

Stormwater Management Program (SWMP)

Town of Bellingham

26 Blackstone Street MA 02019

EPA NPDES Permit Number MAR041091

This Stormwater Management Plan is based on the EPA's Template and is designed to be updated annually based on the progress of the Town's Stormwater Management Program. Tighe & Bond has added language and information and made minor adjustments to the template based on our best professional judgement. Page numbers have not been noted in the Table of Contents below because they will change annually.

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Massachusetts MS4 First-Year Stormwater Management Program (SWMP) Checklist

(For Permittees Authorized Under the Previous Permit)

The Massachusetts MS4 First-Year SWMP Checklist sets out Minimum Control Measure (MCM) elements that must be included in SWMPs by July 1, 2019 for all permittees that were covered under the previous MS4 permit. MCM incorporation deadlines for newly designated MS4s differ from MCM deadlines for MS4s authorized under the previous permit. Deadlines for newly designated permittees are set out in Section 1.10.3. Deadlines for previously authorized permittees are set out in Section 1.10.2. Use this checklist as a guide as you review and update your SWMP to address these requirements.

SMALL MS4 AUTHORIZATION

- ☐ Date that the NOI was submitted and the location of the NOI
- ☐ Date that authorization was granted and the location of the authorization letter

RECEIVING WATERS

- ☐ Identify all receiving waters and impairments to waterbodies
- ☐ Identify the number of outfalls that discharge to each waterbody segment

ELIGIBILITY DETERMINATION UNDER THE ENDANGERED SPECIES ACT (Attach and reference your NOI)

- ☐ Appendix C determination under the U.S. Fish and Wildlife Endangered Species Act (ESA)
- ☐ The Criterion used to certify ESA eligibility
- ☐ Additional measures required by the U.S. Fish and Wildlife Service (if any)

ELIGIBILITY DETERMINATION UNDER THE NATIONAL HISTORIC PRESERVATION ACT (NHPA)

(Attach and reference your NOI)

- ☐ Appendix D property screening determination
- ☐ The Criterion used to certify NHPA eligibility
- ☐ Additional documents from the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO)
- ☐ Additional measures required by the SHPO/THPO to avoid/minimize adverse impacts (if any)

MCM 1: PUBLIC EDUCATION AND OUTREACH

- ☐ Identify all planned BMPs
- ☐ Identify the locations of applicable materials for each BMP
- ☐ Identify the target audience(s)
- ☐ Identify the measurable goals
- ☐ Identify the dates that message(s) are sent to each target audience
- ☐ Identify the responsible parties involved in ensuring the completion of the BMP

MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

- ☐ The location of the SWMP for public access
- ☐ Provisions for public participation in SWMP development
- ☐ Identify any additional planned BMPs, responsible party or parties, location of the documents required to complete the BMP, and measurable goals

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

- ☐ Reference legal authority
- ☐ Identify the department responsible for illicit connection enforcement
- ☐ Annual Sanitary Sewer Overflow (SSO) Inventory
- ☐ MS4 system map
- ☐ IDDE Program Document
- ☐ Outfall/interconnection inventory and ranking
- ☐ Employee training content and dates

MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

- ☐ Reference legal authority
- ☐ Site plan review procedures
- ☐ Procedures for site inspection and enforcement of sediment and erosion control measures

MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

- ☐ Reference legal authority
- ☐ Green infrastructure report
- ☐ List of municipal retrofit opportunities
- ☐ Guidelines for street design and parking lots

MCM 6: GOOD HOUSEKEEPING AND POLLUTION PREVENTION FOR PERMITTEE-OWNED OPERATION

- ☐ Catch basin cleaning program
- ☐ Street sweeping program
- ☐ Stormwater treatment structure inspection and maintenance procedures
- ☐ Winter road maintenance program

Town of Bellingham
FY2019-2024 Small MS4 Permit 5-Year Workplan

A hardcopy version of this Workplan may be retained by the Town and contain the most up-to-date documentation of completed requirements

FY19 Permit Year 1 May 2018 - June 2019		FY20 Permit Year 2 July 2019 - June 2020		FY21 Permit Year 3 July 2020 - June 2021		FY22 Permit Year 4 July 2021 - June 2022		FY23 Permit Year 5 July 2022 - June 2023	
Reporting		Deadline		FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	
Notice of Intent		Oct. 1, 2018		<input checked="" type="checkbox"/>					
Annual Report		Annually by Sept 30			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Prepare Stormwater Management Plan		June 30, 2019 and update annually		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MCM 1: Public Education		Deadline		FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	
MCM 1 Requirement: Message to residents on stormwater topics of significance.		Distribute two messages spaced at least one year apart by 2023. Target to distribute in PY1 and PY3 per NOI.		<input checked="" type="checkbox"/>		<input type="checkbox"/>			
Impaired Waters/TMDL Requirement: Annual message to residents on proper pet waste management, noting existing bylaws where appropriate.		Distribute one message annually.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MCM 1 Requirement: Message to businesses, institutions and commercial facilities on stormwater topics of significance.		Distribute two messages spaced at least one year apart by 2023. Target to distribute in PY2 and PY4 per NOI.			<input checked="" type="checkbox"/>		<input type="checkbox"/>		
MCM 1 Requirement: Message to developers on stormwater topics of significance.		Distribute two messages spaced at least one year apart by 2023. Target to distribute in PY1 and PY3 per NOI.		<input checked="" type="checkbox"/>		<input type="checkbox"/>			
MCM 1 Requirement: Message to industrial facilities on stormwater topics of significance.		Distribute two messages spaced at least one year apart by 2023. Target to distribute in PY2 and PY4 per NOI.			<input checked="" type="checkbox"/>		<input type="checkbox"/>		

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MCM 2: Public Participation	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Comply with State Public Notice Requirement (MGL Ch 30A, Sections 18-25) for all public involvement and participation	Ongoing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide an opportunity to participate in SWMP review and implementation	Annually by June 30	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide opportunities for public involvement and participation in Bellingham's stormwater program	Ongoing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Make annual reports and SWMP available to the public	Ongoing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inter-departmental Stormwater Working Group meetings and correspondence as needed	Ongoing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCM 3: Illicit Discharge Detection and Elimination	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Adopt bylaw prohibiting illicit discharges and authorizing investigation, repair and enforcement	Due on May 1, 2008 as part of 2008 Permit	<input checked="" type="checkbox"/>				
Identify all known SSOs that occurred during the last five years	June 30, 2019 and update annually thereafter	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notify EPA / MassDEP of SSO orally in 24 hrs and in writing in 5 days	Ongoing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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MCM 3: Illicit Discharge Detection and Elimination (cont.)	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Notify responsible party immediately on identification of illicit discharge or illegal connection	Ongoing, as needed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eliminate known illicit discharges or set expeditious schedule in 60 days	Ongoing, as needed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outfall / interconnection inventory and ranking	June 30, 2019 and update annually thereafter	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Written IDDE Program document, including statement of responsibilities and written outfall screening and sampling procedure	June 30, 2019	<input checked="" type="checkbox"/>				
Written catchment investigation procedure	Dec. 30, 2019		<input checked="" type="checkbox"/>			
Annually train IDDE staff	Annually by June 30	<input checked="" type="checkbox"/>	Completed in PY3 due to COVID-19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dry weather outfall and interconnection screening	June 30, 2021			<input type="checkbox"/>		
Investigation of problem catchments must begin, including wet weather screening	June 30, 2020		N/A - no problem catchments identified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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MCM 3: Illicit Discharge Detection and Elimination (cont.)	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Finish "Phase I" system mapping requirements - outfalls and receiving waters - open channel conveyances - interconnections with other MS4s - municipally-owned treatment structures - initial catchment delineations	June 30, 2020		<input checked="" type="checkbox"/>			
Update system map with available "Phase II" information (see permit for detailed list)	Annually after Phase I mapping is completed			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MCM 4: Construction Site Erosion & Sedimentation	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Bylaw for sediment, erosion, debris, litter and sanitary waste	Due on May 1, 2008 as part of 2008 Permit	<input checked="" type="checkbox"/>				
Written procedure for site plan review/ inspection/ enforcement	June 30, 2019	<input checked="" type="checkbox"/>				
MCM 5: New Development and Redevelopment	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Bylaw meeting 2003 post-construction requirements	Due on May 1, 2008 as part of 2008 Permit	<input checked="" type="checkbox"/>				
Update post-construction stormwater bylaw (see permit for detailed list)	June 30, 2020		Proposed Permit modifications extend schedule	<input type="checkbox"/>		

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FY2019-2024 Small MS4 Permit 5-Year Workplan

MCM 5: New Development and Redevelopment (cont.)	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Report evaluating street design, parking guidelines and related rules	June 30, 2022 and updated annually thereafter				<input type="checkbox"/>	<input type="checkbox"/>
Report evaluating allowing green roofs, infiltration, rain harvesting	June 30, 2022				<input type="checkbox"/>	
Identify/rank five or more existing permittee-owned sites that could be retrofitted with structural BMPs	June 30, 2022 and updated annually thereafter				<input type="checkbox"/>	<input type="checkbox"/>
MCM 6: Good Housekeeping	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Inventory permittee-owned parks/open space, buildings/facilities and vehicles/equipment	June 30, 2020 and update annually thereafter		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Initial catch basin optimization plan	June 30, 2019	<input checked="" type="checkbox"/>				
Written O&M procedures for parks, buildings, facilities, vehicles and equipment, and infrastructure operations and maintenance (i.e., street sweeping, catch basin cleaning, winter road maintenance and stormwater treatment structure inspections)	June 30, 2020 and update annually thereafter		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean catch basins per plan	Annually by June 30 beginning in Permit Year 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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FY2019-2024 Small MS4 Permit 5-Year Workplan

MCM 6: Good Housekeeping (cont.)	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Sweep streets at a minimum once per year. Increase sweeping frequency of all municipal owned streets and parking lots with potential for high pollutant loads.	Annually by June 30 beginning in Permit Year 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspect all municipally owned mapped stormwater treatment structures (excluding catch basins)	Annually by June 30 beginning in Permit Year 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implement winter road maintenance program including road salt use optimization.	Implement every winter beginning in Permit Year 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop and implement a written SWPPP for permittee-owned or operated facilities	Develop by June 30, 2020 and implement continuously thereafter		Completed in PY3 due to COVID-19	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cover or enclose salt piles	June 30, 2020 and implement continuously thereafter		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Charles River Watershed Phosphorus TMDL	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Complete Phosphorus Control Plan (PCP) legal analysis	June 30, 2020		<input checked="" type="checkbox"/>			
Complete PCP funding source assessment	June 30, 2021			<input type="checkbox"/>		

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Charles River Watershed Phosphorus TMDL (cont.)	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Complete definition of PCP area (scope)	June 30, 2022				<input type="checkbox"/>	
Complete all remaining elements of written Phase I PCP plan (see permit for detailed list)	June 30, 2023					<input type="checkbox"/>
Charles River Watershed Bacteria TMDL and Bacteria Impairments	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Distribute information on proper septic system maintenance to owners of septic systems within any catchment that discharges to the Charles River	Annually	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distribute materials to dog owners on proper pet waste management during issuance or renewal of dog licenses	Ongoing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Peters River Metal Impairments (Copper & Lead)	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
Require stormwater management systems designed on commercial and industrial land use area draining to the Peters River to incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill	June 30, 2020		Proposed Permit modifications extend schedule	<input type="checkbox"/>		

This Workplan was prepared by Tighe & Bond to facilitate completion of EPA Phase II Small MS4 General Permit requirements. This document is not intended to replace the MS4 General Permit, and requirements of the General Permit shall prevail.

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)

Delegation of Authority (Attached in Appendix A)

☐ Publicly available at the website below

"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

Donald F. DiMartino

Signature



Date

6/28/2019

[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)

Attached in Appendix B.

Small MS4 Authorization

The NOI was submitted on Sep 28, 2018

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

<https://www3.epa.gov/region1/npdes/stormwater/ma/tms4noi/bellingham.pdf> AND Attached in Appendix C.

Authorization to Discharge was granted on March 5, 2019

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

<https://www3.epa.gov/region1/npdes/stormwater/ma/tms4noi/bellingham-auth.pdf> AND Attached in Appendix C.

Stormwater Management Program Team

SWMP Team Coordinator

Name	Donald DiMartino	Title	DPW Director
Department	Public Works		
Phone Number	508-966-5813	Email	DDiMartino@bellinghamma.org
Responsibilities	Manages the Town of Bellingham's Stormwater Management Program and compliance with the MS4 Permit. Oversees Public Works Stormwater Operations, including outfall screening, IDDE employee training, and the good housekeeping program.		

SWMP Team

Name	Tom Degnan	Title	Assistant DPW Director
Department	Public Works		
Phone Number	508-966-5813	Email	TDegnan@bellinghamma.org
Responsibilities	Assists in managing Public Works Stormwater Operations including keeping an inventory of SSOs; maintaining a storm sewer system map; overseeing outfall screening and employee training; and managing the good housekeeping program.		

Name	Jim Kupfer	Title	Town Planner
Department	Planning and Zoning		
Phone Number	508-657-2893	Email	JKupfer@bellinghamma.org
Responsibilities	Manages the public education and outreach of Bellingham's stormwater program; provides opportunities for public involvement and participation and oversees the development of construction and post-construction bylaws, policies and procedures;		

Name		Title	
Department			
Phone Number		Email	
Responsibilities			

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:

Table of Receiving Water included in NOI and Attached in Appendix C.

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
		<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"/>	<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"/>	<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"/>	
		<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"/>	

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)

Endangered Species Act Eligibility Certification attached in Appendix D and National
Historic Preservation Act Certification attached in Appendix E.

- ☐ Publicly available at the website listed below

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

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):

Not applicable.

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.

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: Multi-media Public Education and Outreach

BMP Number (Optional) 1A

Document Name and/or Web Address:

Description:

Education and outreach on stormwater management using multi-media methods including web and print materials. The Town shall consider the following topics when developing educational messages and focus on topics most relevant to the Town of Bellingham: effects of lawn care on water quality, benefits of on-site infiltration of stormwater, effects of automotive work and car washing on water quality and proper disposal of swimming pool water. The Town is required to include proper pet waste management and septic system maintenance in educational messages as part of the requirements of Appendix H of the permit for bacteria impairments.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Distribute a minimum of two (2) educational messages to residents spaced at least one year apart and supplement this message with an annual message on proper pet waste management. The Town may also wish to measure results in more specific ways, like the percent of residents reached or changes in behaviors impacting stormwater management.

Message Date(s):

BMP: Multi-media Public Education and Outreach

BMP Number (Optional) 1B

Document Name and/or Web Address:

Description:

Education and outreach on stormwater management using multi-media methods including web and print materials. The Town shall consider the following topics when developing educational messages and focus on topics most relevant to the Town of Bellingham: proper lawn maintenance, benefits of on-site infiltration of stormwater, use of detergents in building maintenance, proper use and storage of salt or other de-icing and anti-icing materials, proper storage of materials, proper management of waste and dumpsters, proper management of parking lot surfaces, proper car care activities, and proper disposal of swimming pool water.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Distribute a minimum of two (2) educational messages to businesses, institutions and commercial facilities spaced at least one year apart. The Town may also wish to measure results in more specific ways, like the percent of businesses, institutions and commercial facilities reached or changes in behaviors impacting stormwater management.

Message Date(s):

BMP: Multi-media Public Education and Outreach**BMP Number (Optional)** 1C**Document Name and/or Web Address:****Description:**

Education and outreach on stormwater management using multi-media methods including web and print materials. The Town shall consider the following topics when developing educational messages and focus on topics most relevant to the Town of Bellingham: proper sediment and erosion control management practices, information about Low Impact Development (LID) principles and technologies, and information about EPA's construction general permit (CGP).

Targeted Audience: Developers (construction)**Responsible Department/Parties:** Planning Board**Measurable Goal(s):**

Distribute a minimum of two (2) educational messages to developers spaced at least one year apart. The Town may also wish to measure results in more specific ways, like the percent of developers reached or changes in behaviors impacting stormwater management.

Message Date(s): 2018 (PY1), 2020 (PY2)**BMP: Multi-media Public Education and Outreach****BMP Number (Optional)** 1D**Document Name and/or Web Address:****Description:**

Education and outreach on stormwater management using multi-media methods including web and print materials. The Town shall consider the following topics when developing educational messages and focus on topics most relevant to the Town of Bellingham: equipment inspection and maintenance, proper storage of industrial materials, proper management and disposal of wastes, proper management of dumpsters, minimization of use of salt or other de-icing/anti-icing materials, proper storage of salt or other de-icing/anti-icing materials, benefits of on-site infiltration of stormwater runoff from areas with low exposure to industrial materials, proper maintenance of parking lot surfaces, and requirements for coverage under EPA's Multi-Sector General Permit.

Targeted Audience: Industrial facilities**Responsible Department/Parties:** Planning Board**Measurable Goal(s):**

Distribute a minimum of two (2) educational messages to industrial facilities spaced at least one year apart. The Town may also wish to measure results in more specific ways, like the percent of industrial facilities reached or changes in behaviors impacting stormwater management.

Message Date(s): 2019 (PY2), 2021 (PY4)

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) 2A

Location of Plan and/or Web Address:

Responsible Department/Parties:

Measurable Goal(s):

Annually provide the public with an opportunity to participate in the review and implementation of the SWMP.

BMP: Public Participation in Stormwater Management Program Development

BMP Number (Optional) 2B

Description:

Provide opportunities for public involvement and participation in Bellingham's stormwater program. Specific activities may include, but are not limited to, the annual hazardous waste collection day (hosted by DPW), and annual cleanups along the Charles River.

Responsible Department/Parties:

Measurable Goal(s):

Ongoing compliance and reporting of events and activities organized for public participation in Annual Reports.

BMP: Public Participation

BMP Number (Optional) 2C

Document Name and/or Web Address:

Description:

Organize meetings of Interdepartmental Stormwater Working Group, consisting of representatives from departments including Planning and Zoning, Public Works, and Town Administrator's Office.

Responsible Department/Parties:

Measurable Goal(s):

Meetings and communication between the Stormwater working group as needed.

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) 3A

Completed (by May 1, 2008) ☒

Ordinances Link or Reference:

Department Responsible for Enforcement:

BMP: Sanitary Sewer Overflow (SSO) Inventory

BMP Number (Optional) 3B

Completed (by year 1) ☒

Document Name and/or Web Address:

Description:

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.

Responsible Department/Parties:

Measurable Goal(s):

Develop SSO inventory by June 30, 2019. Track number of SSOs identified and removed annually and update in Annual Reports.

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>
--	--

BMP: Map of Storm Sewer System

BMP Number (Optional) 3C

Phase I Completed ☒
(by year 2)

Phase II Completed ☐
(by year 10)

Document Location and/or Web Address: <https://www3.epa.gov/region1/npdes/stormwater/ma/tms4noi/bellingham.pdf>

Description:

Create a map of the storm sewer system and update during IDDE program implementation.

Responsible Department/Parties: Public Works

Measurable Goal(s):

By June 30, 2020, complete Phase I: map 100% of outfalls and receiving waters, 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, complete Phase II: map 100% of outfall spatial locations, pipes, manholes, catch basins, refined catchment delineations, and municipal sanitary sewer system.

BMP: IDDE Program

BMP Number (Optional) 3D/3E1-3

Written Document Completed (by year 1) ☒

Document Name and/or Web Address:

Description:

Create written IDDE program. Complete outfall/interconnection inventory and initial ranking, dry weather outfall screening and sampling, and catchment investigations.

Responsible Department/Parties: Public Works

Measurable Goal(s):

By June 30, 2019, develop written IDDE program and complete outfall/interconnection and initial ranking. Update IDDE program, inventory and ranking as necessary. By June 30, 2021, conduct 100% of outfall screening on High and Low Priority Outfalls. By June 30, 2025, complete catchment investigations for 100% of the Problem Outfalls. By June 30, 2028, complete 100% of all catchment investigations. Track number of illicit discharges identified and volume removed. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

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

At the Department of Public Works

BMP: Employee Training

BMP Number (Optional) **3F** _____

Description:

Train employees on IDDE implementation.

Responsible Department/Parties: Public Works

Measurable Goal(s):

Training occurs annually. Track employees trained, training topics, date/time, and materials presented.

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) 4A

Completed (by May 1, 2008) ☒

Ordinances Link or Reference:

Department Responsible for Enforcement:

BMP: Site Plan Review Procedures

BMP Number (Optional) 4B

Written procedures completed (by year 1) ☒

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

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

BMP Number (Optional) 4B

Completed (by year 1) ☒

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

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) 5A

Completed (by year 2) ☐

Town Ordinances Link or Reference: https://www.bellinghamma.org/sites/bellinghamma/files/uploads/procedural_rules_for_the_planning_board.pdf

Department Responsible for Enforcement: Planning Board

BMP: Street Design and Parking Lot Guidelines Report

BMP Number (Optional) 5B

Completed (by year 4) ☐

Document Name and/or Web Address:

Description:

By June 30, 2022, develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if change to design standards for streets and parking lots can be modified to support low impact design options.

