 3.6. Catchment investigations are not complete until wet weather screening is complete.

BMP: Ongoing Screening

BMP Number (Optional) 3.9

Completed ☐

Document Name and/or Web Address: TBD

Description:

After completing initial catchment investigations and screening, repeat outfall screening.

Responsible Department/Parties: Engineering, Consultant, DPW, Health Department

Measurable Goal(s):

Completion of additional screening of each outfall every five years, after initial completion of catchment investigation/screening of all outfalls by 2025.

Add BMP

MCM 4

Construction Site Stormwater Runoff Control

Permit Part 2.3.5

Objective: The objective of an effective construction stormwater runoff control program is to minimize or eliminate erosion and maintain sediment on site so that it is not transported in stormwater and allowed to discharge to a water of the U.S. through the permittee's MS4.

Examples and Templates:

Examples and templates relevant to MCM 4, including model ordinances and site inspection templates, can be found here: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#csrc>

BMP: Sediment and Erosion Control Ordinance

BMP Number (Optional) 4.1

Completed (by May 1, 2008) ☒

Ordinances Link or Reference: <https://www.townofbourne.com/planning-department/files/subdivision-regulations>

Department Responsible for Enforcement: Planning Department

BMP: Site Plan Review Procedures

BMP Number (Optional) 4.2

Written procedures completed (by year 1) ☒

Document Name and/or Web Address: https://www.townofbourne.com/sites/bournema/files/file/file/2014fullbylaw_0.pdf
<https://www.townofbourne.com/planning-department/files/subdivision-regulations>

Description:

Site Plan review procedures were initially completed as part of the regulations above; these are currently undergoing revision for comprehensiveness for all construction greater than one acre in size.

Responsible Department/Parties: Building and Inspection, Conservation, Planning

Measurable Goal(s):

Complete Site Plan review procedures by Fall 2019 Town Meeting to incorporate into zoning bylaw and implement such that site plan review of 100% of projects greater than one acre in size are conducted according to these procedures.

BMP: Site Inspections and Enforcement of Sediment and Erosion Control Measures Procedures

BMP Number (Optional) 4.3

Completed (by year 1) ☒

Document Name and/or Web Address: <https://www.townofbourne.com/planning-department/files/subdivision-regulations>
https://www.townofbourne.com/sites/bournema/files/file/file/2014fullbylaw_0.pdf

Description:

Requirements for construction operators to implement a sediment and erosion control program as well as enforcement have been adopted and completed, although these are currently undergoing review/revision for comprehensiveness for all construction greater than one acre in size. Regulations are at the links above. Site reviews and inspections of structural BMPs will be recorded on inspection forms included in Appendix B and kept on file with the local Stormwater Authority (either the Conservation Commission of the Planning Board).

Responsible Department/Parties: Building and Inspection, Conservation, Planning

Measurable Goal(s):

Inspect 100% of construction sites as outlined in the above document and take enforcement actions as needed.

BMP: Waste Control**BMP Number (Optional)** 4.4**Completed** ☒

Document Name and/or Web Address: <https://www.townofbourne.com/planning-department/files/subdivision-regulations>
https://www.townofbourne.com/sites/bournema/files/file/file/2014fullbylaw_0.pdf

Description:

Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes. Requirements for trash and sewage have been adopted as part of existing regulations above, although these are currently undergoing review/revision for comprehensiveness for all construction greater than one acre in size and to address all wastes listed in the MS4 permit. Regulations are at the links above.

Responsible Department/Parties: Building and Inspection, Conservation, Planning, Health Department

Measurable Goal(s):

100% of projects disturbing greater than one acre of land will control wastes as part of a Local Stormwater Permit.

Add BMP

MCM 5

Post Construction Stormwater Management in New Development and Redevelopment

Permit Part 2.3.6

Objective: The objective of an effective post construction stormwater management program is to reduce the discharge of pollutants found in stormwater to the MS4 through the retention or treatment of stormwater after construction on new or redeveloped sites and to ensure proper maintenance of installed stormwater controls.

Examples and Templates:

Examples and templates relevant to MCM 5, including model ordinances and bylaw review templates and guidance can be found here: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#pcsm>

BMP: Post-Construction Ordinance

BMP Number (Optional) 5.1

Completed (by year 2) ☐

Town Ordinances Link or Reference: <https://www.townofbourne.com/planning-department/files/subdivision-regulations>; will be incorporated into zoning regulation

Department Responsible for Enforcement: Planning Department, Building and Inspection

BMP: Street Design and Parking Lot Guidelines Report

BMP Number (Optional) 5.2

Completed (by year 4) ☐

Document Name and/or Web Address: To be provided once complete

Description:

Develop a report assessing municipal requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.

Responsible Department/Parties: Staff Stormwater Working Group, Planning

Measurable Goal(s):

Recommendations are implemented as outlined in schedule of report with progress reported annually.