Responsible Department/Parties: Planning Board

Measurable Goal(s):

Complete report no later than four (4) years of permit effective date.

BMP: Green Infrastructure Report

BMP Number (Optional) 5C

Completed (by year 4) ☐

Document Name and/or Web Address:

Description:

By June 30, 2022, 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: Planning Board

Measurable Goal(s):

Complete report no later than four (4) years of permit effective date.

BMP: List of Municipal Retrofit Opportunities

BMP Number (Optional) 5D

Completed (by year 4) ☐

Document Name and/or Web Address:

Description:

By June 30, 2022, conduct detailed inventory of Town-owned properties and rank for retrofit potential. At a minimum, the Town shall consider municipal properties with significant impervious cover that could be modified or retrofitted to reduce the frequency, volume or pollutant loads of stormwater discharges.

Responsible Department/Parties:

Measurable Goal(s):

Complete report no later than four (4) years of permit effective date, beginning in year 5 keep a running list of at least five (5) retrofit sites.

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) 6A

Written Document Completed (by year 2) ☒

Document Name and/or Web Address:

Description:

By June 30, 2020, inventory and create O&M procedures for all permittee-owned parks and open spaces.

Responsible Department/Parties:

Measurable Goal(s):

Complete two (2) years after permit effective date, implement in following years.

Properties List (Optional):

BMP: Buildings and Facilities Operations and Maintenance Procedures

BMP Number (Optional) 6A

Written Document Completed (by year 2) ☒

Document Name and/or Web Address:

Description:

By June 30, 2020, inventory and create O&M procedures for all permittee-owned buildings and facilities (including their storm drains).

Responsible Department/Parties:

Measurable Goal(s):

Complete two (2) years after permit effective date, implement in following years.

Properties List (Optional):

BMP: Vehicles and Equipment Operations and Maintenance Procedures

BMP Number (Optional) 6A

Written Document Completed (by year 2) ☒

Document Name and/or Web Address:

Description:

By June 30, 2020, inventory and create O&M procedures for all permittee-owned vehicles and equipment.

Responsible Department/Parties: Public Works

Measurable Goal(s):

Complete two (2) years after permit effective date, implement in following years.

Properties List (Optional):

INFRASTRUCTURE

BMP: Infrastructure Operations and Maintenance Procedures

BMP Number (Optional) 6B

Written Procedure Completed (by year 2) ☒

Document Name and/or Web Address:

Description:

By June 30, 2020, establish and implement a program for repair and rehabilitation of MS4 infrastructure.

Responsible Department/Parties: Public Works

Measurable Goal(s):

Complete two (2) years after permit effective date, implement in following years.

BMP: Catch Basin Cleaning Program

BMP Number (Optional) 6D-1

Written Procedure Completed (by year 1) ☒

Document Name and/or Web Address:

Description:

By June 30, 2019, begin to improve procedures to optimize catch basin cleaning developed under BMP 6B. Formalize procedures in Town-wide Operations and Maintenance Plan described in BMP 6A by June 30, 2020. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

Responsible Department/Parties: Public Works

Measurable Goal(s):

Track frequency and material quantity of catch basin cleaning. Document plan for optimizing catch basin cleaning in the first Annual Report.

BMP: Street Sweeping Program**BMP Number (Optional)** 6D-2**Written Procedure Completed** (by year 1) ☒**Document Name and/or Web Address:****Description:**

By June 30, 2019, implement procedures for street and parking lot sweeping developed under BMP 6B. Per the metals impairment for the Peters River, the frequent of street sweeping must be increased for target areas with potential for high pollutant loads.

Responsible Department/Parties: Public Works**Measurable Goal(s):**

Annually track number of miles cleaned or the volume or mass of material removed.

BMP: Winter Road Maintenance Program**BMP Number (Optional)** 6D-3**Written Procedure Completed** (by year 1) ☒**Document Name and/or Web Address:****Description:**

By June 30, 2019, implement procedures for use and storage of deicing materials developed under BMP 6B.

Responsible Department/Parties: Public Works**Measurable Goal(s):**

Evaluate at least one salt/chloride alternative for use in the municipality. Implement program for winter road maintenance throughout permit term.

BMP: Stormwater Treatment Structures Inspection and Maintenance Procedures

BMP Number (Optional) 6D-4

Completed (by year 2) ☒

Document Name and/or Web Address:

Description:

Inspect stormwater treatment structures annually by June 30, beginning in Year 1. By June 30, 2020, implement procedures to inspect and maintain Town-owned structural stormwater BMPs.

Responsible Department/Parties: Public Works

Measurable Goal(s):

Develop an inventory of Town-owned BMPs within two years of permit effective date. Annually report on inspection and maintenance conducted.

BMP: SWPPP

BMP Number (Optional) 6C

Completed (by year 2) ☐

Document Name and/or Web Address:

Description:

By June 30, 2020, develop and implement a SWPPP and SWPPP BMPs at maintenance garages, transfer stations and other waste-handling facilities.

Responsible Department/Parties: Public Works

Measurable Goal(s):

Update or develop SWPPPs within two years of permit effective date, implement in following years.

Annual Evaluation

Year 1 Annual Report

Document Name and/or Web Address:

Insert link to EPA website or include copy in Appendix I when complete.

Year 2 Annual Report

Document Name and/or Web Address:

Insert link to EPA website or include copy in Appendix I when complete.

Year 3 Annual Report

Document Name and/or Web Address:

Insert link to EPA website or include copy in Appendix I when complete.

Year 4 Annual Report

Document Name and/or Web Address:

Insert link to EPA website or include copy in Appendix I when complete.

Year 5 Annual Report

Document Name and/or Web Address:

Insert link to EPA website or include copy in Appendix I when complete.

Year X Annual Report

Document Name and/or Web Address:

Insert link to EPA website or include copy in Appendix I when complete.

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
Charles River MA72-04	Total Maximum Daily Loads for Pathogens within the Charles River Watershed	<input type="button" value="+"/> <input type="button" value="-"/>
Peters River MA51-18		<input type="button" value="+"/> <input type="button" value="-"/>
Beaver Brook MA72-12		<input type="button" value="+"/> <input type="button" value="-"/>
Arnolds Brook MA51-32		<input type="button" value="+"/> <input type="button" value="-"/>

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:

The Town of Bellingham must implement the IDDE program described in BMPs 3A-3F. Additionally, catchments draining to any of the waterbodies listed above, which are impaired for bacteria or pathogens, shall be designated as either Problem Catchments or High Priority in implementation of the IDDE program and in the initial outfall ranking.

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:

Bellingham must supplement the residential public education program described in BMP 1A with an annual message about the proper management of pet waste, including noting existing bylaws where appropriate.

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:

Bellingham must supplement the residential public education program described in BMP 1A by disseminating educational material to dog owners at the time of issuance or renewal of dog licenses. This is an ongoing requirement.

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:

Bellingham must supplement the residential public education program described in BMP 1A by providing information to owners of septic systems about proper maintenance in any catchment that discharges to a waterbody impaired for bacteria or pathogens (i.e., Charles River, Peters River, Beaver Brook, and Arnolds Brook).

Solids, Oil and Grease (Hydrocarbons), or Metals

Combination of Impaired Requirements and TMDL Requirements as Applicable

Applicable Receiving Waterbody(ies)	TMDL Name (if applicable)	Add/Delete Row
Peters River MA51-18		<input type="button" value="+"/> <input type="button" value="-"/>

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:

The Town of Bellingham must implement the IDDE program described in BMPs 3A-3F. Additionally, catchments draining to Peters River, which is impaired for copper and lead, shall be designated as either Problem Catchments or High Priority in implementation of the IDDE program and in the initial outfall ranking.

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

Increase street sweeping frequency of all municipal owned streets and parking lots to a schedule to target areas with potential for high pollutant loads

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

For target areas with potential for high pollutant loads, the Town must increase the frequency of the street sweeping program, as described in BMP 6D-2. This may include, but is not limited to, increased street sweeping frequency in commercial areas and high density residential areas, or drainage areas with a large amount of impervious area.

Prioritize inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Clean catch basins more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings

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

As described in BMP 6D-1, the Town of Bellingham will undertake a catch basin cleaning program to ensure that no sump is more than 50% full and increase the frequency of catch basin cleaning if inspection and maintenance activities indicate excessive sediment or debris loadings.

Requirements Due by Year 2

Stormwater Management in New Development and Redevelopment

Stormwater management systems designed on commercial and industrial land use area draining to the water quality limited water body shall incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or other unexpected event

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

By June 30, 2020, the Town shall require stormwater management systems designed on commercial and industrial land draining to Peters River to incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or other unexpected event. The Town also encourages commercial and industrial property owners with stormwater management systems designed to infiltrate to provide the level of pollutant removal equal to or greater than the level of pollutant removal provided through the use of biofiltration of the same volume of runoff to be infiltrated, prior to infiltration.

Charles River Watershed Phosphorus TMDL

PCP Phase	Document Location
I (completed by year 5)	
II (completed by year 10)	
III (completed by year 15)	

Appendix A

Delegation of Authority



Town of Bellingham

BOARD OF SELECTMEN

10 Mechanic Street

Bellingham, Massachusetts 02019

Tel: 508-966-5800 * Fax: 508-966-4425

July 8, 2019

Ms. Thelma Murphy
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100 (OEP06-1)
Boston, MA 02109-3912

Re: NPDES MA Small MS4 General Permit
Delegating an "Authorized Representative"

Dear Ms. Murphy:

This letter serves to designate the Town of Bellingham's DPW Director as an authorized person for signing the Stormwater Management Plan (SWMP), stormwater pollution prevention plans (SWPPPs), inspection reports, annual reports, monitoring reports, reports on training and other information required under the General Permit. This authorization cannot be used for signing a NPDES permit application (e.g., Notice of Intent (NOI)) in accordance with 40 CFR 122.22.

By signing this authorization, I confirm that the Chair of the Board of Selectmen meets the following requirements to make such a designation as set forth in Appendix B, Subparagraph 11 of the Small MS4 General Permit:

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

"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."

Sincerely,

Daniel Spencer
Chair of Board of Selectmen

Appendix B

Town Specific MS4 Background

Bellingham is located in Norfolk County, approximately 25 miles southeast of Worcester. There are approximately 0.5 square miles of water within its 19.0 square mile footprint. According to the 2010 United States Census, Bellingham is home to approximately 16,330 residents in more than 6,150 households. Almost all of the Town is within the urbanized area and therefore, regulated by EPA under the MS4 program.



Figure 1 Location of Bellingham, Massachusetts

The Town of Bellingham is located within the Charles River Watershed and the Blackstone River Watershed. Protecting the quality of Bellingham's water resources, including lakes, ponds, rivers and groundwater supplies, is a priority for the Town of Bellingham. Pollutants from stormwater runoff are a contributing factor to the impairment of Bellingham's waterbodies, including bacterial contamination and high phosphorus levels.

The Town of Bellingham has achieved all of the measurable goals for the BMPs selected in the 2003 Notice of Intent and those added in subsequent years to reflect unplanned stormwater activities by the Town. A list of BMPs completed under the 2003 Small MS4 Permit is included on the next page.

The Town of Bellingham has taken advantage of low-cost and innovative approaches to provide stormwater education and outreach, primarily to residential audiences and developers. The Town maintains a Stormwater Information webpage, which includes education for households and small businesses. The Town also displays educational posters on stormwater topics at the Town Hall including pet waste management, fertilizer use and low impact development. The Town provides opportunities for public participation through hazardous waste collection day and annual cleanups along the Charles River.

The Town has made significant progress in mapping the stormwater system and developing a GIS base map of catch basins, drainage manholes, 286 known Town-owned outfalls and known connectivity. The Town approved the Illicit Connections and Discharges Bylaw in 2006 and requires that all new catch basins have hoods installed over the outlet pipe and new drain manholes have a one-foot sump below the lowest outlet pipe, as part of the Subdivision Regulations.

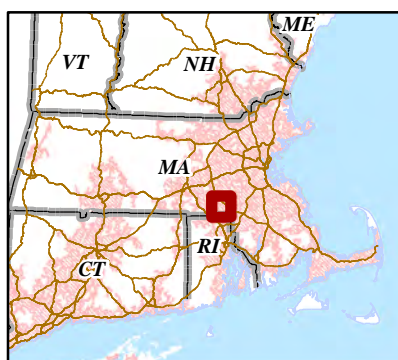
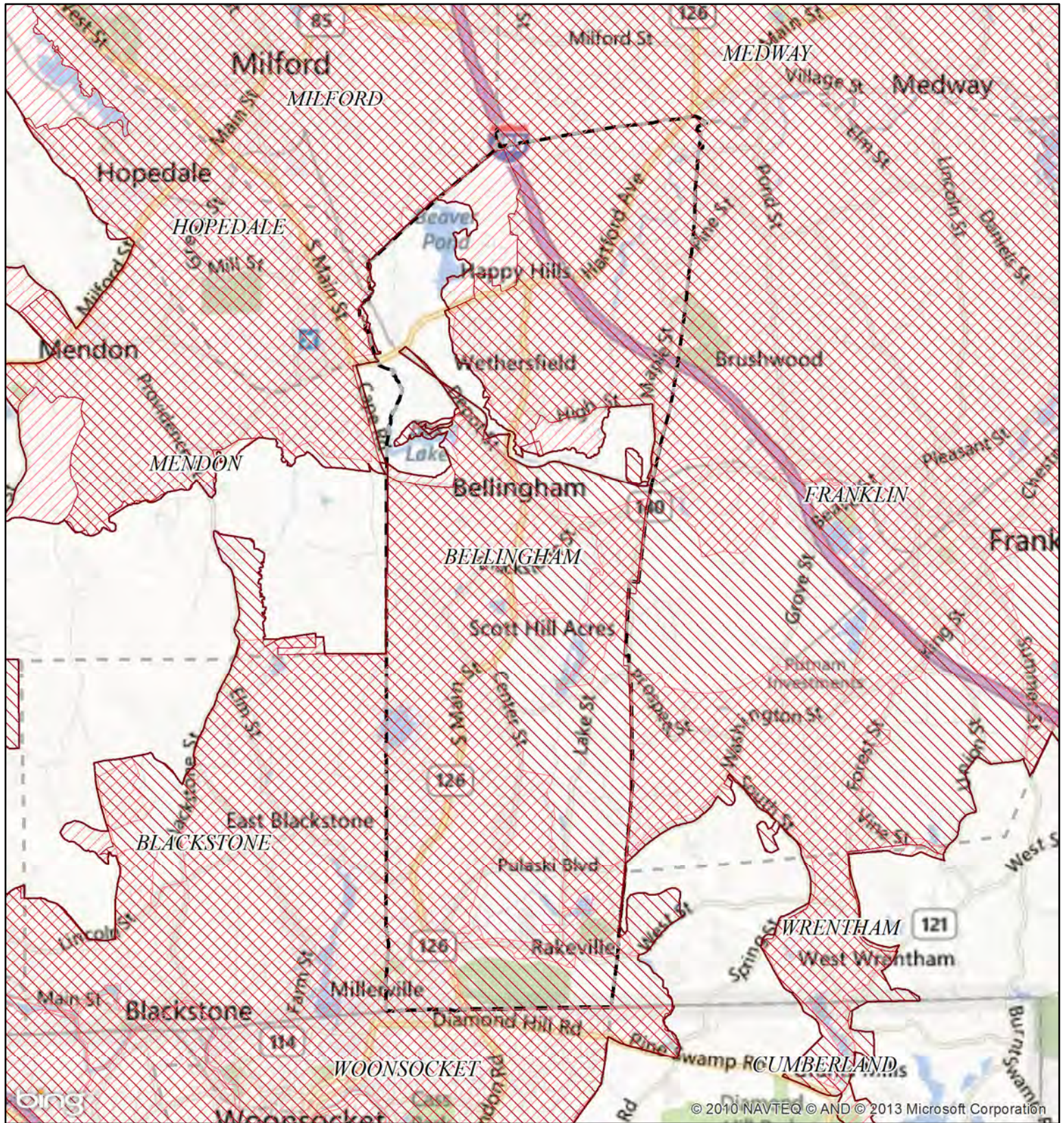
In 2007, the Town revised their Regulations and Procedural Rules to include Erosion and Sedimentation Control requirements both during and post construction.

Lastly, the Town has established an active Good Housekeeping Program for stormwater pollution prevention including active street sweeping, catch basin cleaning, maintaining a SWPPP and SPCC Plan for their DPW garage.

Summary of 2003 and 2016 MS4 General Permit BMPs

BMPs identified in the 2003 General Permit NOI have evolved over the permit term due to staff changes and Stormwater Program modifications. The intent of the 2003 BMPs are being met under the following proposed 2016 General Permit BMPs (BMPs current as of 2018 Annual Report):

- 1.01: Youth Summer Water Awareness Program – now under BMP 1A
- 1.02: Distribute Written Information – now under BMPs 1A-D
- 1.03: Smart Storm Roof Runoff Recharge/Reuse Info Posting – now under BMP 1A-1D
- 2.01: Create Storm Water Management Committee – now under BMP 2C
- 2.02: Open and Advertise SWMC Meetings – now under BMPs 2B-2C
- 3.01: Complete GIS Mapping of 2000 Urbanized Area – now under BMP 3C
- 3.02: Distribute Written Info to Residents on Illicit Discharge – now under BMP 1A
- 3.03: Illicit Discharge Bylaw to Town Meeting – now under BMPs 3A
- 3.04: Train DPW Staff to Identify Illicit Discharges – now under BMP 3F
- 4.01: Review Existing Bylaws – now under BMP 4A
- 4.02: Suggest Modifications to Bylaws & Regulations – now under BMP 4A
- 4.03: Procedures for Town's Site Inspectors – now under BMP 4B
- 5.01: Review existing bylaws – now under BMP 5A
- 5.02: Suggest Modification to Bylaws & Regulations – now under BMP 5A
- 5.03: Annual Review of Post Construction Runoff Procedures – now under BMP 5A
- 6.01: Continuous Street Sweeping & CB Cleaning – now under BMP 6D-2
- 6.02: Sweeping & CB Cleaning Records – now under BMP 6D-1
- 6.03: DPW & Parks Department Facilities Master Plan – now under BMP 6A
- 6.04: All Town Facilities Stormwater Review and Master Plan – now under BMP 6A
- 6.05: Construct Recharge & Treatment at Plymouth Road – now covered under MCM 5



NPDES Phase II Stormwater Program Automatically Designated MS4 Areas

Bellingham MA

Regulated Area:

UA Based on 2000 Census	UA Based on 2010 Census
----------------------------	----------------------------



Town Population: 16333
Regulated Population: 16143
(Populations estimated from 2010 Census)



Urbanized Areas, Town Boundaries:
US Census (2000, 2010)
Base map © 2013 Microsoft Corporation
and its data suppliers

Appendix C

Notice of Intent, System Map and
Authorization to Discharge Letter from EPA

Part I: General Conditions

General Information

Name of Municipality or Organization: State:

EPA NPDES Permit Number (if applicable):

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Fax Number:

Other Information

Stormwater Management Program (SWMP) Location (web address or physical location, if already completed):

Eligibility Determination

Endangered Species Act (ESA) Determination Complete? Eligibility Criteria (check all that apply): ☐ A ☐ B ☒ C

National Historic Preservation Act (NHPA) Determination Complete? Eligibility Criteria (check all that apply): ☒ A ☐ B ☐ C

☒ Check the box if your municipality or organization was covered under the 2003 MS4 General Permit

MS4 Infrastructure (if covered under the 2003 permit)

Estimated Percent of Outfall Map Complete? If 100% of 2003 requirements not met, enter an estimated date of completion (MM/DD/YY):

Web address where MS4 map is published:

If outfall map is unavailable on the internet an electronic or paper copy of the outfall map must be included with NOI submission (see section V for submission options)

Regulatory Authorities (if covered under the 2003 permit)

Illicit Discharge Detection and Elimination (IDDE) Authority Adopted? (Part II, III, IV or V, Subpart B.3.(b.) of 2003 permit)	<input type="text" value="Yes"/>	Effective Date or Estimated Date of Adoption (MM/DD/YY):	<input type="text" value="10/11/06"/>
Construction/Erosion and Sediment Control (ESC) Authority Adopted? (Part II, III, IV or V, Subpart B.4.(a.) of 2003 permit)	<input type="text" value="Yes"/>	Effective Date or Estimated Date of Adoption (MM/DD/YY):	<input type="text" value="10/01/07"/>
Post- Construction Stormwater Management Adopted? (Part II, III, IV or V, Subpart B.5.(a.) of 2003 permit)	<input type="text" value="Yes"/>	Effective Date or Estimated Date of Adoption (MM/DD/YY):	<input type="text" value="10/01/07"/>

Part II: Summary of Receiving Waters

Massachusetts list of impaired waters: [Massachusetts 2014 List of Impaired Waters- http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf](http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf)

Check off relevant pollutants for discharges to impaired waterbodies (see above 303(d) lists) without an approved TMDL in accordance with part 2.2.2.a of the permit. List any other pollutants in the last column, if applicable.