BMP: Green Infrastructure Report

BMP Number (Optional) 5.3

Completed (by year 4) ☐

Document Name and/or Web Address: To be provided once complete

Description:

Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist

Responsible Department/Parties: Staff Stormwater Working Group, Planning

Measurable Goal(s):

Recommendations are implemented as outlined in the schedule of report with progress reported annually.

BMP: List of Municipal Retrofit Opportunities

BMP Number (Optional) 5.4

Completed (by year 4) ☐

Document Name and/or Web Address: To be provided once available.

Description:

Identify at least five permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually.

Responsible Department/Parties: Staff Stormwater Working Group, Planning

Measurable Goal(s):

The list is completed by June 30, 2022 and updated as needed.

BMP:As-built plans for on-site stormwater control

BMP Number (Optional) 5.5

Completed ☒

Document Name and/or Web Address: <https://www.townofbourne.com/planning-department/files/subdivision-regulations>

Description:

Procedures to require submission of as-built drawings are currently in the Town Subdivision Regulations at the location above. These are currently undergoing review/revision for comprehensiveness for all construction greater than one acre in size and to address all wastes listed in the MS4 permit, and updated procedures for submission of as-built drawings and operation and maintenance are included in the draft regulations currently under review.

Responsible Department/Parties: Building and Inspection, Planning, Health

Measurable Goal(s):

Require submission of as-built plans and operation and maintenance procedures of on-site stormwater controls for completed projects as part of the Post- Construction ordinance.

Add BMP

MCM 6

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

Permit Part 2.3.7

Objective: The permittee shall implement an operations and maintenance program for permittee-owned operations that has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee-owned operations.

Examples and Templates:

Examples and templates relevant to MCM 6, including SOP templates for catch basin cleaning, street sweeping, vehicle maintenance, parks and open space management, winter deicing, and Stormwater Pollution Prevention Plans can be found here: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#gh>

PERMITTEE OWNED FACILITIES

BMP: Parks and Open Spaces Operations and Maintenance Procedures

BMP Number (Optional) 6.1

Written Document Completed (by year 2) ☐

Document Name and/or Web Address: To be provided once completed

Description:

Develop inventory of all permittee owned parks and open spaces. Create written O&M procedures including all requirements contained in 2.3.7.a.ii of the permit, including pet waste handling and signage. Implement procedures as outlined in the written guidelines. In nitrogen impaired receiving waters, require slow release fertilizers; establish procedures to manage grass cutting and leaf litter, including prohibiting blowing organic waste materials onto impervious surfaces; and increase street sweeping to twice per year. Nitrogen impaired receiving waters include: Phinneys Harbor (MA 95-15), Squeteague Harbor (MA 95-55), Little Buttermilk Bay (MA95-76), Buttermilk Bay (MA95-01), Pocasset Harbor (MA95-17), and Red Brook Harbor (MA95-18).

Responsible Department/Parties: Staff Stormwater Working Group, DPW, Parks/Recreation, Planning

Measurable Goal(s):

Implement the SOP listed above on 100% of the parks and open spaces.

Properties List (Optional):

BMP: Buildings and Facilities Operations and Maintenance Procedures

BMP Number (Optional) 6.2

Written Document Completed (by year 2) ☐

Document Name and/or Web Address: To be provided once completed

Description:

Develop inventory of all permittee owned buildings and facilities. Create written O&M procedures for these buildings and facilities, including all requirements contained in 2.3.7.a.ii of the permit. Implement the written procedures.

Responsible Department/Parties: Staff Stormwater Working Group, Parks/Recreation, Schools

Measurable Goal(s):

Complete O&M procedures and implement the SOP on 100% of buildings and facilities.

Properties List (Optional):

BMP: Vehicles and Equipment Operations and Maintenance Procedures

BMP Number (Optional) 6.3

Written Document Completed (by year 2) ☐

Document Name and/or Web Address: To be provided ionce completed

Description:

Develop an inventory of all permittee owned vehicles and equipment. Create written O&M procedures for vehicles and equipment including all requirements contained in 2.3.7.a.ii of the permit. Implement the written procedures.

Responsible Department/Parties:

Measurable Goal(s):

Implement the SOP listed above for 100% of vehicles and equipment according to the above document.

Properties List (Optional):

INFRASTRUCTURE

BMP: Infrastructure Operations and Maintenance Procedures

BMP Number (Optional) 6.4

Written Procedure Completed (by year 2) ☐

Document Name and/or Web Address: To be provided once completed

Description:

Establish and implement written program for repair and rehabilitation of MS4 infrastructure.

Responsible Department/Parties: DPW, Engineering

Measurable Goal(s):

100% of infrastructure is maintained to ensure proper function in accordance with the procedures above.

BMP: Catch Basin Cleaning Program

BMP Number (Optional) 6.5

Written Procedure Completed (by year 1) ☒

Document Name and/or Web Address: See Appendix F

Description:

Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full, and clean catch basins on that schedule. See Appendix F for schedule guidance and sample log.

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

All catch basins are cleaned in accordance to the document above such that no catch basin is more than 50% full at any given time. Document number catch basins inspected/cleaned/volume removed in annual report.

BMP: Street Sweeping Program

BMP Number (Optional) 6.6

Written Procedure Completed (by year 1) ☒

Document Name and/or Web Address: See Appendix G

Description:

Establish and implement street sweeping procedures. Roads should generally be swept once per year, except for rural uncurbed roads or limited access highways. See Appendix G for further guidance.

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Annually sweep 100% of all streets and 50% of all municipal parking lots in accordance with the schedule listed above.

BMP: Winter Road Maintenance Program

BMP Number (Optional) 6.7

Written Procedure Completed (by year 1) ☒

Document Name and/or Web Address: See Appendix H

Description:

Establish and implement procedures for winter road maintenance , including use and storage of sand and salt, disposal, and minimization of chloride containing materials. See Appendix H for further guidance.

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Evaluate at least one salt/chloride alternative for use in the municipality.

BMP: Stormwater Treatment Structures Inspection and Maintenance Procedures

BMP Number (Optional) 6.8

Completed (by year 1) ☒

Document Name and/or Web Address: See Appendix I

Description:

Establish and implement inspection and maintenance protocols and frequencies. Inspect permittee-owned structural BMPs annually at minimum. The Town of Bourne does not currently own any municipal structural BMPs, however inspection and maintenance protocols are provided in Appendix I and will be implemented once structural BMPs are in place.

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Inspect and maintain 100% of treatment structures at least annually to ensure proper function.

BMP: SWPPP

BMP Number (Optional) 6.9

Completed (by year 2) ☐

Document Name and/or Web Address: Not Applicable

Description:

The Town of Bourne does not have any maintenance garages, public works yards, transfer stations, or other waste handling facilities where pollutants are exposed to stormwater, within the MS4 permitted area

Responsible Department/Parties: Not Applicable

Measurable Goal(s):

Not Applicable - no facilities requiring SWPPP

BMP:

BMP Number (Optional) _____

Completed ☐

Document Name and/or Web Address: _____

Description:

Responsible Department/Parties: Conservation, DPW

Measurable Goal(s):

BMP:

BMP Number (Optional) _____

Completed ☐

Document Name and/or Web Address:

Description:

Responsible Department/Parties: Staff Stormwater Working Group, DNR, DPW, Town Clerk

Measurable Goal(s):

Add BMP

Annual Evaluation

Year 1 Annual Report

Document Name and/or Web Address:

Year 2 Annual Report

Document Name and/or Web Address:

Year 3 Annual Report

Document Name and/or Web Address:

Year 4 Annual Report

Document Name and/or Web Address:

Year 5 Annual Report

Document Name and/or Web Address:

Year X Annual Report

Document Name and/or Web Address:

Add a Year

TMDLs and Water Quality Limited Waters

Select the applicable Impairment(s) and/or TMDL(s).

Impairment(s)

- ☒ Bacteria/Pathogens ☐ Chloride ☒ Nitrogen ☐ Phosphorus
☐ Solids/oil/grease (hydrocarbons)/metals

TMDL(s)

In State:

- ☐ Assabet River Phosphorus ☒ Bacteria and Pathogen ☒ Cape Cod Nitrogen
☐ Charles River Watershed Phosphorus ☐ Lake and Pond Phosphorus

Out of State:

- ☐ Bacteria and Pathogen ☐ Metals ☐ Nitrogen ☐ Phosphorus

[Clear Impairments and TMDLs](#)

Bacteria/Pathogens

Combination of Impaired Waters Requirements and TMDL Requirements as Applicable

Applicable Receiving Waterbody(ies)	TMDL Name (if applicable)	Add/Delete Row
Buzzards Bay (MA95-62)	Final Buzzards Bay Pathogen TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Buttermilk Bay (MA95-01)	Final Buzzards Bay Pathogen TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Pocasset Harbor (MA95-17)	Final Buzzards Bay Pathogen TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Back River (MA95-47)	Final Buzzards Bay Pathogen TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Red Brook Harbor (MA95-18)	Final Buzzards Bay Pathogen TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Phinney's Harbor (MA95-16)	Final Buzzards Bay Pathogen TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Pocasset River (MA95-16)	Final Buzzards Bay Pathogen TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Cape Cod Canal (MA95-14)	Final Buzzards Bay Pathogen TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Eel Pond (MA95-48)	Final Buzzards Bay Pathogen TMDL	<input type="checkbox"/> + <input type="checkbox"/> -