[illegible]

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
Unnamed Pond off of Pony Court	1	<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"/>	
Isolated Wetland off of Bellstone Drive	1	<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"/>	
Isolated Wetland off of Denault Drive	1	<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"/>	
Isolated Wetland off of Easy Street	1	<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"/>	
Isolated Wetland off of Lake Street	1	<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"/>	
Isolated Wetland off of Linwood Ave	1	<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"/>	
Isolated Wetland off of Mann Street	1	<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"/>	
Isolated Wetland off of Maple Street	1	<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"/>	
Isolated Wetland off of South Main Street	2	<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"/>	
Isolated Wetland off of Westminster Street	1	<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"/>	
Outside Receiving Water Discharge	162	<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"/>	<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 to lengthen table

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary

Identify the Best Management Practices (BMPs) that will be employed to address each of the six Minimum Control Measures (MCMS). For municipalities/organizations whose MS4 discharges into a receiving water with an approved Total Maximum Daily Load (TMDL) and applicable waste load allocation (WLA), identify any additional BMPs employed to specifically support the achievement of the WLA in the TMDL section at the end of Part III.

For each MCM, list each existing or proposed BMP by category and provide a brief description, responsible parties/departments, measurable goals and the year the BMP will be employed (public education and outreach BMPs also require a target audience).

MCM 1: Public Education and Outreach

BMP ID	BMP Media/Category	BMP Description	Targeted Audience	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
1A	Multi-media methods (including web and distribution of print materials)	Education and outreach on stormwater management topics of significance, (including proper pet waste management, effects of lawn care on water quality). Educational topics will include but are not limited to those in Part 2.3.2.d.i	Residents	Planning Board	Distribute a minimum of two (2) educational messages spaced at least a year apart	2018 (PY1)

Notice of Intent (NOI) for coverage under Small MS4 General Permit

BMP ID	BMP Media/Category	BMP Description	Targeted Audience	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
1B	Multi-media methods (including web and distribution of print materials)	Education and outreach on stormwater management topics of significance (including effects of lawn care on water quality, illicit discharges to the MS4). Educational topics will include but are not limited to those in Part 2.3.2.d.ii	Businesses, Institutions, and Commercial Facilities	Planning Board	Distribute a minimum of two (2) educational messages spaced at least a year apart	2019 (PY2)
1C	Multi-media methods (including web and permit application attachment)	Education and outreach on stormwater management topics of significance (including proper erosion and sedimentation control, permit requirements and design standards). Educational topics will include but are not limited to those in Part 2.3.2.d.iii	Developers (Construction)	Planning Board	Distribute a minimum of two (2) educational messages spaced at least a year apart	2018 (PY1)
1D	Multi-media methods (including web and distribution of print materials)	Education and outreach on stormwater management topics of significance (including general pollution prevention, illicit discharges to the MS4). Educational topics will include but are not limited to those in Part 2.3.2.d.iv	Industrial Facilities	Planning Board	Distribute a minimum of two (2) educational messages spaced at least a year apart	2019 (PY2)

Notice of Intent (NOI) for coverage under Small MS4 General Permit**Part III: Stormwater Management Program Summary****MCM 2: Public Involvement and Participation**

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
2A	Public Review	SWMP Review	Public Works	Annually provide the public with an opportunity to participate in the review and implementation of the SWMP	2018 (PY1)
2B	Public Participation	Provide opportunities for public involvement and participation in Bellingham's stormwater program (including supporting clean-up events and hosting a hazardous waste collection day). Specific activities, schedule, and lead departments are included in the SWMP.	Public Works	Ongoing compliance	2018 (PY1)
2C	Public Participation	Inter-departmental Stormwater Working Group	Planning Board	Stormwater working group will meet and communicate via email as needed	2018 (PY1)

Notice of Intent (NOI) for coverage under Small MS4 General Permit

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Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
3A	IDDE Ordinance/Bylaw	Complete. Continue to enforce and update if necessary.	Public Works	Track illicit discharges identified and removed. Track permits issues with certification of no illicit connections.	2018 (PY1)
3B	SSO Inventory	Develop SSO inventory in accordance of permit conditions	Public Works	Complete within 1 year of effective date of permit. Track # of SSOs identified and removed annually	2018 (PY1)
3C	Storm sewer system map	Create map and update during IDDE program implementation	Public Works	Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit	2018 (PY1)
3D	Written IDDE program	Create written IDDE program	Public Works	Complete within 1 year of the effective date of permit and update as required	2018 (PY1)
3E	Assessment and Priority Ranking of Outfalls & Interconnections	1. Outfall/Interconnection Inventory and Initial Ranking as part of BMP 3D	Public Works	Complete within 1 year of the effective date of permit and update as necessary	2018 (PY1)
3E	Assessment and Priority Ranking of Outfalls & Interconnections	2. Dry Weather Outfall Screening & Sampling in accordance with IDDE Plan and permit conditions	Public Works	Complete 3 years after effective date of permit. Track # of illicit discharges identified & volume removed. Summarize screening/sampling results.	2018 (PY1)

Notice of Intent (NOI) for coverage under Small MS4 General Permit

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
3E	Assessment and Priority Ranking of Outfalls & Interconnections	3. Catchment Investigations according to program and permit conditions	Public Works	Complete 10 years after effective date of permit. Track # and percentage of MS4 catchments evaluated. Track # of illicit discharges identified & volume removed. Summarize screening/sampling results.	2019 (PY2)
3F	Employee Training	Train employees on IDDE implementation	Public Works	Train annually. Track employees trained, training topic, date/time, and materials presented.	2018 (PY1)

Notice of Intent (NOI) for coverage under Small MS4 General Permit**Part III: Stormwater Management Program Summary****MCM 4: Construction Site Stormwater Runoff Control**

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
4A	Construction Bylaw and Regulations	Modify local bylaw and regulations, if necessary, to contain new MS4 provisions per Part 2.3.5.	Planning Board	Review current procedures and modify if necessary within 1 year of permit effective date	2018 (PY1)
4B	Construction Policy and Procedures	Develop and implement written procedures for site inspections and enforcement procedures per Part 2.3.5.	Planning Board	Review current procedures and modify if necessary within 1 year of permit effective date	2018 (PY1)

Notice of Intent (NOI) for coverage under Small MS4 General Permit

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Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
5A	Post-Construction Bylaw and Regulations	Modify local bylaw and regulations to contain new MS4 provisions per Part 2.3.6.a.	Planning Board	Modify existing bylaw and regulations within two (2) years of permit effective date	2019 (PY 2)
5B	Assess street and parking lot guidelines	Develop a report assessing 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.	Planning Board	Complete report no later than (4) years of permit effective date	2020 (PY3)
5C	Assess allowing green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	Planning Board	Complete report no later than (4) years of permit effective date	2020 (PY3)
5D	Retrofit Feasibility Assessment	Conduct detailed inventory of Town-owned properties and rank for retrofit potential	Public Works	Complete report no later than 4 years of permit effective date, beginning in year 5 keep running list of at least 5 retrofit sites	2020 (PY3)

Notice of Intent (NOI) for coverage under Small MS4 General Permit

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Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary

MCM 6: Municipal Good Housekeeping and Pollution Prevention

BMP ID	BMP Category	BMP Description	Responsible Department / Parties	Additional Description/Measurable Goal	Beginning Year of BMP Implementation
6A	Operation & Maintenance Program	Inventory and create O&M procedures for all permittee-owned parks and open spaces, buildings and facilities (including their storm drains), and vehicles and equipment	Public Works	Complete 2 years after permit effective date, implement in following years	2018 (PY1)
6B	Operation & Maintenance Program	Establish and implement program for repair and rehabilitation of MS4 infrastructure	Public Works	Complete 2 years after permit effective date, implement in following years	2019 (PY2)
6C	Stormwater Pollution Prevention Plans (SWPPP)	Develop and implement a SWPPP and SWPPP BMPs at maintenance garages, transfer stations and other waste-handling facilities	Public Works	Update or develop SWPPPs within 2 year of permit effective date, implement in following years	2019 (PY2)
6D	Operation & Maintenance Program	1. Implement procedures to optimize catch basin cleaning developed under BMP 6B	Public Works	Track frequency and material quantity of catch basin cleaning in town. In first Annual Report and in SWMP, document plan for optimizing catch basin cleaning.	2018 (PY1)
6D	Operation & Maintenance Program	2. Implement procedures for street and parking lot sweeping developed under BMP 6B	Public Works	Annually track number of miles cleaned or the volume or mass of material removed.	2018 (PY1)
6D	Operation & Maintenance Program	3. Implement procedures for use and storage of deicing materials developed under BMP 6B	Public Works	Implement program for winter road maintenance throughout permit term.	2018 (PY1)

Notice of Intent (NOI) for coverage under Small MS4 General Permit

BMP ID	BMP Category	BMP Description	Responsible Department / Parties	Additional Description/Measurable Goal	Beginning Year of BMP Implementation
6D	Operation & Maintenance Program	4. Implement procedures to inspect and maintain Town-owned structural stormwater BMPs	Public Works	Develop an inventory of Town-owned BMPs during PY3. Report on inspection and maintenance conducted annually starting in PY4.	2020 (PY3)

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Total Maximum Daily Load (TMDL) Requirements

Use the drop-down menus to select the applicable TMDL, action description to meet the TMDL requirements, and the responsible department/parties. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

[illegible]

Part III: Stormwater Management Program Summary (continued)

Use the drop-down menus to select the pollutant causing the water quality limitation and enter the waterbody ID(s) experiencing excursions above water quality standards for that pollutant. Choose the action description from the dropdown menu and indicate the responsible party. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

[illegible]

Part IV: Notes and additional information

Use the space below to indicate the part(s) of 2.2.1 and 2.2.2 that you have identified as not applicable to your MS4 because you do not discharge to the impaired water body or a tributary to an impaired water body due to nitrogen or phosphorus. Provide all supporting documentation below or attach additional documents if necessary. Also, provide any additional information about your MS4 program below.

1. BMPs identified in the 2003 General Permit NOI have evolved over the permit term due to staff changes and Stormwater Program modifications. The intent of the 2003 BMPs are being met under the proposed 2016 General Permit BMPs included in the Stormwater Management Plan. The Plan will describe how the BMPs under the 2003 permit fit into the new program, particularly where BMPs and/or measurable goals that are outdated or no longer appropriate have been replaced or updated.

2. The National Endangered Species Eligibility Determination screening process has been completed and the Town of Bellingham meets Criterion C. The Town's stormwater discharges and discharge related activities will have no affect on listed species or critical habitat. The Town will consult with U.S. Fish and Wildlife as needed during the permit term.

3. The National Historic Preservation Act Eligibility Determination screening process has been completed and the Town of Bellingham meets Criterion A. The Town's stormwater discharges do not have the potential to cause effects on historic properties. The Town will consult with the State Historic Preservation Officer as needed during the permit term.

4. The outfalls and associated receiving waters in Part II are based on mapping as of September 2018 and are subject to change during implementation of the Stormwater Management Program as newly constructed outfalls are added to the map and inventory; locations are adjusted; or outfalls are removed if they are determined to be non-municipally owned/operated or reclassified as a BMP inlet, culvert, or other structure. Changes to the outfall inventory and mapping will be formalized in Annual Reports to EPA.

Detailed explanations of the above notes will be included in the Town's Stormwater Management Plan.

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Page 19 of 19

Part V: Certification

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 gather and evaluate 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, I certify that 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.


Name:

Michael Soter

Title:

Board of Selectmen Chair

Signature:

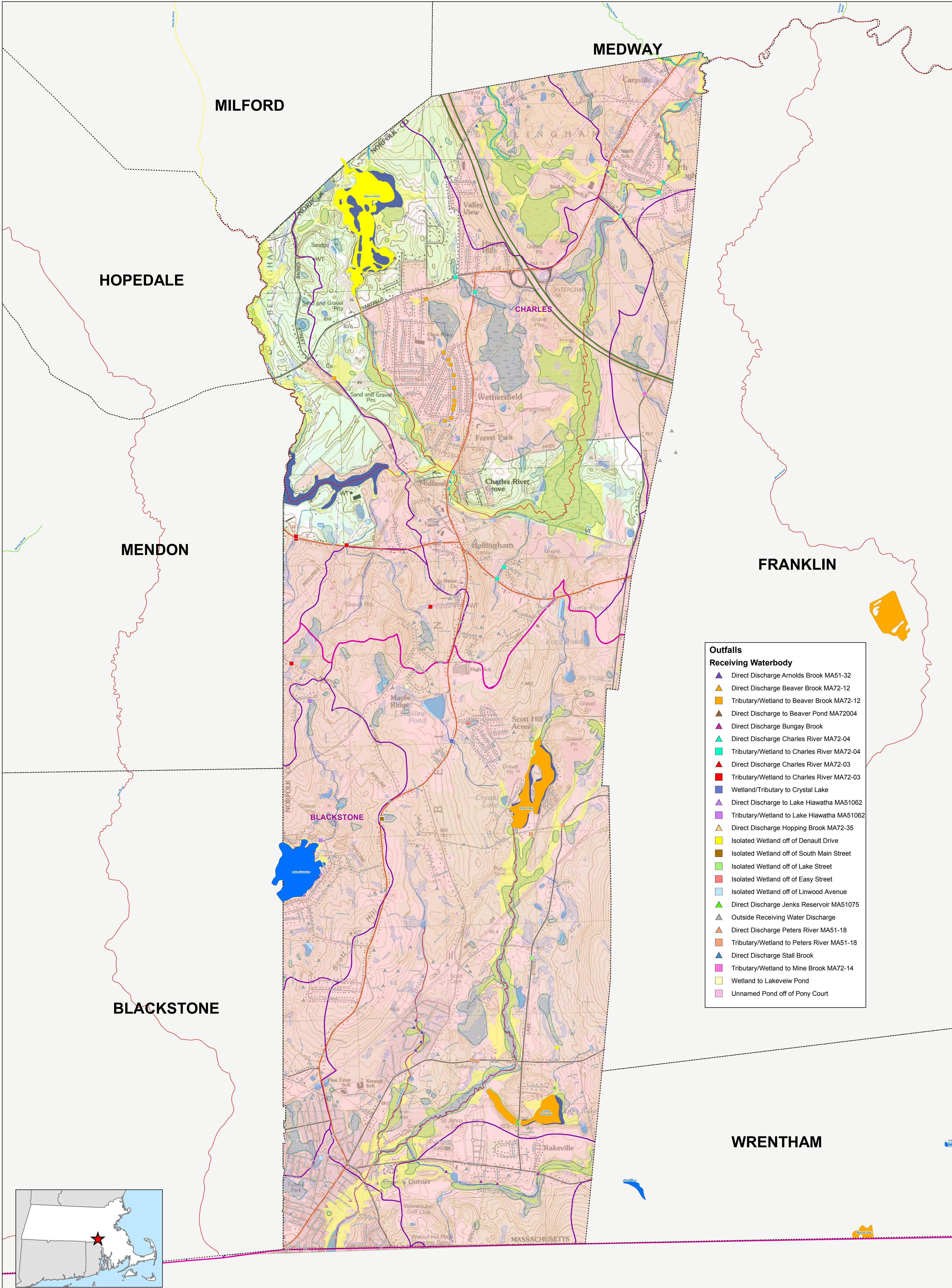


Date:

9/19/2018

[To be signed according to Appendix B, Subparagraph B.11, Standard Conditions]

Note: When prompted during signing, save the document under a new file name



Outfalls	
Receiving Waterbody	
	Direct Discharge Arnolds Brook MA51-32
	Direct Discharge Beaver Brook MA72-12
	Tributary/Wetland to Beaver Brook MA72-12
	Direct Discharge to Beaver Pond MA72004
	Direct Discharge Bungay Brook
	Direct Discharge Charles River MA72-04
	Tributary/Wetland to Charles River MA72-04
	Direct Discharge Charles River MA72-03
	Tributary/Wetland to Charles River MA72-03
	Wetland/Tributary to Crystal Lake
	Direct Discharge to Lake Hiawatha MA51062
	Tributary/Wetland to Lake Hiawatha MA51062
	Direct Discharge Hopping Brook MA72-35
	Isolated Wetland off of Denault Drive
	Isolated Wetland off of South Main Street
	Isolated Wetland off of Lake Street
	Isolated Wetland off of Easy Street
	Isolated Wetland off of Linwood Avenue
	Direct Discharge Jenks Reservoir MA51075
	Outside Receiving Water Discharge
	Direct Discharge Peters River MA51-18
	Tributary/Wetland to Peters River MA51-18
	Direct Discharge Stall Brook
	Tributary/Wetland to Mine Brook MA72-14
	Wetland to Lakeveiw Pond
	Unnamed Pond off of Pony Court

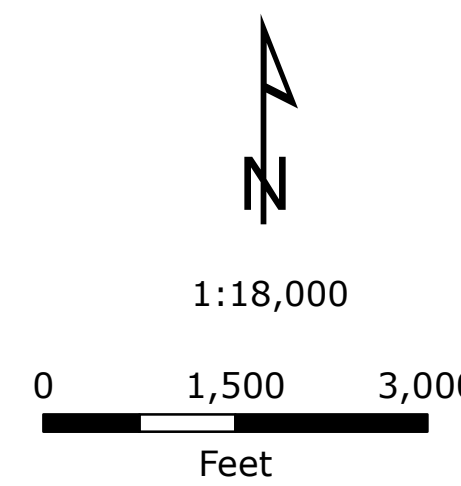
- Legend**
- Roads**
- CLASS**
- Limited Access Highway
 - Multi-Lane Highway, NOT Limited Access
 - Other Numbered Highway
 - Major Road - Collector
 - Minor Street or Road

- National Wetlands Inventory Wetland Areas**
- Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
 - Lake
 - Riverine
 - NWI Rivers and Streams

- Water Body Segments - Rivers (arcs)**
- Category**
- 2 - Attaining some uses; other uses not assessed
 - 3 - No uses assessed
 - 4A - Impaired - TMDL is completed
 - 4C - Impaired not caused by a pollutant
 - 5 - Impaired - TMDL required
- Water Body Segments - Lakes, Estuaries (polygons)**
- Category**
- 2 - Attaining some uses; other uses not assessed
 - 3 - No uses assessed
 - 4A - Impaired - TMDL is completed
 - 4C - Impaired not caused by a pollutant
 - 5 - Impaired - TMDL required

- Urban Area 2000 Census
- Urban Area 2010 Census

- Flood Zone Designations**
- 100 Year Flood Zone
 - Major Drainage Basin
 - Subbasin
 - Town Boundary
 - Public Surface Water Supply
 - Lake, Pond, River or Impoundment
 - Inland Wetlands
 - Coastal Wetlands
 - Stream/Intermittent Stream



OUTFALLS AND RECEIVING WATERBODIES

Notice of Intent
Bellingham, Massachusetts

September 2018

Tighe&Bond
Engineers | Environmental Specialists



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

VIA EMAIL

March 5, 2019

Michael Soter
Board of Selectmen Chair

And;

Donald DiMartino
DPW Director
26 Blackstone Street
Bellingham, MA. 02019
DDiMartino@bellinghamma.org

Re: National Pollutant Discharge Elimination System Permit ID #: MAR041091, Town of Bellingham

Dear Donald DiMartino:

The 2016 NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts (MS4 General Permit) is a jointly issued EPA-MassDEP permit. Your Notice of Intent (NOI) for coverage under this MS4 General Permit has been reviewed by EPA and appears to be complete. You are hereby granted authorization by EPA and MassDEP to discharge stormwater from your MS4 in accordance with the applicable terms and conditions of the MS4 General Permit, including all relevant and applicable Appendices. This authorization to discharge expires at midnight on **June 30, 2022**.

For those permittees that certified Endangered Species Act eligibility under Criterion C in their NOI, this authorization letter also serves as EPA's concurrence with your determination that your discharges will have no effect on the listed species present in your action area, based on the information provided in your NOI.

As a reminder, your first annual report is due by **September 30, 2019** for the reporting period from May 1, 2018 through June 30, 2019.

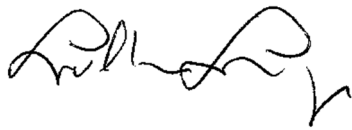
Information about the permit and available resources can be found on our website:
<https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit>. Should you have
any questions regarding this permit please contact Newton Tedder at tedder.newton@epa.gov or
(617) 918-1038.

Sincerely,



Thelma Murphy, Chief
Stormwater and Construction Permits Section
Office of Ecosystem Protection
United States Environmental Protection Agency, Region 1

and;



Lealdon Langley, Director
Wetlands and Wastewater Program
Bureau of Water Resources
Massachusetts Department of Environmental Protection

Appendix D

Endangered Species Act Eligibility Criteria Documentation

Endangered Species Act Eligibility Certification

TO: Town of Bellingham Stormwater Management Program Files
FROM: Tighe & Bond
COPY: Donald DiMartino, DPW Director
DATE: November 28, 2017

Tighe & Bond has completed the National Endangered Species Eligibility Determination screening process in accordance with Part 1.9.1 and Appendix C of U.S. EPA's National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts (see Attachment A of this memorandum), effective July 1, 2018¹, and determined that the **Town of Bellingham** meets **Criterion C**, where informal consultation with U.S. Fish and Wildlife Service (USFWS) resulted in a finding that the stormwater discharges and discharge related activities will have "no affect" on listed species or critical habitat.

Tighe & Bond followed EPA's screening process required by the 2016 Small MS4 General Permit as follows:

Tighe & Bond went to the USFWS Information for Planning and Consultation (IPaC) website² and created an IPaC Trust Resources Report, included in Attachment B of this memorandum. This Report lists the following species that may occur or could potentially be affected by activities in the Town:

- Northern Long-eared Bat.

This report documents that there are no critical habitats in Bellingham.

Tighe & Bond then went to the USFWS New England Field Office website for Endangered Species Reviews/Consultations³ and selected the Massachusetts state list⁴ to review which Towns have federally-listed species. A copy of the list of Federally Listed Endangered and Threatened Species in Massachusetts is included in Attachment C of this memorandum. Based on review of this list, the Northern Long-eared Bat is listed statewide.

Tighe & Bond then reviewed Step 1 Part B of the USFWS endangered species consultation, and visited the Massachusetts Natural Heritage and Endangered Species Program (NHESP) species information and conservation website about the Northern Long-eared Bat⁵. The NHESP website included a map showing the known locations of the Northern Long-eared Bat within Massachusetts. Attachment D includes a map showing there are no roost trees or hibernating locations within Bellingham. Based on the results of the NHESP website review, Tighe & Bond determined there is no potential habitat for any listed species within the action area and therefore no further coordination is required with the USFWS. Attachment E provides

¹ Revised General Permit effective date according to June 29, 2017 EPA memorandum from EPA Region 1 Acting Regional Administrator.

² <http://ecos.fws.gov/ipac/>

³ https://www.fws.gov/newengland/EndangeredSpec-Consultation_Project_Review.htm

⁴ <https://www.fws.gov/newengland/pdfs/MA%20species%20by%20town.pdf>

⁵ <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/rare-mammals/northern-long-eared-bat.html>

the results of Tighe & Bond's informal consultation on behalf of the Town of Bellingham with USFWS "no species present" letter that states "no species are known to occur in the project area".

Step 1 – Determine if you can meet USFWS Criterion A

"USFWS Criterion A: You can certify eligibility, according to USFWS Criterion A, for coverage by this permit if, upon completing the Information, Planning, and Conservation (IPaC) online system process, you printed and saved the preliminary determination which indicated that federally listed species or designated critical habitats are not present in the action area. See Attachment 1 to Appendix C for instructions on how to use IPaC."

No, the Town of Bellingham's IPaC action area contains the Northern Long-eared Bat.

Step 2 – Determine if You Can Meet Eligibility USFWS Criteria B

"USFWS Criterion B: You can certify eligibility according to USFWS Criteria B for coverage by this permit if you answer "Yes" to **all** of the following questions:

- 1) Does your action area contain one or more of the following species: Sandplain gerardia, Small whorled Pogonia, American burying beetle, Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle?"

No, the Town of Bellingham's action area does not contain any of the above species.

Step 3 – Determine if You Can Meet Eligibility USFWS Criteria C

"You can certify eligibility according to USFWS Criterion C for coverage by this permit if you answer "Yes" to both of the following questions:

- 1) Does your action area contain one or more of the following species: Northern Long-eared Bat, Sandplain gerardia, Small whorled Pogonia and/or American burying beetle and does not contain any following species: Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle?

Yes, the Town of Bellingham's action area contains the Northern Long-eared Bat, but none of the other subsequent species.

- 2) Did the assessment of your discharge and discharge related activities indicate that there would be "no affect" on listed species or critical habitat and EOA provided concurrence with your determination?

Yes, Tighe & Bond performed an informal consultation with USFWS and determined that the Town's discharges and discharge related activities will have "no affect" on listed species or critical habitat (see discussion above).

- 3) Do you agree that if, during the course of the permit term, you plan to install a structural BMP not identified in the NOI that you will conduct an endangered species screening for the proposed site and contact the USFWS if you determine that the new activity "may

affect” or is “not likely to adversely affect” listed species or critical habitat under the jurisdiction of the USFWS.”

Yes, during the course of the permit term the Town of Bellingham agrees to conduct an endangered species screening for the proposed site and contact USFWS if they plan to install a structural BMP not identified in the NOI.

Tighe & Bond’s review of all of the questions under Step 3 resulted in “Yes” and thereby we determined the Town of Bellingham’s action area meets the endangered species’ eligibility requirements included in Criterion C.

J:\B\B0852 Bellingham MS4 Engineering\NPDES Compliance\ESA Eligibility\Endangered Species Act Eligibility Certification_Final.docx

Attachment A

Appendix C of U.S. EPA's National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts

APPENDIX C ENDANGERED SPECIES GUIDANCE

A. Background

In order to meet its obligations under the Clean Water Act and the Endangered Species Act (ESA), and to promote the goals of those Acts, the Environmental Protection Agency (EPA) is seeking to ensure the activities regulated by this general permit do not adversely affect endangered and threatened species or critical habitat. Applicants applying for permit coverage must assess the impacts of their stormwater discharges and discharge-related activities on federally listed endangered and threatened species (“listed species”) and designated critical habitat (“critical habitat”) to ensure that those goals are met. Prior to obtaining general permit coverage, applicants must meet the ESA eligibility provisions of this permit by following the steps in this Appendix¹.

Applicants also have an independent ESA obligation to ensure that their activities do not result in any prohibited “take” of listed species¹². The term “Take” is used in the ESA to include harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering. “Harass” is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Many of the measures required in this general permit and in these instructions to protect species may also assist in ensuring that the applicant’s activities do not result in a prohibited take of species in violation of section 9 of the ESA. If the applicant has plans or activities in an area where endangered and threatened species are located, they may wish to ensure that they are protected from potential take liability under ESA section 9 by obtaining an ESA section 10 permit or by requesting formal consultation under ESA section 7. Applicants that are unsure whether to pursue a section 10 permit or a section 7 consultation for takings protection should confer with the appropriate United States Fish and Wildlife Service (USFWS) office or the National Marine Fisheries Service (NMFS), (jointly the Services).

Currently, there are 20 species of concern for applicants applying for permit coverage, namely the Dwarf wedgemussel (*Alasmodonta heterodon*), Northeastern bulrush (*Scirpus ancistrochaetus*), Sandplain gerardia (*Agalinis acuta*), Piping Plover (*Charadrius melodus*), Roseate Tern (*Sterna dougallii*), Northern Red-bellied cooter (*Pseudemys rubriventis*), Bog Turtle (*Glyptemys muhlenbergii*), Small whorled Pogonia (*Isotria medeoloides*), Puritan tiger beetle (*Cicindela puritana*), American burying beetle (*Nicrophorus americanus*), Northeastern beach tiger beetle (*Cicindela dorsalis*), Northern Long-eared Bat (*Myotis septentrionalis*), Atlantic Sturgeon (*Acipenser oxyrinchus*), Shortnose Sturgeon (*Acipenser brevirostrum*), North Atlantic Right Whale (*Eubalaena glacialis*), Humpback Whale (*Megaptera novaengliae*), Fin Whale (*Balaenoptera physalus*), Kemp’s Ridley Sea Turtle (*Lepidochelys kempii*), Loggerhead Sea Turtle (*Caretta caretta*), Leatherback Sea Turtle (*Dermochelys coriacea*), and the Green Turtle (*Chelonia*

¹ EPA strongly encourages applicants to begin this process at the earliest possible stage to ensure the notification requirements for general permit coverage are complete upon Notice of Intent (NOI) submission.

² Section 9 of the ESA prohibits any person from “taking” a listed species (e.g. harassing or harming it) unless: (1) the taking is authorized through an “incidental take statement” as part of completion of formal consultation according to ESA section 7; (2) where an incidental take permit is obtained under ESA section 10 (which requires the development of a habitat conversion plan; or (3) where otherwise authorized or exempted under the ESA. This prohibition applies to all entities including private individuals, businesses, and governments.

mydas). The Atlantic Sturgeon, Shortnose Sturgeon, North Atlantic Right Whale, Humpback Whale, Fin Whale, Loggerhead Sea Turtle, Kemp's Ridley Sea Turtle, Leatherback Sea Turtle and Green Turtle are listed under the jurisdiction of NMFS. The Dwarf wedgemussel, Northeastern bulrush, Sandplain gerardia, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Small whorled Pogonia, Roseate Tern, Puritan tiger beetle, Northeastern beach tiger beetle, Northern Long-eared Bat and American burying beetle are listed under the jurisdiction of the U.S. Fish and Wildlife Service.

Any applicant seeking coverage under this general permit, must consult with the Services where appropriate. When listed species are present, permit coverage is only available if EPA determines, or the applicant determines and EPA concurs, that the discharge or discharge related activities will have "no affect" on the listed species or critical habitat, or the applicant or EPA determines that the discharge or discharge related activities are "not likely to adversely affect" listed species or critical habitat and formal or informal consultation with the Services has been concluded and results in written concurrence by the Services that the discharge is "not likely to adversely affect" an endangered or threatened species or critical habitat.

EPA may designate the applicants as non-Federal representatives for the general permit for the purpose of carrying out formal or informal consultation with the Services (See 50 CFR §402.08 and §402.13). By terms of this permit, EPA has automatically designated operators as non-Federal representatives for the purpose of conducting formal or informal consultation with the U.S. Fish and Wildlife Service. EPA has not designated operators as non-Federal representatives for the purpose of conducting formal or informal consultation with the National Marine Fisheries Service. EPA has determined that discharges from MS4s are not likely to adversely affect listed species or critical habitat under the jurisdiction of the National Marine Fisheries Service. EPA has initiated informal consultation with the National Marine Fisheries Service on behalf of all permittees and no further action is required by permittees in order to fulfill ESA requirements of this permit related to species under the jurisdiction of NMFS

B. The U.S. Fish and Wildlife Service ESA Eligibility Process

Before submitting a notice of intent (NOI) for coverage by this permit, applicants must determine whether they meet the ESA eligibility criteria by following the steps in Section B of this Appendix. Applicants that cannot meet the eligibility criteria in Section B must apply for an individual permit.

The USFWS ESA eligibility requirements of this permit relating to the Dwarf wedgemussel, Northeastern bulrush, Sandplain gerardia, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Small whorled Pogonia, Roseate Tern, Puritan tiger beetle, Northeastern beach tiger beetle, Northern Long-eared Bat and American burying beetle may be satisfied by documenting that one of the following criteria has been met:

USFWS Criterion A: No endangered or threatened species or critical habitat are in proximity to the stormwater discharges or discharge related activities.

USFWS Criterion B: In the course of formal or informal consultation with the Fish and Wildlife Service, under section 7 of the ESA, the consultation resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by USFWS on a finding that the stormwater discharges and

discharge related activities are “not likely to adversely affect” listed species or critical habitat (informal consultation).

USFWS Criterion C: Using the best scientific and commercial data available, the effect of the stormwater discharge and discharge related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the applicant and affirmed by EPA, that the stormwater discharges and discharge related activities will have “no affect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the USFWS.

1. The Steps to Determine if the USFWS ESA Eligibility Criteria Can Be Met

To determine eligibility, you must assess the potential effects of your known stormwater discharges and discharge related activities on listed species or critical habitat, PRIOR to completing and submitting a Notice of Intent (NOI). You must follow the steps outlined below and document the results of your eligibility determination.

Step 1 – Determine if you can meet USFWS Criterion A

USFWS Criterion A: You can certify eligibility, according to USFWS Criterion A, for coverage by this permit if, upon completing the Information, Planning, and Conservation (IPaC) online system process, you printed and saved the preliminary determination which indicated that federally listed species or designated critical habitats are not present in the action area. See Attachment 1 to Appendix C for instructions on how to use IPaC.

If you have met USFWS Criterion A skip to Step # 4.

If you have not met USFWS Criterion A, go to Step # 2.

Step 2 – Determine if You Can Meet Eligibility USFWS Criteria B

USFWS Criterion B: You can certify eligibility according to USFWS Criteria B for coverage by this permit if you answer “Yes” to **all** of the following questions:

- 1) Does your action area contain one or more of the following species: Sandplain gerardia, Small whorled Pogonia, American burying beetle, Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle?
AND
- 2) Did your assessment of the discharge and discharge related activities indicate that the discharge or discharge related activities “may affect” or are “not likely to adversely affect” listed species or critical habitat?
AND
- 3) Did you contact the USFWS and did the formal or informal consultation result in either a “no jeopardy” opinion by the USFWS (for formal consultation) or concurrence by the

USFWS that your activities would be “not likely to adversely affect” listed species or critical habitat (for informal consultation)?

AND

- 4) Do you agree to implement all measures upon which the consultation was conditioned?
- 5) Do you agree that if, during the course of the permit term, you plan to install a structural BMP not identified in the NOI that you will re-initiate informal or formal consultation with USFWS as necessary?

Use the guidance below Step 3 to understand effects determination and to answer these questions.

If you answered “Yes” to all four questions above, you have met eligibility USFWS Criteria B. Skip to Step 4.

If you answered “No” to any of the four questions above, go to Step 3.

Step 3 – Determine if You Can Meet Eligibility USFWS Criterion C

USFWS Criterion C: You can certify eligibility according to USFWS Criterion C for coverage by this permit if you answer “Yes” to both of the following question:

- 1) Does your action area contain one or more of the following species: Northern Long-eared Bat, Sandplain gerardia, Small whorled Pogonia and/or American burying beetle and **does not** contain one any following species: Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle?³
- OR
- 2) Did the assessment of your discharge and discharge related activities and indicate that there would be “no affect” on listed species or critical habitat and EPA provided concurrence with your determination?
- 3) Do you agree that if, during the course of the permit term, you plan to install a structural BMP not identified in the NOI that you will to conduct an endangered species screening for the proposed site and contact the USFWS if you determine that the new activity “may affect” or is “not likely to adversely affect” listed species or critical habitat under the jurisdiction of the USFWS.

Use the guidance below to understand effects determination and to answer these questions.

If you answered “Yes” to both the question above, you have met eligibility USFWS Criterion C. Go to Step 4.

If you answered “No” to either of the questions above, you are not eligible for coverage by this permit. You must submit an application for an individual permit for your stormwater discharges. (See 40 CFR 122.21).

USFWS Effects Determination Guidance:

If you are unable to certify eligibility under USFWS Criterion A, you must assess whether your stormwater discharges and discharge-related activities “may affect”, will have “no affect” or are “not likely to adversely affect” listed species or critical habitat. “Discharge-related activities” include: activities which cause, contribute to, or result in point source stormwater pollutant discharges; and measures to provide treatment for stormwater discharges including the siting, construction and operational procedures to control, reduce or prevent water pollution. Please be aware that no protection from incidental take liability is provided under this criterion.

The scope of effects to consider will vary with each system. If you are having difficulty in determining whether your system is likely to cause adverse effects to a listed species or critical habitat, you should contact the USFWS for assistance. In order to complete the determination of effects it may be necessary to follow the formal or informal consultation procedures in section 7 of the ESA.

Upon completion of your assessment, document the results of your effects determination. If your results indicate that stormwater discharges or discharge related activities will have “no affect” on threatened or endangered species or critical habitat and EPA concurs with your determination, you are eligible under USFWS Criterion C of this Appendix. Your determination may be based on measures that you implement to avoid, eliminate, or minimize adverse effects.

If the determination is “May affect” or “not likely to adversely affect” you must contact the USFWS to discuss your findings and measures you could implement to avoid, eliminate, or minimize adverse effects. If you and the USFWS reach agreement on measures to avoid adverse effects, you are eligible under USFWS Criterion B. Any terms and/or conditions to protect listed species and critical habitat that you relied on in order to complete an adverse effects determination, must be incorporated into your Storm Water Management Program (required by this permit) and implemented in order to maintain permit eligibility.

If endangered species issues cannot be resolved: If you cannot reach agreement with the USFWS on measures to avoid or eliminate adverse effects then you are not eligible for coverage under this permit. You must seek coverage under an individual permit.

Effects from stormwater discharges and discharge-related activities which could pose an adverse effect include:

- *Hydrological:* Stormwater discharges may cause siltation, sedimentation, or induce other changes in receiving waters such as temperature, salinity or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely.
- *Habitat:* Excavation, site development, grading and other surface disturbance activities, including the installation or placement of treatment equipment may adversely affect listed species or their habitat. Stormwater from the small MS4 may inundate a listed species habitat.

- *Toxicity:* In some cases, pollutants in the stormwater may have toxic effects on listed species.

Step 4 - Document Results of the Eligibility Determination

Once the USFWS ESA eligibility requirements have been met, you shall include documentation of USFWS ESA eligibility in the Storm Water Management Program required by the permit. Documentation for the various eligibility criteria are as follows:

- USFWS Criterion A: A copy of the IPaC generated preliminary determination letter indicating that no listed species or critical habitat is present within your action area. You shall also include a statement on how you determined that no listed species or critical habitat are in proximity to your stormwater system or discharges.
- USFWS Criterion B: A dated copy of the USFWS letter of concurrence on a finding of “no jeopardy” (for formal consultation) or “not likely to adversely affect” (for informal consultation) regarding the ESA section 7 consultation.
- USFWS Criterion C: A dated copy of the EPA concurrence with the operator’s determination that the stormwater discharges and discharge-related activities will have “no affect” on listed species or critical habitat.

C. Submittal of Notice of Intent

Once the ESA eligibility requirements of Part C of this Appendix have been met, you may submit the Notice of Intent indicating which Criterion you have met to be eligible for permit coverage. Signature and submittal of the NOI constitutes your certification, under penalty of law, of eligibility for permit coverage under 40 CFR 122.21.

D. Duty to Implement Terms and Conditions upon which Eligibility was Determined

You must comply with any terms and conditions imposed under the ESA eligibility requirements to ensure that your stormwater discharges and discharge related activities do not pose adverse effects or jeopardy to listed species and/or critical habitat. You must incorporate such terms and conditions into your Storm Water Management Program as required by this permit. If the ESA eligibility requirements of this permit cannot be met, then you may not receive coverage under this permit and must apply for an individual permit.

E. Services Information

United States Fish and Wildlife Service Office

National websites for Endangered Species Information:

Endangered Species home page: <http://endangered.fws.gov>

ESA Section 7 Consultations: <http://endangered.fws.gov/consultation/index.html>

Information, Planning, and Conservation System (IPAC): <http://ecos.fws.gov/ipac/>

U.S. FWS – Region 5

Supervisor

New England Field Office
U.S. Fish and Wildlife Services
70 Commercial Street, Suite 300
Concord, NH 03301

Natural Heritage Network

The Natural Heritage Network comprises 75 independent heritage program organizations located in all 50 states, 10 Canadian provinces, and 12 countries and territories located throughout Latin America and the Caribbean. These programs gather, manage, and distribute detailed information about the biological diversity found within their jurisdictions. Developers, businesses, and public agencies use natural heritage information to comply with environmental laws and to improve the environmental sensitivity of economic development projects. Local governments use the information to aid in land use planning.

The Natural Heritage Network is overseen by NatureServe, the Network's parent organization, and is accessible on-line at: http://www.natureserve.org/nhp/us_programs.htm, which provides websites and other access to a large number of specific biodiversity centers.

U.S. Fish and Wildlife IPaC system instructions

Use the following protocol to determine if any federally listed species or designated critical habitats under USFWS jurisdiction exist in your action area:

Enter your project specific information into the “Initial Project Scoping” feature of the Information, Planning, and Conservation (IPaC) system mapping tool, which can be found at the following location:

<http://ecos.fws.gov/ipac/>

- a. Indicate the action area¹ for the MS4 by either:
 - a. Drawing the boundary on the map or by uploading a shapefile.
Select “Continue”
- c. Click on the “SEE RESOURCE LIST” button and on the next screen you can export a trust resources list. This will provide a list of natural resources of concern, which will include an Endangered Species Act Species list. You may also request an official species list under “REGULATORY DOCUMENTS” Save copies and retain for your records

¹ The action area is defined by regulation as all areas to be affected directly or indirectly by the action and not merely the immediate area involved in the action (50 CFR §402.02). This analysis is not limited to the "footprint" of the action nor is it limited by the Federal agency's authority. Rather, it is a biological determination of the reach of the proposed action on listed species. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area.

The documentation used by a Federal action agency to initiate consultation should contain a description of the action area as defined in the Services' regulations and explained in the Services' consultation handbook. If the Services determine that the action area as defined by the action agency is incorrect, the Services should discuss their rationale with the agency or applicant, as appropriate. Reaching agreement on the description of the action area is desirable but ultimately the Services can only consult when an action area is defined properly under the regulations.

For storm water discharges or discharge related activities, the action area should encompass the following:

- The immediate vicinity of, or nearby, the point of discharge into receiving waters.
- The path or immediate area through which or over which storm water flows from the municipality to the point of discharge into the receiving water. This includes areas in the receiving water downstream from the point of discharge.
- Areas that may be impacted by construction or repair activities. This extends as far as effects related to noise (from construction equipment, power tools, etc.) and light (if work is performed at night) may reach.

The action area will vary with the size and location of the outfall pipe, the nature and quantity of the storm water discharges, and the type of receiving waters, among other factors.