Annual Requirements Beginning Year 1

Rank outfalls to these receiving waters as high priority for IDDE implementation in the initial outfall ranking

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 3.4, 3.6, 3.7, 3.8, 3.9

Public Education and Outreach

(Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information))

Annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 1.1, 1.2

Permittee or its agents disseminate educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 1.1, 1.2, 1.10

Provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 1.1, 1.2

Nitrogen

Combination of Impaired Waters Requirements and TMDL Requirements as Applicable

Applicable Receiving Waterbody(ies)	TMDL Name (if applicable)	Add/Delete Row
Phinneys Harbor (MA95-15)	Final N TMDL for Phinneys Harbor	<input type="checkbox"/> + <input type="checkbox"/> -
Buttermilk Bay (MA95-01)		<input type="checkbox"/> + <input type="checkbox"/> -
Little Buttermilk Bay (MA95-76)		<input type="checkbox"/> + <input type="checkbox"/> -
Squeteague Harbor (MA95-55)		<input type="checkbox"/> + <input type="checkbox"/> -
Pocasset Harbor (MA95-170)		<input type="checkbox"/> + <input type="checkbox"/> -

Annual Requirements Beginning Year 1

Rank outfalls to these receiving waters as high priority for IDDE implementation in the initial outfall ranking

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

Not Applicable. Note that ranking of outfalls to nitrogen impaired waters as high priority is NOT required by the permit - the presence of this requirement in this section of the SWMP is an error in version 1 of EPA SWMP Template.

Public Education and Outreach

(Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information))

Distribute an annual message in the spring (April/May) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 1.1, 1.2, 1.4, 1.5

Distribute an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 1.1, 1.2, 1.4, 1.5

Distribute an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 1.1, 1.2

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

Establish requirements for the use of slow release fertilizers on permittee owned property currently using fertilizer, in addition to reducing and managing fertilizer use as provided in part 2.3.7.1

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 6.1, 6.2

Establish procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 6.1, 6.2

Increase street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 6.1, 6.2

Nitrogen Reduction Tracking BMP

Any structural BMPs listed in Table 3 of Attachment 1 to Appendix H already existing or installed in the regulated area by the permittee or its agents shall be tracked and the permittee shall estimate the nitrogen removal by the BMP consistent with Attachment 1 to Appendix H. .

The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated nitrogen removed in mass per year by the BMP is found in the following document or website and is updated yearly at a minimum:

The Town of Bourne does not currently have BMPs in place that are aimed at nitrogen reduction . As BMPs are constructed, this list will be developed and updated annually

Requirements Due by Year 2

Stormwater Management in New Development and Redevelopment

The requirement for adoption/amendment of the permittee's ordinance or other regulatory mechanism shall include a requirement that new development and redevelopment stormwater management BMPs be optimized for nitrogen removal

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 5.1

Requirements Due by Year 4

Complete a Nitrogen Source Identification Report

The document name (if attached) and/or web address is/are:

A Nitrogen Source Identification Report will be required for outfalls discharging to Buttermilk Bay (MA95-01), Little Buttermilk Bay (MA95-76), Pocasset Harbor (MA95-17), and Squeteague Harbor (MA95-55). A Nitrogen Source Identification Report is not required for waters discharging to Phinneys Harbor (MA95-15) because the completed TMDL report indicates that stormwater is not a significant source of nitrogen to the receiving water.

Stormwater Management in New Development and Redevelopment

Retrofit inventory and priority ranking under 2.3.6.1.b. shall include consideration of BMPs to reduce nitrogen discharges

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

BMPs 5.4 ; potential retrofits identified will be aimed at nitrogen reduction in nitrogen impaired waters identified above. Also note that the reference to Section 2.3.6.1.b above is an error in the EPA SWMP template; the appropriate reference should be Section 2.3.6.d

Requirements Due by Year 5

Potential Structural BMPs

Evaluate all permittee-owned properties identified as presenting retrofit opportunities or areas for structural BMP installation under Permit part 2.3.6.d.ii or identified in the Nitrogen Source Identification Report that are within the drainage area of the impaired water or its tributaries

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

The retrofit opportunity list identified in BMP 5.4 will be evaluated to identify the next planned infrastructure or redevelopment activity, or a planned retrofit date; the estimated cost of redevelopment or retrofit BMPs, and the engineering and regulatory feasibility of redevelopment or retrofit BMPs.

Complete a listing of planned structural BMPs and a plan and schedule for implementation

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

A listing and schedule for implementing BMPs will be included in the Year 5 Annual Report, based upon the evaluation completed as part of BMP 5.4. A structural BMP demonstration project shall be installed in the tributary of one of the non-TMDL nitrogen impaired waters listed above by year six of the permit. The remainder of the BMPs will be installed in accordance with the schedule identified in the fifth year Annual Report.