Attachment B
Bellingham IPaC Trust Resources Report



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2017-SLI-1055

March 14, 2017

Event Code: 05E1NE00-2017-E-01953

Project Name: Bellingham NOI

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Bellingham NOI

Official Species List

Provided by:

New England Ecological Services Field Office

70 COMMERCIAL STREET, SUITE 300

CONCORD, NH 03301

(603) 223-2541

<http://www.fws.gov/newengland>

Consultation Code: 05E1NE00-2017-SLI-1055

Event Code: 05E1NE00-2017-E-01953

Project Type: Regulation Promulgation

Project Name: Bellingham NOI

Project Description: This project is applying for coverage under the 2016 MS4 General Permit. The project consists of the entire area of the Town of Bellingham's small municipal separate storm sewer systems (MS4) that falls within the urbanized area of the town. Based on EPA's 2016 MS4 General Permit Bellingham must apply for permit coverage for the Town's MS4 stormwater discharges and assess the impacts of the stormwater discharges and discharge-related activities on endangered and threatened species, and designated critical habitats that fall within the areas that fall within the MS4.

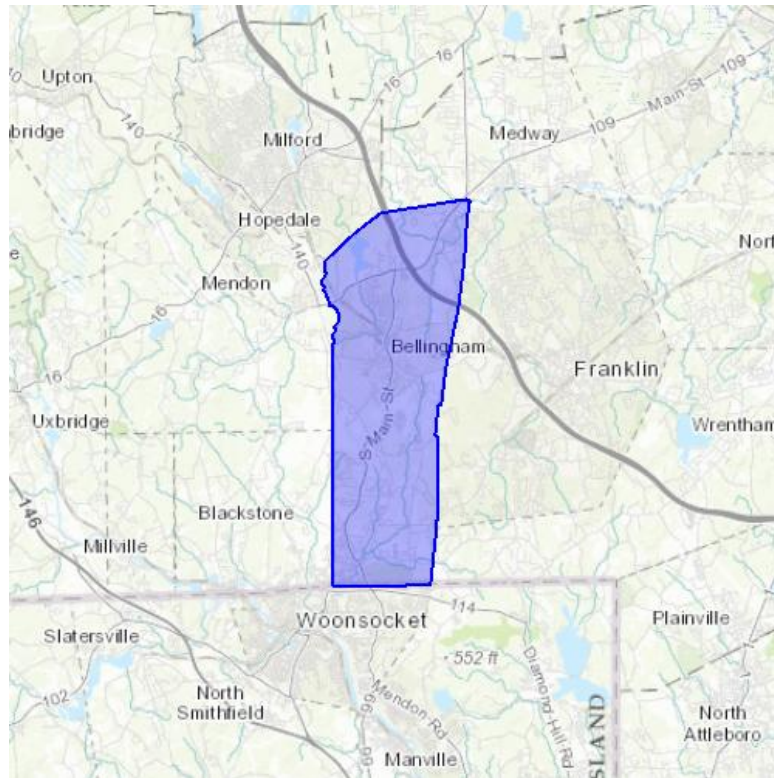
Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Bellingham NOI

Project Location Map:



Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Norfolk, MA | Worcester, MA | Providence, RI



United States Department of Interior
Fish and Wildlife Service

Project name: Bellingham NOI

Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Northern long-eared Bat (<i>Myotis septentrionalis</i>) Population: Wherever found	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: Bellingham NOI

Critical habitats that lie within your project area

There are no critical habitats within your project area.

Attachment C

Federally Listed Endangered and Threatened Species in
Massachusetts

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Barnstable	Piping Plover	Threatened	Coastal Beaches	All Towns
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Chatham
	Sandplain gerardia	Endangered	Open areas with sandy soils.	Sandwich and Falmouth.
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Bourne (north of the Cape Cod Canal)
	Red Knot ¹	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Berkshire	Bog Turtle	Threatened	Wetlands	Egremont and Sheffield
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Bristol	Piping Plover	Threatened	Coastal Beaches	Fairhaven, Dartmouth, Westport
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Fairhaven, New Bedford, Dartmouth, Westport
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Taunton
	Red Knot ¹	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Dukes	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	All Towns
	Piping Plover	Threatened	Coastal Beaches	All Towns
	Northeastern beach tiger beetle	Threatened	Coastal Beaches	Aquinnah and Chilmark
	Sandplain gerardia	Endangered	Open areas with sandy soils.	West Tisbury
	Red Knot ¹	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES
IN MASSACHUSETTS**

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
	Red Knot ¹	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
	Dwarf wedgemussel	Endangered	Mill River	Whately
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hatfield, Amherst and Northampton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
	Red Knot ¹	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES
IN MASSACHUSETTS**

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Plymouth	Piping Plover	Threatened	Coastal Beaches	Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoisett
	Northern Red-bellied Cooter	Endangered	Inland Ponds and Rivers	Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Plymouth, Marion, Wareham, and Mattapoisett.
	Red Knot ¹	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Suffolk	Piping Plover	Threatened	Coastal Beaches	Revere, Winthrop
	Red Knot ¹	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Worcester	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Leominster
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

¹Migratory only, scattered along the coast in small numbers

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.

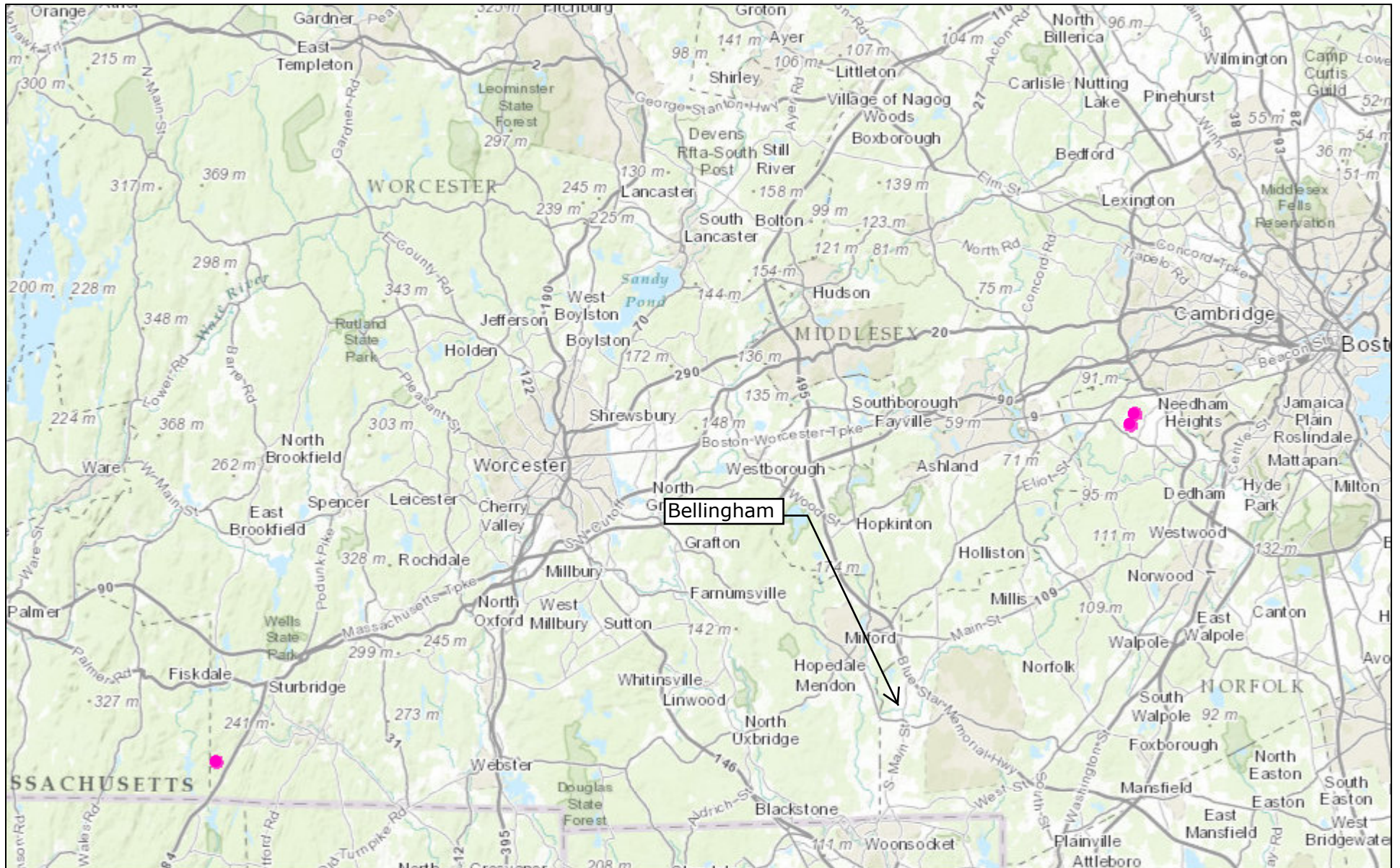
-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.

-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

Attachment D

Northern Long-eared Bat Location Map

NHESP No. Long-eared Bat Locations

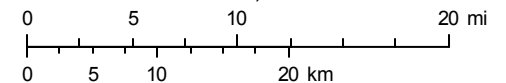


March 1, 2017

Statewide NLEB Symbology

- Hibernaculum
- MA_Northern_Long_eared_Bat_Winter_Hibernacula

1:577,791



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

Attachment E

U.S. Fish and Wildlife Review Letter



United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
<http://www.fws.gov/newengland>



January 20, 2017

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm> (accessed January 2017)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Maria Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

Appendix E

Historic Properties Eligibility Criteria Documentation

National Historic Preservation Act Eligibility Certification

TO: Town of Bellingham Stormwater Management Program Files
FROM: Tighe & Bond
COPY: Donald DiMartino, DPW Director
DATE: July 10, 2018

Tighe & Bond has completed the National Historic Preservation Act Eligibility Determination screening process in accordance with Part 1.9.2 and Appendix D of U.S. EPA's National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts (see Attachment A of this memorandum), effective July 1, 2018¹, and determined that the **Town of Bellingham** meets **Criterion A: the discharges do not have the potential to cause effects on historic properties.**

Tighe & Bond followed the screening process included in Appendix D and has determined Bellingham is an existing facility authorized by the previous permit and therefore meets Criterion A (see Question 1 in Appendix D of the Permit) and is not, as part of developing and submitting the Notice of Intent for permit coverage, undertaking any activity involving subsurface land disturbance less than an acre. Based on this screening process, the Town of Bellingham's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not have an effect on a property that is listed or eligible for listing on the National Register of Historic Properties (NRHP) and no further action is necessary at this time.

Attachment B to this memorandum includes a list of the federal- and state-listed historic areas, buildings, burial grounds, objects, and structures downloaded from the Massachusetts Cultural Resource Information System (MACRIS) that is current as of July 10, 2018. If the Town undertakes construction on or around a property that is listed or eligible for listing, the Town will coordinate with the State Historic Preservation Officer (SHPO) (i.e. the Massachusetts Historical Commission) by submitting a Project Notification Form and associated documentation for the project. As applicable for each project, the Town will implement measures 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 the Town fails to document and implement such measures, those discharges are ineligible for coverage under EPA's Small MS4 General Permit.

J:\B\B0852 Bellingham MS4 Engineering\NPDES Compliance\HP\National Historic Preservation Act Eligibility Certification_Final.docx

¹ Revised General Permit effective date according to June 29, 2017 EPA memorandum from EPA Region 1 Acting Regional Administrator.

Attachment A

Appendix D of U.S. EPA's National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts

Appendix D

National Historic Preservation Act Guidance

Background

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of Federal “undertakings” on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. The term federal “undertaking” is defined in the NHPA regulations to include a project, activity, or program of a federal agency including those carried out by or on behalf of a federal agency, those carried out with federal financial assistance, and those requiring a federal permit, license or approval. See 36 CFR 800.16(y). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the National Register of Historic Places. This term includes artifacts, records, and remains that are related to and located within such properties. See 36 CFR 800.16(1).

EPA’s issuance of a National Pollutant Discharge Elimination System (NPDES) General Permit is a federal undertaking within the meaning of the NHPA regulations and EPA has determined that the activities to be carried out under the general permit require review and consideration, in order to be in compliance with the federal historic preservation laws and regulations. Although individual submissions for authorization under the general permit do not constitute separate federal undertakings, the screening processes provides an appropriate site-specific means of addressing historic property issues in connection with EPA’s issuance of the permit. To address any issues relating to historic properties in connection with the issuance of this permit, EPA has included a screening process for applicants to identify whether properties listed or eligible for listing on the National Register of Historic Places are within the path of their discharges or discharge-related activities (including treatment systems or any BMPs relating to the discharge or treatment process) covered by this permit.

Applicants seeking authorization under this general permit must comply with applicable, State, Tribal, and local laws concerning the protection of historic properties and places and may be required to coordinate with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO) and others regarding effects of their discharges on historic properties.

Activities with No Potential to Have an Effect on Historic Properties

A determination that a federal undertaking has no potential to have an effect on historic properties fulfills an agency’s obligations under NHPA. EPA has reason to believe that the vast majority of activities authorized under this general permit will have no potential effects on historic properties. This permit typically authorizes discharges from existing facilities and requires control of the pollutants discharged from the facility. EPA does not anticipate effects on historic properties from the pollutants in the authorized discharges. Thus, to the extent EPA’s issuance of this general permit authorizes discharges of such constituents, confined to existing channels, outfalls or natural drainage areas, the permitting action does not have the potential to cause effects on historical properties.

In addition, the overwhelming majority of sources covered under this permit will be facilities that are seeking renewal of previous permit authorization. These existing dischargers should have already addressed NHPA issues in the previous general permit as they were required to certify that they were either not affecting historic properties or they had obtained written agreement from

the applicable SHPO or THPO regarding methods of mitigating potential impacts. To the extent this permit authorizes renewal of prior coverage without relevant changes in operations the discharge has no potential to have an effect on historic properties.

Activities with Potential to Have an Effect on Historic Properties

EPA believes this permit may have some potential to have an effect on historic properties the applicant undertakes the construction and/or installation of control measures that involve subsurface disturbance that involves less than 1 acre of land. (Ground disturbances of 1 acre or more require coverage under the Construction General Permit.) Where there is disturbance of land through the construction and/or installation of control measures, there is a possibility that artifacts, records, or remains associated with historic properties could be impacted. Therefore, if the applicant is establishing new or altering existing control measures to manage their discharge that will involve subsurface ground disturbance of less than 1 acre, they will need to ensure (1) that historic properties will not be impacted by their activities or (2) that they are in compliance with a written agreement with the SHPO, THPO, or other tribal representative that outlines all measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties.

Examples of Control Measures Which Involve Subsurface Disturbance

The type of control measures that are presumptively expected to cause subsurface ground disturbance include:

- Dikes
- Berms
- Catch basins, drainage inlets
- Ponds, bioretention areas
- Ditches, trenches, channels, swales
- Culverts, pipes
- Land manipulation; contouring, sloping, and grading
- Perimeter Drains
- Installation of manufactured treatment devices

EPA cautions applicants that this list is non-inclusive. Other control measures that involve earth disturbing activities that are not on this list must also be examined for the potential to affect historic properties.

Certification

Upon completion of this screening process the applicant shall certify eligibility for this permit using one of the following criteria on their Notice of Intent for permit coverage:

Criterion A: The discharges do not have the potential to cause effects on historic properties.

Criterion B: A historic survey was conducted. The survey concluded that no historic properties are present. Discharges do not have the potential to cause effects on historic properties.

Criterion C: The discharges and discharge related activities have the potential to have an effect on historic properties, and the applicant has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties.

Authorization under the general permit is available only if the applicant certifies and documents permit eligibility using one of the eligibility criteria listed above. Small MS4s that cannot meet any of the eligibility criteria in above must apply for an individual permit.

Screening Process

Applicants or their consultant need to answer the questions and follow the appropriate procedures below to assist EPA in compliance with 36 CFR 800.

Question 1: Is the facility an existing facility authorized by the previous permit or a new facility and the applicant is not undertaking any activity involving subsurface land disturbance less than an acre?

YES - The applicant should certify that fact in writing and file the statement with the EPA. This certification must be maintained as part of the records associated with the permit.

The applicant should certify eligibility for this permit using Criterion A on their Notice of Intent for permit coverage. The applicant does not need to contact the state Historic Commission. Based on that statement, EPA will document that the project has “no potential to cause effects” (36 CFR 800.3(a)(1)). There are no further obligations under the Section 106 regulations.

NO- Go to Question 2.

Question 2: Is the property listed in the National Register of Historic Places or have prior surveys or disturbances revealed the existence of a historic property or artifacts?

NO - The applicant should certify that fact in writing and file the statement with the EPA. This certification must be maintained as part of the records associated with the permit.

The applicant should certify eligibility for this permit using Criterion B on their Notice of Intent for permit coverage. The applicant does not need to contact the state Historic Commission. Based on that statement, EPA will document that the project has “no potential to cause effects” (36 CFR 800.3(a)(1)). There are no further obligations under the Section 106 regulations.

YES - The applicant or their consultant should prepare a complete information submittal to the SHPO. The submittal consists of:

- Completed Project Notification Form- forms available at <http://www.sec.state.ma.us/mhc/mhcform/formidx.htm>;

- USGS map section with the actual project boundaries clearly indicated; and
- Scaled project plans showing existing and proposed conditions.

(1) Please note that the SHPO does not accept email for review. Please mail a paper copy of your submittal (Certified Mail, Return Receipt Requested) or deliver a paper copy of your submittal (and obtain a receipt) to:

State Historic Preservation Officer
Massachusetts Historical Commission
220 Morrissey Blvd.
Boston MA 02125.

(2) Provide a copy of your submittal and the proof of MHC delivery showing the date MHC received your submittal to:

NPDES Permit Branch Chief
US EPA Region 1 (OEP06-1)
5 Post Office Square, Suite 100
Boston MA 02109-3912.

The SHPO will comment within thirty (30) days of receipt of complete submittals, and may ask for additional information. Consultation, as appropriate, will include EPA, the SHPO and other consulting parties (which includes the applicant). The steps in the federal regulations (36 CFR 800.2 to 800.6, etc.) will proceed as necessary to conclude the Section 106 review for the undertaking. **The applicant should certify eligibility for this permit using Criterion C on their Notice of Intent for permit coverage.**

Attachment B

Massachusetts Cultural Resource Information System (MACRIS)
List of federal- and state-listed historic areas, buildings, burial
grounds, objects, and structures

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Bellingham; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
BEL.A	North Bellingham Mill District		Bellingham	
BEL.B	Caryville - West Medway		Bellingham	
BEL.C	Caryville Mill Area		Bellingham	
BEL.D	North Bellingham Cemetery and Oak Hill Cemetery		Bellingham	
BEL.926	Adams - Ray Farmstead Site		Bellingham	
BEL.1	Bellingham Public Library	Common St	Bellingham	1930
BEL.3	Massey School - Center Elementary School	Common St	Bellingham	1873
BEL.81	Taft Woolen Company Worker Housing	2 Cutler St	Bellingham	c 1920
BEL.82	Taft Woolen Company Worker Housing	8 Cutler St	Bellingham	c 1920
BEL.83	Taft Woolen Company Worker Housing	10 Cutler St	Bellingham	c 1920
BEL.84	Taft Woolen Company Worker Housing	12 Cutler St	Bellingham	c 1920
BEL.85	Taft Woolen Company Worker Housing	14 Cutler St	Bellingham	c 1920
BEL.802	Scammell Cemetery	Depot St	Bellingham	c 1838
BEL.904	Depot Street Bridge over Charles River	Depot St	Bellingham	1829
BEL.10	Hixon House	237 Depot St	Bellingham	r 1850
BEL.11	Bellingham High School	60 Harpin St	Bellingham	c 1937
BEL.27	North School - Bellingham District #7 Schoolhouse	Hartford Ave	Bellingham	c 1855
BEL.800	Oak Hill Cemetery	Hartford Ave	Bellingham	1849
BEL.801	North Bellingham Cemetery	Hartford Ave	Bellingham	1712
BEL.907	North Bellingham Cemetery Perimeter Wall	Hartford Ave	Bellingham	r 1750
BEL.908	North Bellingham Cemetery Security Fence	Hartford Ave	Bellingham	r 1980
BEL.909	North Bellingham Cemetery Circulation System	Hartford Ave	Bellingham	c 1850
BEL.910	North Bellingham Cemetery Receiving Tombs	Hartford Ave	Bellingham	1804
BEL.911	North Bellingham Cemetery Flagpole	Hartford Ave	Bellingham	r 1980
BEL.912	North Bellingham Cemetery - Adams-Barber Monument	Hartford Ave	Bellingham	c 1807

Inv. No.	Property Name	Street	Town	Year
BEL.913	North Bellingham Cemetery - Smith Monument	Hartford Ave	Bellingham	r 1850
BEL.914	North Bellingham Cemetery - Bryant Obelisk	Hartford Ave	Bellingham	r 1850
BEL.915	North Bellingham Cemetery - Partridge, John Marker	Hartford Ave	Bellingham	1791
BEL.916	North Bellingham Cemetery - Coombes, Polly Marker	Hartford Ave	Bellingham	1795
BEL.917	North Bellingham Cemetery - Holbrook, Grace Marker	Hartford Ave	Bellingham	1791
BEL.918	North Bellingham Cemetery - Holbrook, J. Marker	Hartford Ave	Bellingham	1785
BEL.919	North Bellingham Cemetery - Holbrook, Luke Marker	Hartford Ave	Bellingham	1775
BEL.920	Oak Hill Cemetery - Penniman, Nathan Marker	Hartford Ave	Bellingham	1839
BEL.921	Oak Hill Cemetery - Slocomb Family Monument	Hartford Ave	Bellingham	r 1875
BEL.922	Oak Hill Cemetery - Benedict, Olive Marker	Hartford Ave	Bellingham	1869
BEL.923	Oak Hill Cemetery - Elmer Marker	Hartford Ave	Bellingham	r 1850
BEL.924	Oak Hill Cemetery - Hill, Asa Marker	Hartford Ave	Bellingham	1892
BEL.925	Oak Hill Cemetery - Stearns, Harold F. Marker	Hartford Ave	Bellingham	1960
BEL.12	Messenger, William House	23 Hartford Ave	Bellingham	c 1830
BEL.13	Rockwood, John House	24 Hartford Ave	Bellingham	c 1703
BEL.14	Holbrook, Lyman House	66 Hartford Ave	Bellingham	c 1830
BEL.4	Holbrook, John House	124 Hartford Ave	Bellingham	1765
BEL.15	Marsh, John - Thayer, Elias House	182 Hartford Ave	Bellingham	c 1780
BEL.47	Rays Woolen Company Worker Housing	319 Hartford Ave	Bellingham	c 1888
BEL.48	Rays Woolen Company Worker Housing	321 Hartford Ave	Bellingham	c 1888
BEL.49	Rays Woolen Company Worker Housing	323 Hartford Ave	Bellingham	c 1888
BEL.50	Rays Woolen Company Worker Housing	325 Hartford Ave	Bellingham	c 1888
BEL.51	Rays Woolen Company Worker Housing	331 Hartford Ave	Bellingham	c 1888
BEL.16	Bates and Arnold Cotton Mill Building	334 Hartford Ave	Bellingham	c 1835
BEL.17	North Baptist Church	365 Hartford Ave	Bellingham	c 1907
BEL.18	North Baptist Church Parsonage	365 Hartford Ave	Bellingham	c 1907
BEL.19	Saint Brendan's Roman Catholic Church	384 Hartford Ave	Bellingham	c 1895
BEL.5	Metcalf, Stephen House	430 Hartford Ave	Bellingham	c 1777
BEL.96		430 Hartford Ave	Bellingham	
BEL.20	Williams, P. A. House	436 Hartford Ave	Bellingham	c 1840
BEL.21	Nashon - Kean, P. House	454 Hartford Ave	Bellingham	c 1870
BEL.22	Fairbanks, E. House	457 Hartford Ave	Bellingham	c 1840
BEL.23	Fairbanks, Joseph House	462 Hartford Ave	Bellingham	c 1803
BEL.24	Rockwood, G. D. House	479 Hartford Ave	Bellingham	c 1875

Inv. No.	Property Name	Street	Town	Year
BEL.25	Metcalf, Hollis House	485 Hartford Ave	Bellingham	c 1825
BEL.26	Metcalf, F. House	491 Hartford Ave	Bellingham	c 1850
BEL.9		505 Hartford Ave	Bellingham	c 1900
BEL.99	Holbrook House	High St	Bellingham	r 1800
BEL.905	Meeting House - First Baptist Church Stone Marker	7 High St	Bellingham	1912
BEL.903	Maple Street Bridge over Penn Central Railroad	Maple St	Bellingham	c 1900
BEL.52	Rays Woolen Company Worker Housing	3 Maple St	Bellingham	c 1888
BEL.53	Rays Woolen Company Worker Housing	5 Maple St	Bellingham	c 1888
BEL.54	Rays Woolen Company Worker Housing	6-8 Maple St	Bellingham	c 1888
BEL.55	Rays Woolen Company Worker Housing	9 Maple St	Bellingham	c 1888
BEL.56	Rays Woolen Company Worker Housing	10 Maple St	Bellingham	c 1888
BEL.57	Rays Woolen Company Worker Housing	13 Maple St	Bellingham	c 1888
BEL.58	Charles River Woolen Company Worker Housing	15-17 Maple St	Bellingham	c 1910
BEL.59	Rays Woolen Company Worker Housing	18 Maple St	Bellingham	c 1888
BEL.60	Rays Woolen Company Worker Housing	21 Maple St	Bellingham	c 1888
BEL.61	Rays Woolen Company Worker Housing	22 Maple St	Bellingham	c 1888
BEL.62	Bellingham Woolen Company Worker Housing	26 Maple St	Bellingham	c 1920
BEL.63	Charles River Woolen Company Worker Housing	27 Maple St	Bellingham	c 1910
BEL.64	Bellingham Woolen Company Worker Housing	31 Maple St	Bellingham	c 1920
BEL.6	Rays Cotton Mill	32 Maple St	Bellingham	c 1826
BEL.65	Bellingham Woolen Company Worker Housing	33 Maple St	Bellingham	c 1920
BEL.7	Rays Woolen Company Mill #2	38 Maple St	Bellingham	c 1880
BEL.66	Bellingham Cotton Mill Worker Housing	46 Maple St	Bellingham	c 1840
BEL.67	Bellingham Cotton Mill Worker Housing	51 Maple St	Bellingham	c 1825
BEL.68	Bellingham Cotton Mill Worker Housing	52 Maple St	Bellingham	c 1840
BEL.69	Rays Woolen Company Worker Housing	55 Maple St	Bellingham	c 1890
BEL.70	Rays Woolen Company Worker Housing	56 Maple St	Bellingham	c 1890
BEL.71	Rays Woolen Company Worker Housing	58-60 Maple St	Bellingham	c 1890
BEL.72	Rays Woolen Company Worker Housing	59 Maple St	Bellingham	c 1890
BEL.73	Rays Woolen Company Worker Housing	63 Maple St	Bellingham	c 1890
BEL.74	Rays Woolen Company Worker Housing	67 Maple St	Bellingham	c 1890
BEL.75	Rays Woolen Company Worker Housing	70 Maple St	Bellingham	c 1900
BEL.76	Rays Woolen Company Worker Housing	71 Maple St	Bellingham	c 1890
BEL.28	Daniels House	74 Maple St	Bellingham	c 1825
BEL.29	Ames, W. House	79 Maple St	Bellingham	r 1840
BEL.97	Ames, W. Barn	79 Maple St	Bellingham	r 1840
BEL.2	Bellingham Town Hall	Mechanic St	Bellingham	1802

Inv. No.	Property Name	Street	Town	Year
BEL.901	Bellingham Soldier's Monument	Mechanic St	Bellingham	1874
BEL.902	Bellingham Watering Trough	Mechanic St	Bellingham	1904
BEL.30	Hitchcock, N. House	68 North Main St	Bellingham	c 1876
BEL.31	Tavern House Inn	71 North Main St	Bellingham	c 1780
BEL.32	Weatherby, Nathaniel House	72 North Main St	Bellingham	c 1702
BEL.906	Keystone Bridge	Old Pulaski Blvd	Bellingham	1835
BEL.33	Stowe, Elijah B. House and Store	10 Pearl St	Bellingham	c 1877
BEL.93	Stowe, Elijah B. Barn	10 Pearl St	Bellingham	c 1877
BEL.86		13 Pearl St	Bellingham	c 1860
BEL.94		13 Pearl St	Bellingham	
BEL.87	Fairbanks House	14 Pearl St	Bellingham	c 1890
BEL.95	Fairbanks Garage	14 Pearl St	Bellingham	
BEL.88	Taft Woolen Company Worker Housing	17 Pearl St	Bellingham	c 1920
BEL.89	Taft Woolen Company Worker Housing	19 Pearl St	Bellingham	c 1920
BEL.8	Ray - Taft - Cutler - McKean Woolen Mill	26 Pearl St	Bellingham	c 1865
BEL.90	Taft Woolen Company Worker Housing	28 Pearl St	Bellingham	c 1920
BEL.91	Taft Woolen Company Worker Housing	30 Pearl St	Bellingham	c 1920
BEL.92	Taft Woolen Company Worker Housing	32 Pearl St	Bellingham	c 1920
BEL.34	Chilson - Burr, Willie A. House	50 Railroad St	Bellingham	c 1840
BEL.77	Bellingham Woolen Company Worker Housing	5 Ray Ave	Bellingham	c 1920
BEL.78	Bellingham Woolen Company Worker Housing	9 Ray Ave	Bellingham	c 1920
BEL.79	Bellingham Woolen Company Worker Housing	11 Ray Ave	Bellingham	c 1920
BEL.80	Bellingham Woolen Company Worker Housing	13 Ray Ave	Bellingham	c 1920
BEL.35	Barber, A. J. Jr. House	5 Scott St	Bellingham	1840
BEL.98	Barber, A. J. Jr. Barn	5 Scott St	Bellingham	c 1840
BEL.36	Scott, Saul House	20 Scott St	Bellingham	c 1770
BEL.44	Bellingham First Baptist Church	South Main St	Bellingham	c 1826
BEL.37	Wilcox, F. House	501 South Main St	Bellingham	c 1780
BEL.38	Scott, Edgar House	510 South Main St	Bellingham	c 1925
BEL.39	Arnold, Jacob House	741 South Main St	Bellingham	c 1800
BEL.40	Cushman, Amariah House	950 South Main St	Bellingham	c 1800
BEL.41	Slocumb, Bethuel House	975 South Main St	Bellingham	c 1800
BEL.42	Scott, Daniel - Thayer, Gen. John M. House	1068 South Main St	Bellingham	c 1830
BEL.43	Rockwood, M. House	1198 South Main St	Bellingham	c 1840
BEL.45	Bellingham Fire Station #1 and Municipal Building	Wrentham Rd	Bellingham	1927
BEL.46	Wilcox, Jerald O. House	470 Wrentham Rd	Bellingham	c 1848

Appendix F

Sanitary Sewer Overflow Inventory

SSO Inventory for Bellingham, MA (2014 – 2018)

Summary table:

Date	Time	Location	Discharge to surface water or MS4	Estimated SSO Volume	Cause of SSO	Mitigation/Corrective Measures Completed
1/13/2014	1:20 PM	Pine Grove Ave.	Yes – Pete’s River	2,000 Gallons	Blockage	See detailed descriptions below
2/27/2015	1:00 PM	Pine Grove Ave.	Yes – Pete’s River	100 Gallons	Blockage	
3/21/2015	5:00 PM	Wrentham Manor	No	3,900 Gallons	Pump/Lift Station Failure	
10/25/2015	4:30 PM	Old Bridge Lane Sewer Station	No	8,000 – 10,000 gallons	Pump/Lift Station Failure	
8/2/2018	8:00 PM	Wrentham Manor	No	2,000 Gallons	Pump/Lift Station Failure	

Detailed descriptions:

- On **January 14th, 2014** at approximately 1:20 PM, the Sewer Department was notified of sewage coming out of manhole on Pine Grove Ave. After responding and investigating, it was discovered that a brick had fallen into the flow channel blocking flow through the siphon. Sewer department staff removed debris from the flow channel and patched under the casting with cement. The total volume of wastewater discharged to Pete’s River was estimated to be 2,000 gallons.
- On **February 27th, 2015** at approximately 1:00 PM, the Sewer Department was notified of sewage coming out of a manhole on Pine Grove Ave. After responding and investigating, a brick from the SMH invert was discovered to be blocking the upper end of the siphon. The total volume of wastewater discharged to Pete’s River was approximately 100 gallons. Town staff removed the brick from the invert and pumped out and jetted the lines. Town staff made plans to reconstruct the brickwork.
- On **March 21st, 2015** at approximately 5:00 PM, the Sewer Department was notified of sewage coming out of a manhole at Wrentham Manor (Wrentham Road). After responding and investigating, it was discovered that the pump had shorted out and killed power to the entire control and alarm panel. The total volume of water discharged to the lawn area of the housing authority was approximately 3,900 gallons. Town staff repaired both pumps. The force main may be frozen, as the heat tape breaker was off. The town continues to have issues with the force main pipe. The pumps are operating but not pumping out the force main. The town staff has jet cleaned much of the force main but have more to do. Town staff is manually monitoring the wet well while debugging the force main issue.
- On **October 25th, 2015** at approximately 4:30 PM, the Sewer Department was notified of sewage coming out of a manhole at the Old Bridge Lane Sewer Station. After responding and investigating, it was discovered that the automated controls

did not start the pumps at the sewer station, and that the alarm system did not send an alarm. The total volume of wastewater discharged to the ground surface (no receiving water was impacted) was approximately 8,000 – 10,000 gallons. There were no signs of any puddles of wastewater or flow in any adjacent areas. The nearest wetlands are >175' away. Release flow was minimal (flow from 92 condo units and fire station). The flow was not sufficient enough to create an observable channel in pine needles on the ground surface. The pump controls were reset and operational by 11/25 noon.

- On **August 2nd, 2018** at approximately 8:00 PM, the Sewer Department was notified of sewage coming out of a manhole at Wrentham Manor (Wrentham Road). After responding and investigating, it was discovered that the pump/lift station failed and that the Mission Dialer failed to call out the alarms. The total volume of wastewater discharged to groundwater was approximately 2,000 gallons (no receiving water was impacted). Town staff repaired both pumps and investigated pump changes to eliminate clogging. The town is working with an electrician to get an alarm if power is lost due to mission dialer unit.

Appendix G

Plan Amendment Log

STORMWATER MANAGEMENT PLAN

AMENDMENT LOG

Tighe&Bond

Amend. No.	Description of the Amendment	Date of Amendment	Amendment Prepared by (Name/Signature)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Appendix H

Reference Documents

Pollutant Impacts on Water Quality	
Sediment	Sediment is a common component of stormwater, and can be a pollutant. Sediment can be detrimental to aquatic life (primary producers, benthic invertebrates, and fish) by interfering with photosynthesis, respiration, growth, reproduction, and oxygen exchange in water bodies. Sediment can transport other pollutants that are attached to it including nutrients, trace metals, and hydrocarbons. Sediment is the primary component of total suspended solids (TSS), a common water quality analytical parameter.
Nutrients	Nutrients including nitrogen and phosphorous are the major plant nutrients used for fertilizing landscapes, and are often found in stormwater. These nutrients can result in excessive or accelerated growth of vegetation, such as algae, resulting in impaired use of water in lakes and other sources of water supply. For example, nutrients have led to a loss of water clarity in Lake Tahoe. In addition, un-ionized ammonia (one of the nitrogen forms) can be toxic to fish.
Bacteria and Viruses	Bacteria and viruses are common contaminants of stormwater. For separate storm drain systems, sources of these contaminants include animal excrement and sanitary sewer overflow. High levels of indicator bacteria in stormwater have led to the closure of beaches, lakes, and rivers to contact recreation such as swimming.
Oil and Grease	Oil and grease includes a wide array of hydrocarbon compounds, some of which are toxic to aquatic organisms at low concentrations. Sources of oil and grease include leakage, spills, cleaning and sloughing associated with vehicle and equipment engines and suspensions, leaking and breaks in hydraulic systems, restaurants, and waste oil disposal.
Metals	Metals including lead, zinc, cadmium, copper, chromium, and nickel are commonly found in stormwater. Many of the artificial surfaces of the urban environment (e.g., galvanized metal, paint, automobiles, or preserved wood) contain metals, which enter stormwater as the surfaces corrode, flake, dissolve, decay, or leach. Over half the trace metal load carried in stormwater is associated with sediments. Metals are of concern because they are toxic to aquatic organisms, can bioaccumulate (accumulate to toxic levels in aquatic animals such as fish), and have the potential to contaminate drinking water supplies.
Organics	Organics may be found in stormwater at low concentrations. Often synthetic organic compounds (adhesives, cleaners, sealants, solvents, etc.) are widely applied and may be improperly stored and disposed. In addition, deliberate dumping of these chemicals into storm drains and inlets causes environmental harm to waterways.
Pesticides	Pesticides (including herbicides, fungicides, rodenticides, and insecticides) have been repeatedly detected in stormwater at toxic levels, even when pesticides have been applied in accordance with label instructions. As pesticide use has increased, so too have concerns about the adverse effects of pesticides on the environment and human health. Accumulation of these compounds in simple aquatic organisms, such as plankton, provides an avenue for biomagnification through the food web, potentially resulting in elevated levels of toxins in organisms that feed on them, such as fish and birds.
Gross Pollutants	Gross Pollutants (trash, debris and floatables) may include heavy metals, pesticides, and bacteria in stormwater. Typically resulting from an urban environment, industrial sites and construction sites, trash and floatables may create an aesthetic "eye sore" in waterways. Gross pollutants also include plant debris (such as leaves and lawn-clippings from landscape maintenance), animal excrement, street litter, and other organic matter. Such substances may harbor bacteria, viruses, vectors, and depress the dissolved oxygen levels in streams, lakes and estuaries sometimes causing fish kills.
Vector Production	Vector production (e.g., mosquitoes, flies, and rodents) is frequently associated with sheltered habitats and standing water. Unless designed and maintained properly, standing water may occur in treatment control BMP's for 72 hours or more, thus providing a source for vector habitat and reproduction (Metzger, 2002).

Source: California Stormwater Quality Association, Stormwater BMP Handbook, 2003.

Potential pollutants likely associated with specific *municipal facilities*

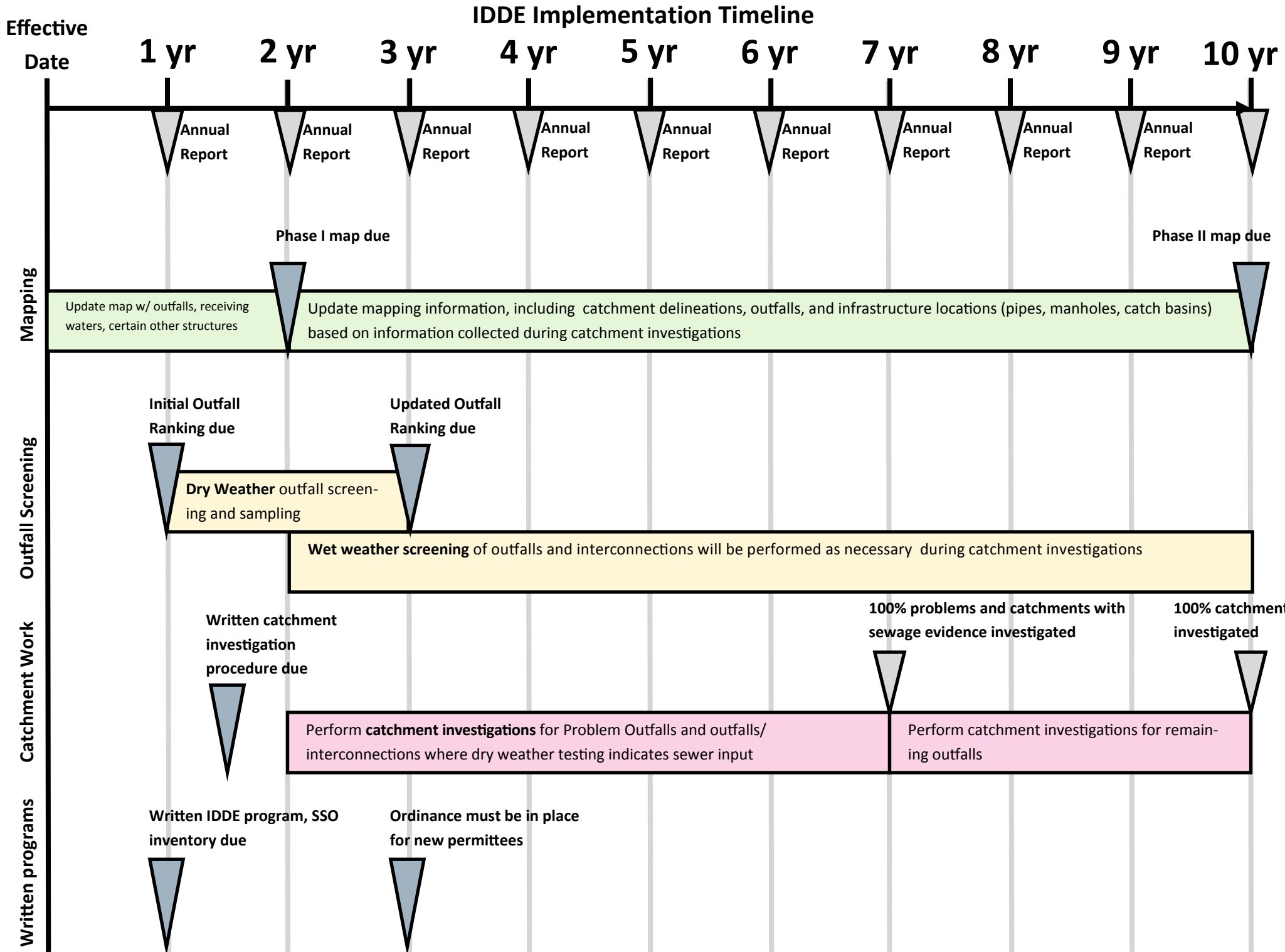
Municipality Facility Activity	Potential Pollutants								
	Sediment	Nutrients	Trash	Metals	Bacteria	Oil & Grease	Organics	Pesticides	Oxygen Demanding Substances
Building and Grounds Maintenance and Repair	X	X	X	X	X	X	X	X	X
Parking/Storage Area Maintenance	X	X	X	X	X	X	X		X
Waste Handling and Disposal	X	X	X	X	X	X	X	X	X
Vehicle and Equipment Fueling			X	X		X	X		
Vehicle and Equipment Maintenance and Repair				X		X	X		
Vehicle and Equipment Washing and Steam Cleaning	X	X	X	X		X	X		
Outdoor Loading and Unloading of Materials	X	X	X	X		X	X	X	X
Outdoor Container Storage of Liquids		X		X		X	X	X	X
Outdoor Storage of Raw Materials	X	X	X			X	X	X	X
Outdoor Process Equipment	X		X	X		X	X		
Overwater Activities			X	X	X	X	X	X	X
Landscape Maintenance	X	X	X		X			X	X

Source: California Stormwater BMP Handbook (<http://www.cabmphandbooks.com/>)(slightly modified)

Potential pollutants likely associated with *municipal activities*

Municipal Program	Activities	Potential Pollutants								
		Sediment	Nutrients	Trash	Metals	Bacteria	Oil & Grease	Organics	Pesticides	Oxygen Demanding Substances
Roads, Streets, and Highways Operation and Maintenance	Sweeping and Cleaning	X		X	X		X			X
	Street Repair, Maintenance, and Striping/Painting	X		X	X		X	X		
	Bridge and Structure Maintenance	X		X	X		X	X		
Plaza, Sidewalk, and Parking Lot Maintenance and Cleaning	Surface Cleaning	X	X			X	X			X
	Graffiti Cleaning	X	X		X			X		
	Sidewalk Repair	X		X						
	Controlling Litter	X		X		X	X			X
Fountains, Pools, Lakes, and Lagoons Maintenance	Fountain and Pool Draining		X					X		
	Lake and Lagoon Maintenance	X	X	X		X			X	X
Landscape Maintenance	Mowing/Trimming/Planting	X	X	X		X			X	X
	Fertilizer & Pesticide Management	X	X						X	
	Managing Landscape Wastes			X					X	X
	Erosion Control	X	X							
Drainage System Operation and Maintenance	Inspection and Cleaning of Stormwater Conveyance Structures	X	X	X		X		X		X
	Controlling Illicit Connections and Discharges	X	X	X	X	X	X	X	X	X
	Controlling Illegal Dumping	X	X	X	X	X	X	X	X	X
	Maintenance of Inlet and Outlet Structures	X		X	X		X			X
Waste Handling and Disposal	Solid Waste Collection		X	X	X	X	X	X		X
	Waste Reduction and Recycling			X	X					X
	Household Hazardous Waste Collection			X	X		X	X	X	
	Controlling Litter			X	X	X		X		X
	Controlling Illegal Dumping	X		X		X	X		X	X
Water and Sewer Utility Operation and Maintenance	Water Line Maintenance	X				X	X			
	Sanitary Sewer Maintenance	X				X	X			X
	Spill/Leak/Overflow Control, Response, and Containment	X	X			X		X		X

Source: California Stormwater BMP Handbook (<http://www.cabmphandbooks.com/>)



Tips for Organizing and Conducting Volunteer Clean-up Events

By: Jen Drociak –Acting Coordinator / Volunteer, Manchester Urban Ponds Restoration Program (UPRP)

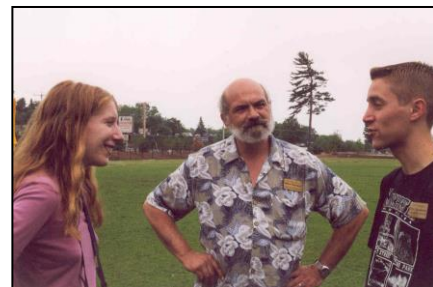
Step 1: Plan Your Clean-Up Event

- A. Land and / or Shore? Determine the Location(s):** Determine where, in proximity to the waterbody, your group wishes to concentrate its efforts on during a clean-up event. To find heavily-littered areas, and / or areas that are prone to illegal dumping, walk along the shore, in advance, to identify location(s) for the clean-up event. Identify accessible paths along the shoreline and / or on public trails that are easy for people to walk. The location(s) may be largely determined by public (or lake / homeowner association) access points such as a public beach, boat-launch, or park. If the location is large, consider identifying smaller locations within the larger location which can be managed by individual group leaders and groups. Determining the location(s) will provide you with an idea of the footwear that may be needed for the task based upon the terrain. If the clean-up event will be located at a beach or a dry area, sandals or sneakers may be adequate. If it will be located in a wetland or mucky area, knee-boots may be appropriate. If it will be located in water, hip-boots may be most appropriate. Determining the location(s) will also provide you with a sense of how many volunteers your group is seeking for the clean-up event.



The UPRP typically focuses clean-up efforts in the parks adjacent to the ponds by skirting around the ponds themselves. This involves differing terrain, and thus footwear. There have been occasions, however, where one or more volunteers have also used a small fishing boat to retrieve trash from the water that is too deep to obtain via hip-waders.

- B. Obtain Landowner Permission:** Whether the location(s) of your clean-up event is / are municipally-owned or privately-owned, determine who owns the property in advance in order to obtain permission. If you do not know who the property owner is, visit your municipality's on-line assessor's website to review the tax map(s) and property card(s) associated with the area. It is typically easy to obtain permission to organize a clean-up on municipally-owned / public land. If the location(s) are on privately-owned land, talk to the land owner(s) and explain why you are organizing a clean-up in that area, along with the benefits of doing so. Obtain permission from them in writing, if you can, by considering they sign a form. Verbal permission may be adequate, however.



The UPRP organizes clean-up events on land owned by Public Works and Parks, Recreation, and Cemetery Departments. We have not had to seek private landowner permission. We simply notify the Manchester Public Works Department and Parks, Recreation, and Cemetery Department of the dates of the clean-up events.

- C. Determine the Task(s) at Hand:** Determine what you will request of your volunteers. Will it be the removal of trash only? If so, will it be the removal of large items only or all items including the minutia? Will it be the removal of yard waste only? Graffiti removal or other vandalism? All of the above? Determining the task(s) at hand will provide you with an idea of the supplies (and hours) you will need to perform the task(s).

The UPRP typically removes trash only. We typically do not pick up the minutia (cigarette butts, bottle caps, etc.) due to the large volume of trash we collect and the limited amount of time and volunteers we have at each clean-up event.



- D. Determine the Check-In Location:** Based upon the chosen location(s) of the clean-up event, consider and determine the most appropriate location for volunteers to initially gather to check in and obtain supplies, as well as to reconvene at the end of the clean-up event. This may be a kiosk, boat-launch, or specific location on a beach or in a park. Try to stay away from busy roads or areas that are difficult to access.

The UPRP typically requests that volunteers meet in one central / well-known location such as a kiosk in a parking lot or boat-launch. We have kept the initial meeting location at each clean-up event consistent over the years.



- E. Determine the Most Appropriate Age(s) of Your Volunteers:** Based upon the task(s) at hand, determine the most appropriate age(s) of your volunteers. Are you seeking adults only? Children? Both? Do you have tasks that all can partake in, or are the tasks age-specific?

The UPRP generally seeks volunteers of all ages for clean-up events and encourage everyone, despite their age or ability, to participate in a manner of how they most feel comfortable.

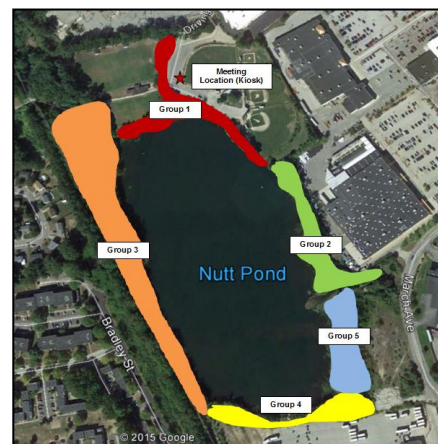


- F. Determine the Desired Number of Volunteers:** Based upon the number and location(s) that are chosen for the clean-up event, determine the desired number of volunteers to partake in the event.

The UPRP typically splits the area adjacent to the ponds into several areas, or groups of volunteers.

- G. Create Map(s) of the Location(s) OR Plan on Designating a “Group Leader” for Each Location:** If the location(s) is / are large enough to break into more than one group during the clean-up event, consider making aerial photographic “maps” (or using topographic maps) of each group’s area, indicating on the map the original meeting location, and the group’s start and end point.

The UPRP has created aerial maps to use in the past. However, what we consider to be more helpful is having a “group leader” (returning volunteer or someone familiar with the area) lead a small group of other volunteers in each designated area.



Step 2: Schedule Your Clean-Up Event

- A. Choose a Date:** Choose a date for the clean-up event at a time of year that makes the most sense to your group. Keep in mind that while lakes and ponds have year-round residents, the majority of residents are likely seasonal and may not arrive for the season, or on or around Memorial Day weekend. Thus, a late-spring or late-fall cleanup may not be the most appropriate time as it may not garner the most volunteers. An early or mid-summer cleanup may be the most appropriate. Consider, perhaps, scheduling the event in conjunction with an annual lake association meeting or holiday barbeque. Also consider scheduling the date of the clean-up event at least a month in advance to allow time to prepare (gather supplies and recruit volunteers). Lastly, consider a rain date.



The UPRP typically schedules annual pond and park cleanups on Saturday mornings during the last two weeks in April and the first one or two weeks in May. This is because a) this time of year is typically after the snow has melted and b) this time of year is typically before “leaf-in” (and in the case of some of these areas, this is important, as the areas are overtaken with thick stands of invasive species). We do not offer rain dates.

- B. Choose a Time:** Determine the amount of time it may take to clean up the area(s) of your choosing. Will it take one hour? Two hours? More? This is also a factor of the number of volunteers that attend (typically the more volunteers that attend the least amount of time the clean-up will take). If you believe the area(s) may take more than two hours, it may be best to schedule a two-part clean-up event. Also consider the time of day most appropriate to your group, especially if it is scheduled in conjunction with (or before or after) another event such as an annual meeting or holiday barbeque.



The UPRP has realized that 1 ½ - 2 hours is a sufficient amount of time to allot to clean-up events. We also realize that volunteers typically do not have the time or patience to commit to any more time in one day than that. We have also typically scheduled the clean-up events from 9:00AM to 11:00AM, with a meeting time of no later than 8:50AM. Early-morning clean-up events afford volunteers to have the remainder of the day for other things.

Step 3: Determine and Obtain Necessary Supplies

- A. Determine the Necessary Supplies:** Determining the task(s) at hand will determine your necessary supplies. If your clean-up event is strictly a trash removal cleanup, you may only need to obtain latex gloves and trash bags. If your clean-up event also includes yard-waste removal, you may need to obtain paper yard-waste bags, rakes and / or other tools.

Since the UPRP clean-up events are strictly focused on trash-removal, the only supplies we must procure are latex gloves (medium sized) and trash bags. We also have a few hand-held trash-grabbers since some volunteers find them helpful in reaching difficult areas and / or to prevent excessive bending.



- B. Obtain the Necessary Supplies:** Determine how you will obtain the necessary supplies. Does your group have a budget? Will your group be purchasing your supplies? Will your group fundraise to purchase supplies? Will your group borrow supplies, from perhaps the town or city?

The UPRP typically obtains supplies from the Manchester Parks, Recreation, and Cemetery Department. These supplies typically only include latex gloves and trash bags, but have included, in the past, rakes, other tools and yard waste bags. We also typically have a large container of hand-sanitizer available.

- C. Obtain a First-Aid Kit:** Consider obtaining one or more First Aid kits (for one or more groups of volunteers) in case it is needed. It is better to be proactively safe!

The UPRP has one First-Aid kit for use.

- D. Consider Providing Water and Snacks:** If your group has the financial means, consider providing water and snacks to your volunteers for afterwards. If your group does not have the financial means, consider soliciting donations from local establishments or having your group bake some treats, and bring a large cooler of ice water (or iced-tea) and some paper (or reusable plastic) cups.

The UPRP does not regularly provide water and snacks to volunteers since we do not have a budget to do so. On occasion, we have been able to obtain donations for yogurt snacks from Stonyfield Farm. On occasion we have also brought or made a baked good.



Step 4: Determine Your Waste Disposal Options

- A. Determine Your Waste Disposal Options:** At the end of your clean-up event, determine how and where you will dispose of the trash that was collected. Is there a dumpster on site that your group has permission to use? Are there already trash and / or recycling carts on site that your group has permission to use? If not, consider contacting your municipality's Highway Department, Parks & Recreation Department, or Road Agent, at least a month in advance, who may be able to coordinate trash and / or recycling pickup from your municipality's vendor (i.e. Waste Management, Pinard, etc.). Determine when the trash and / or recycling will be picked up and what the requirements for pickup are (especially with items such as vehicular tires and batteries, etc.). In addition, consider recruiting volunteers with pick-up trucks, especially if your group is cleaning multiple areas, and trash must be stockpiled in one area at the end of the event. Similarly, if you cannot obtain trash pick-up services, volunteers with pick-up trucks, and a municipal sticker (or permission) may be able to haul the trash and / or recycling to your local landfill or transfer station for free.



The UPRP typically sends notification of the clean-up schedule to the Manchester Public Works Director as soon as the dates are calendared. The Public Works Director, or staff, has coordinated with Manchester's solid waste collection staff to collect the trash on the Monday following the cleanup event (which have been held on Saturdays). While there have been a few times the Public Works Department has made one or more 95-gallon recycling carts available for the clean-up events, they are generally not available, and therefore, recycling is not typically sorted from other debris. All (tied / secure) bags of trash have been neatly placed in the same locations over the years; typically underneath or adjacent to the informational kiosks. Trash collected that does not fit into bags is also neatly placed adjacent to the bagged trash. We also recruit volunteers with pick-up trucks so that trash from different areas of the cleanup can be taken to one designated location at the end of the event. In addition, one of our volunteers separates steel and other scrap metal and takes it to a scrap metal recycling facility.

Step 5: Advertise Your Clean-Up Event / Recruit Volunteers

- A. Determine Any Project Partners:** In addition to volunteers who live around the waterbody, and any other residents of the town, determining any existing local groups or clubs that may be able to assist with the clean-up event is always helpful. Is there a local middle school, high school, or even college (if nearby) environmental club? A local chapter of the Student Conservation Association (SCA)? Any other organization, volunteer group, or club? A lot of these groups and / or clubs seek new community service projects and can help you garner additional / new volunteers.



The UPRP has partnered with the Student Conservation Association, local high school ecology clubs, local boy-scout troops, trout-fishing clubs, geo-caching groups, and others in the past. This has helped garner additional / new volunteers.

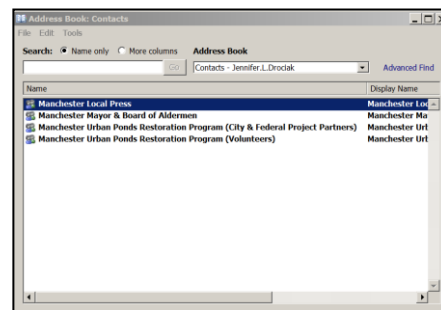
- B. Determine the Best Way(s) to Advertise Your Clean-Up Event:** Determine the target audience of volunteers and consider the best way(s) to advertise your clean-up event. Is it by e-mail? Website? Post-card? Posting of a flyer on a community bulletin board and / or kiosk? An annual lake association newsletter? An advertisement in a local newspaper? TV? Radio? facebook / social media? All of the above? Remember, printed materials and postage cost money, as typically do newspaper and radio advertisements. If your group has available funds for this, that is one thing. If not, instead of



simply placing a paid advertisement in a newspaper, try reaching out to a local news reporter to see if s/he will write a story about your cleanup (or write and submit an op-ed piece). This is usually good, free, advertisement. Also determine the most appropriate time to advertise for the clean-up event. Will you be advertising only once, or multiple times before the event?

The UPRP has typically advertised clean-up events in the following manners: 1) The UPRP webpage, 2) The City of Manchester website "Calendar of Events", 3) the UPRP facebook page, and 4) E-newsletter / e-mail. Local newspapers are also always gracious to cover the event(s) in a story beforehand. The UPRP typically sends posts the clean-up events on the website, and sends out an e-mail approximately three weeks in advance of the cleanup. The UPRP will then send weekly e-mails.

- C. Create an E-Mail Distribution List:** If you don't already have an e-mail distribution list, consider creating one. This may include names and e-mail addresses of lake association members, conservation commissioners, selectmen, municipal employees / department heads and others you know who may be interested. You can add to this with each clean-up event your group coordinates. If you have access to Constant Contact, Mailer, Mail Chimp, or other similar e-mail platform, this may be easier and more appropriate to use. If not, e-mail is a good starting place.



The UPRP has an e-mail distribution list which consists of approximately 200 individuals consisting of city aldermen, city department heads, conservation commissioners, media contacts, active school groups and other environmental organizations, and former volunteers. With every e-mail sent, an option is sent to opt-out of receiving e-mails by having a name and e-mail address removed from the list. This list is updated at least twice a year.

- D. Before You Mail, Post, (or Hit the Send Button):** Before you mail or post your flyer, or hit the send button to your e-mail distribution list, be sure to include the Who, What, Where, When, Why, and How to ensure all information is readily available. Why are you seeking volunteers? Who are you seeking as volunteers? What tasks are you seeking of volunteers? Where (general location and specific meeting location) are you seeking volunteers? When (date / time) are you seeking volunteers? Is there a rain date? How will the tasks be conducted? What should the volunteers wear or bring? What will be provided? Are you requesting an RSVP? For more information, who should they contact? Prepare your volunteers by letting them know what time to arrive, what to wear (clothes that can get dirty or wet, long pants, work gloves, boots or sturdy shoes, etc.), what to bring (sunscreen, insect repellent, water) and what to do in case of bad weather (rain date or cancellation information / phone number).



For Example: Seeking volunteers of all ages to assist in an annual trash clean-up at Black Brook and Blodget Park in Manchester on Saturday, April 23, 2016 from 9:00AM – 11:00AM. Volunteers will partner to clean the park and skirt the edges of the brook and wetland complex to remove accumulated trash. Please dress appropriately for weather as no rain date is scheduled. Latex gloves and trash bags will be provided, but please wear knee-boots, or hip-waders if you have them. No RSVP necessary. For more information, please visit www.manchesternh.gov/urbanponds or contact Jen Drociak at email@gmail.com or (603) ### - ####. We look forward to seeing you there!

Step 6: Conduct Your Clean-Up Event

- A. Arrive Early:** Consider arriving 15 minutes to one hour earlier than your volunteers so that you can set up at your check in location. Consider setting up the following: "Clean-Up Attendance Sheet", water and / or refreshments, first aid and safety, trash bags and clean-up supplies, organizational information (flyers, fact sheets, reports, etc.). Consider also walking around the location(s) to identify any new trash and / or safety concerns that may have accrued / arisen since your last visit.

The UPRP coordinator(s) typically meet on-site approximately 15-30 minutes in advance of volunteers to set up trash bags, latex gloves, and the “Clean-Up Attendance Sheet”. We also survey the site to identify any new trash or safety hazards to relay to volunteers.

B. Welcome Your Volunteers and Ask Them to Sign-In:

Welcome each volunteer upon arrival and ask that they sign a “Clean-Up Attendance Sheet” so that your group may account for number of volunteers and volunteer hours contributed to the clean-up event. Consider leaving the “Clean-Up Attendance Sheet” at the check-in location for those volunteers who may have to leave (and sign out) earlier than the full allotted time.

The UPRP “Clean-Up Attendance Sheet” typically notes the location and date of the event, and has room to tally the number of volunteers, number of volunteer hours, number of bags of trash and other debris. It also has fields for volunteers to print their name, address, and e-mail, and note the time they checked in, and the time they checked out.

Manchester Urban Ponds Restoration Program 2016 Clean-Up Attendance Sheet					
Location: _____		Date: _____		Hours at Event: _____	# Volunteer Hours: _____
Name (Please Print)	Address	E-Mail	Time In	Time Out	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
Number of Bags of Trash: _____ Other Items: _____					

C. Ask Volunteers to Sign a Liability Waiver and Photo-Release Form: Trash found in a waterbody will likely be dirty, rusty, slimy, and sharp. In addition, your group may find broken glass, hypodermic needles and hazardous wastes. Heavy items should not be lifted alone. Caution is needed when handling all trash in order to avoid cuts and other injuries. Consider asking volunteers to sign a liability waiver and photo-release form. These can be two documents, or combined into one. The form should explain any dangers associated with the clean-up event and reminds volunteers to act responsibly for their own safety. The form helps protect you and your organization from potential liability if a volunteer is injured. In addition, with their permission, it allows you to use photographs taken that day. Examples of these forms can be found on-line.

D. Introduce Yourself and Provide Opening Remarks: Introduce yourself, thank special guests, sponsors / project partners (who have helped by providing goods or services), and volunteers. If the media is there, they may want to interview you or for you to provide a brief quote. Consider preparing remarks ahead-of-time, and allowing any special guests to also provide opening remarks to the group.

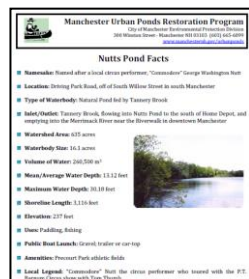
The UPRP coordinators typically introduce themselves, and thank any special guests (city aldermen, city employees, etc.), sponsors (municipal and local), and volunteers themselves.

E. Provide Volunteers with a Brief Background / History of the Area(s):

To acquaint new volunteers to your group / program and to the area, consider providing a brief background / history about the waterbody / area, distinguishing features, and its importance to the community. Consider showing volunteers a map of the waterbody and / or watershed. Also consider providing information such as points of interest, recent (or upcoming) restoration projects in the area, and / or information relative to water quality / monitoring, exotic species, other volunteer opportunities, etc.



Many of the UPRP volunteers are returning volunteers. However, with any new volunteers, we typically offer basic information on the program itself, as well as the watershed, inlet / outlet, history fun-facts, and any recent / upcoming restoration projects. We have fact sheets on each of our ponds on our website, which we can also direct them to for more information.



F. Provide Necessary Supplies to Your Volunteers: Ensure your volunteers have ample supplies for the duration of the clean-up event. If they did not bring their own work gloves, request that they take two pairs of Latex gloves (in case one pair rips), and more than one trash bag, depending on the designated location(s). If your group is also removing yard waste, provide your volunteers with rakes and lawn-waste bags. Request that they return any unused pair of gloves, trash bags, and any supplies to you at the end of the clean-up event. Consider also leaving supplies out in a designated location along with the “Clean-Up Attendance Sheet” for volunteers who may show up late.



Many of the UPRP bring their own work gloves. We then issue two pairs of Latex gloves to each volunteer as well as multiple trash bags, depending on the specific area they will be cleaning up. We request that all unused supplies be returned at the end of the clean-up.

G. Provide Your Volunteers with Instructions for the Clean-Up Event: Provide your volunteers with instructions for the clean-up event such as what they will be retrieving (large trash only, all trash, etc.) what not to pick up (hypodermic needles, cigarette butts, etc.), if they are to separate trash from recycling or not (in which case they may carry two bags at once – different colors may be helpful - one for trash and one for recycling), what is considered recyclable if they are separating recycling from trash (this differs in each community and some vendors may not accept unclean / dirty recyclables from clean-up events), etc. Also provide your volunteers with safety tips and a general schedule of the clean-up event including the location to reconvene at the end and where to place trash. Ensure everyone knows there to focus their efforts and then to stop.

The UPRP typically only picks up large items, and does not typically separate trash from recycling, due to limited means. However, we have done so in the past and have provided volunteers with two trash bags – one for recycling, and one for trash.

H. Make It Fun! Play One or More Games While You’re at It! Why not make things fun while you’re out there picking up trash? Consider playing one or more games (especially if some of the volunteers are children) such as a scavenger hunt, who can find the most interesting or unusual piece of trash, who can find the largest piece of trash, who collects the most trash, etc. Consider offering a prize and / or certificate to the winner(s) of one or more of the games you play.

The UPRP has, for many years, asked volunteers to find the “Most Interesting or Unusual Piece of Trash” at each clean-up event. At the end of the clean-up, volunteers will place their found items in one location for “judging” by the coordinator(s) of the clean-up event. Certificates and / or prizes have been awarded to the winner(s), and photos have been taken. We have found some really interesting and unusual pieces of trash over the years, and have kept a list!



I. Relinquish Groups of Volunteers / Group Leader(s) to Designated Area(s): If you are separating volunteers into more than one group for your clean-up event, relinquish the groups to their designated location(s). If you don’t have a group leader for each group, relinquish them with their maps in hand. If you have a group leader be sure to introduce the volunteers in each group to their group leader before relinquishing them to their designated location(s). Remember to consider that not all locations may need the same number of volunteers.

The UPRP typically asks one or more returning volunteers if they would agree to be group leaders. Not all locations require the same amount of volunteers, however. This is decided based upon the area of the designated location(s), as well as the amount of trash to be removed in the designated location(s). For example, one small area along the shoreline may only require two volunteers, but a larger area in another location with a lot of trash may require 4-6 or more volunteers.



- J. Reconvene at Initial Check-In Area at Designated Time:** After the allotted period of time has elapsed for the clean-up event, reconvene at your initial check-in area. Account for all volunteers that did not sign out early.

The UPRP always meets at our initial check-in area. We then account for each group leader and group of volunteers (who did not sign out early) to ensure all have safely returned.

- K. Count Full Bags of Trash (or Weigh All Trash):** Count all full bags of trash that were collected and returned. If one or more bags are returned and are not considered full, consider consolidating them to make full bags of trash. That way, your measurements of “full bags” collected for this, and any other clean-up events, are consistently measured / counted. If your group has access to a scale, you consider weighing your bags of trash, and any other trash, to account for pounds of trash collected. Another option is to ask if the vendor who is charged with collecting the trash after the event can inform your group of the weight of the collection when the truck enters the scale at the weigh-station before drop-off at the refuse facility.

Since trash collected at UPRP clean-up events has not been weighed by a scale, and trash has been weighed by vendor truck only occasionally, to be consistent, we always count full bags at the site, and consolidate bags of trash that are returned not full in order to make full bags.

- L. Account for and Count Other Items:** Account for and count the quantity of other items of trash collected that cannot fit into bags.

The UPRP always accounts for and counts any trash that is collected that cannot be bagged. This typically includes vehicular tires, shopping carts, wood debris, construction debris, or any other items that have been illegally dumped.

- M. Share the Data with Volunteers:** Once you have tallied the final numbers of bags of trash and other items collected during the clean-up event, announce them to your volunteers so they know just how much trash and other debris they removed from the area, know how important their contribution of time and efforts were, and have immediate results of their work!



- N. Tally Final Numbers on Clean-Up Attendance Sheet:** Once you have tallied everything collected, write these numbers on your “Clean-Up Attendance Sheet”.

- O. Take Photographs:** To commemorate the success of your clean-up event, take a photo of the trash collected, and of the group of volunteers who helped collect it!

The UPRP always photographs the trash collected (in and out of bags), as well as takes a group photograph in front of or aside the trash collected.



- P. Award a Prize, or Two, or Three:** If you played one or more games during the clean-up event, consider awarding a certificate or prize to your winner(s) and photographing them with their winning piece of trash!

The UPRP has, for many years, asked volunteers to find the “Most Interesting or Unusual Piece of Trash” at each clean-up event. At the end of the clean-up, volunteers will place their found items in one location for “judging” by the coordinator(s) of the clean-up. Certificates and / or prizes have been awarded to the winner(s), and photos have been taken.



- Q. Thank the Volunteers:** Before parting ways, be sure to thank your volunteers for their assistance! Encourage them to volunteer again. Be sure to individually thank any special guests (aldermen / selectmen, city employees, media, etc.).

At the end of each clean-up event, the UPRP notes upcoming clean-up events in order to encourage volunteers to return for the next event.



Above Left: Volunteers at the 100th Cleanup of the Manchester Urban Ponds Restoration Program.

Above Right: Cake served to volunteers at the 100th official cleanup of the Manchester Urban Ponds Restoration Program .

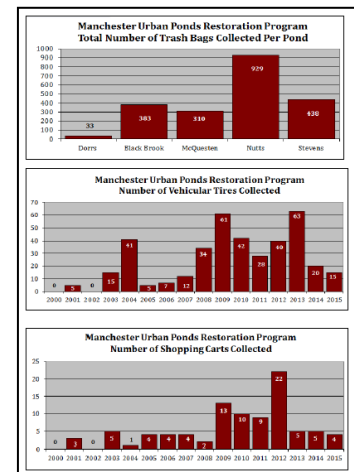
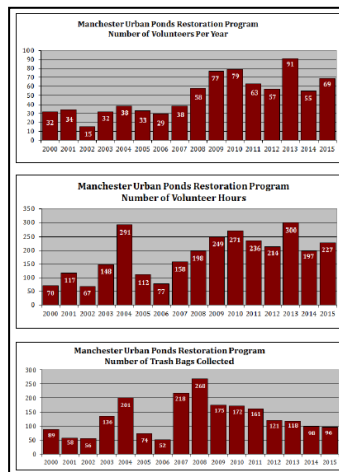
- R. Consider Having a Picnic / Cookout / or Lunch:** If you have the financial means, consider having a picnic / cookout / lunch afterwards to celebrate your accomplishment. Or, consider soliciting local vendors for food donations in exchange for sponsor / partnership recognition at your clean-up event. If you're not able to make or supply lunch, consider encouraging volunteers to bring a brown-bag lunch for afterwards.

Step 7: Follow Up After the Clean-Up Event

A. Update Your Electronic Records: Now is the time to transpose the information collected on the “Clean-Up Attendance Sheet” into an electronic record-retention system if you have access to one. Perhaps you have access to a database. If not, consider using a Microsoft Excel workbook / spreadsheet system to track measurements from your clean-up events. Now is also the time to update your existing e-mail distribution list with the names and e-mail addresses of those volunteers who participated in your clean-up event.

The UPRP has consistently used Microsoft Excel to track clean-up measurements. In the first worksheet of the workbook, we account for the number of our clean-up event, the location, date, hours spent at the event, numbers of bags of trash collected at the event, number of volunteers at the event, number of volunteer hours at the event, total value of volunteer time for the event, and other items retrieved at the event. For each year tracked, we created a “total” line with auto-calculations to account for the total of each year. To account for the value of volunteer time, we use figures taken from www.independentsector.org. In the second worksheet of the workbook, we account for pond cleanup attendees, where, for each clean-up event, we list the location, date, names (in alphabetical order), address, and hours at event. Similarly, for each year tracked, we created a “total” line. In the third worksheet of the workbook, we have created graphs based upon each year’s total metrics. We then transpose these graphs to a Microsoft Word document, then an Adobe PDF document, and post on our website, and at the kiosks.

Manchester Urban Ponds Restoration Pond Cleanup Measurements									
Machias Pond (NHIC)		10/2/05	10/2	10/2	10/2	10/2	10/2	10/2	10/2
#				12/5	12/1	9/2	(Counted Only Once)	273.75	\$4,761.83
2013									
#	Location	Date	Hours	# Bags Trash Collected	# Volunteers in Attendance	# Volunteer Hours	Value of Volunteer Time (\$27.50/hr)	Other Items Retrieved	
10	Black Brook	4/20/2013	2	26	10	100	\$2,750.00	5 trees, 1 wooden pile, 2 large plastic pots	
11	Streams Pond	4/20/2013	2	8	6	18	\$501.46	5 trees, 1 wooden machine, 1 wooden pile	
12	Mud Pond	7/4/2013	2	1	5	14	\$385.00	wind socks, 10 plastic bags	
13	Machias Pond (NHIC)	9/5/2013	2	1	7	17	\$467.50	27 trees, 2 wooden piles, 1 wooden pile	
14	Streams Pond	9/12/2013	2	1	1	1	\$27.50	25 trees, 10 large bags	
2014									
#	Location	Date	Hours	# Bags Trash Collected	# Volunteers in Attendance	# Volunteer Hours	Value of Volunteer Time (\$27.50/hr)	Other Items Retrieved	
15	Black Brook	4/20/2014	2	11	6	12	\$330.00	wood debris, 1 plastic chair	
16	Streams Pond	5/12/2014	2	1	1	14	\$385.00	15 wood debris, 2 wooden piles, 20 plastic bags	
17	Concord Lake (CT, PA)	5/22/2014	2	1	20	40	\$1,100.00	wood debris, 10 plastic bags, 10 wooden chairs	
18	Mud Pond	5/22/2014	2	1	1	4	\$110.00	10 trees, 1 plastic chair, 10 wood debris	
19	Machias Pond (NHIC)	5/22/2014	2	1	1	12	\$330.00	10 trees, 10 plastic bags, 10 wood debris	
20			10	10	10	55	(Counted Only Once)	1,512.50	\$4,507.86
2015									
#	Location	Date	Hours	# Bags Trash Collected	# Volunteers in Attendance	# Volunteer Hours	Value of Volunteer Time (\$27.50/hr)	Other Items Retrieved	
21	Black Brook	4/20/2015	2	1	7	115	\$3,162.50	10 gallon shovels, 30 plastic plastic bags	
22	Streams Pond	5/10/2015	2	1	1	4	\$110.00	4 trees, 1 TV, 1 wooden pile, 10 plastic bags	
23	Mud Pond	7/1/2015	2	1	21	42	\$1,155.00	12 trees, 1 wooden pile, 10 plastic bags	
24	Machias Pond (NHIC)	7/1/2015	2	1	1	1	\$27.50	10 plastic bags, 10 wooden piles, 10 plastic bags	
25	Streams Pond	7/1/2015	2	1	1	1	\$27.50	10 wooden piles, 10 plastic bags, 10 wooden piles	
26					63	(Counted Only Once)	1,732.50	\$5,000.00	
101				2095	800		2095.00	\$54,254.80	



B. Follow Up With an E-mail or Thank-You Note: It is always nice to follow up with your new (and / or returning) volunteers by sending them a formal personalized thank-you via e-mail or US Postal Service. Besides, who doesn't like receiving a letter in the letter box, especially in this electronic day-in-age?

The UPRP, has, on occasion, sent personalized thank-you cards in the mail. Typically, however, we send a group thank-you via e-mail and attach photographs taken at the event(s), as well as re-cap tallies from the clean-up event(s).



C. Consider Writing an Article for Your Newsletter or the Newspaper: Consider writing an article for your newsletter, if you have one, or a local newspaper or newspaper, summarizing the event with photographs and tallies from the event. Volunteers who helped out at your clean-up event will feel proud of their accomplishment and the results. This is a good way to garner publicity about your group and its event as well as garner additional volunteers in the future.

The UPRP has often written newspaper articles and / or shared summary information about the clean-up events (at the end of the season) listing sponsors / project partners and volunteers, and including photographs of volunteers at the event, via an electronic newsletter.



From 2000 - 2005 **The Manchester Urban Ponds Restoration Program** (UPRP) was part of the Supplemental Environmental Projects Plan (SEPP) which was part of an agreement between the City of Manchester, NH Department of Environmental Services, and the US Environmental Protection Agency to address combined sewers in the City. Seven (7) waterbodies in Manchester have been evaluated and monitored for restoration potential. Specific restoration projects to meet the program's goals have also been identified, funded, and completed through this project. Since 2000, the Manchester Urban Ponds Restoration Program has organized 101 clean-up events. Over the past 15 years, 800 volunteers have spent 2,298.50 hours collecting 2,093 bags of trash! This does not include the items illegally “dumped” such as shopping carts (91), tires (388), car batteries, other car parts, construction debris, and other items. In addition, the value of volunteer time spent at these clean-ups has amounted to over \$54,000 over the past 15 years! The Manchester Urban Ponds Restoration Program was awarded an EPA “Environmental Merit Award” in 2011. More information on the Manchester Urban Ponds Restoration Program can be found by visiting www.manchesternh.gov/urbanponds.



Jen Drociak lives in Manchester, NH and holds a Bachelor of Science degree in Environmental Conservation from the University of New Hampshire. She is employed with the New Hampshire Department of Environmental Services where she has worked as a program specialist for the Pollution Prevention Program, a restoration specialist for the NH Coastal Program where she established a monitoring program for pre- and post-restoration projects in NH's salt marshes, and as the Volunteer River Assessment Program Coordinator

where she provided technical assistance to approximately 200 volunteers who collected water quality samples for surface water quality assessments on NH's rivers and streams. Jen has also worked for the Wastewater Engineering Bureau as a grants management specialist and is currently working for the Land Resources Management Bureau as a compliance specialist. Since 2000, Jen has also been involved with the Manchester Urban Ponds Restoration Program, and has served as acting coordinator since 2006 where she largely coordinates annual clean-up events and water quality monitoring.

Appendix I

Annual Reports & Reporting Requirements

Annual Reports

The Town will submit annual reports each year of the Small MS4 permit term, 90 days from the close of the reporting period (i.e., September 28). The reporting period will be a one-year period commencing on the permit effective date, and subsequent anniversaries thereof, except that the first annual report under the 2016 General Permit shall also cover the period from May 1, 2018 to the permit effective date, July 1, 2018. Under the 2016 General Permit, annual reports will consist of a simple update provided to EPA and more robust documentation included in Appendix F of this SWMP.

Per Section 4.4.b of the 2016 General Permit, the annual reports shall contain the following information:

- i. A self-assessment review of compliance with the permit terms and conditions.*
- ii. An assessment of the appropriateness of the selected BMPs.*
- iii. The status of any plans or activities required by part 2.1 and/ or part 2.2, including:*
 - Identification of all discharges determined to be causing or contributing to an exceedance of water quality standards and description of response including all items required by part 2.1.1;*
 - For discharges subject to TMDL related requirements, identification of specific BMPs used to address the pollutant identified as the cause of impairment and assessment of the BMPs effectiveness at controlling the pollutant (part 2.2.1. and Appendix F) and any deliverables required by Appendix F;*
 - For discharges to water quality limited waters a description of each BMP required by Appendix H and any deliverables required by Appendix H.*
- iv. An assessment of the progress towards achieving the measurable goals and objectives of each control measure in part 2.3 including:*
 - Evaluation of the public education program including a description of the targeted messages for each audience; method of distribution and dates of distribution; methods used to evaluate the program; and any changes to the program.*
 - Description of the activities used to promote public participation including documentation of compliance with state public notice regulations.*
 - Description of the activities related to implementation of the IDDE program including: status of the map; status and results of the illicit discharge potential ranking and assessment; identification of problem catchments; status of all protocols described in part 2.3.4.(program responsibilities and systematic procedure); number and identifier of catchments evaluated; number and identifier of outfalls screened; number of illicit discharges located; number of illicit discharges removed; gallons of flow removed; identification of tracking indicators and measures of progress based on those indicators; and employee training.*
 - Evaluation of the construction runoff management including number of project plans reviewed; number of inspections; and number of enforcement actions.*
 - Evaluation of stormwater management for new development and redevelopment including status of ordinance development (2.3.6.a.ii.), review and status of the street design assessment (2.3.6.b.), assessments to barriers to green infrastructure (2.3.6.c), and retrofit inventory status (2.3.6.d.)*

- *Status of the O&M Programs required by part 2.3.7.a.*
 - *Status of SWPPP required by part 2.3.7.b. including inspection results.*
 - *Any additional reporting requirements in part 3.0.*
- v. *All outfall screening and monitoring data collected by or on behalf of the permittee during the reporting period and cumulative for the permit term, including but not limited to all data collected pursuant to part 2.3.4. The permittee shall also provide a description of any additional monitoring data received by the permittee during the reporting period.*
- vi. *Description of activities for the next reporting cycle.*
- vii. *Description of any changes in identified BMPs or measurable goals.*
- viii. *Description of activities undertaken by any entity contracted for achieving any measurable goal or implementing any control measure.*

**MS4 Record Keeping Update
Bellingham, MA
October 2020**

The Town's Stormwater Management Program has been appended through the Permit term, including development of the following standalone reports. These reports are available from the Bellingham Department of Public Works.

The **IDDE Program** has been updated to include:

- Illicit Discharge Detection and Elimination Program, June 2019
- Sanitary Sewer Overflow (SSO) inventory, updated annually
- Bellingham Outfall Inventory and Dry Weather Screening Field Effort Summary – Spring 2019, June 2019
- Bellingham Outfall Inventory and Dry Weather Screening Field Effort Summary – Spring 2020, in final review
- Bellingham MS4 Catchment Investigation Procedures, December 2019
- Phase I MS4 System Map, September 2020

The **Construction and Post-Construction Programs** have been updated to include:

- Section 7 of the Planning Board's Procedural Regulations and the Planning Board's As-Built Policy requires the submission of as-built drawings and an operations and maintenance plan for permanent stormwater management systems. The September 2016 Planning Board As-Built Policy Handbook and Certificate are here: <https://www.bellinghamma.org/planning-board/pages/built-policy-handbook-certificate>

The **Municipal Good Housekeeping Program** has been updated to include:

- Good Housekeeping and Pollution Prevention Operations and Maintenance Plan, June 2020

The **Charles River Watershed Phosphorus Control Plan** has been updated to include:

- Technical Review of EPA's Small Municipal Separate Storm Sewer Systems (MS4) General Permit Phosphorus Control Plan Obligations for the Town of Bellingham, June 2018
- Legal Analysis, June 2020 (part of draft Phosphorus Control Plan)

The **SWMP** is updated to include the following information to address Section 3.0 of the General Permit, Additional Requirements for Discharges to Surface Drinking Water Supplies and Their Tributaries:

- EPA's SWMP template does not include provisions to address this requirement. However, this is not applicable to Bellingham because there are no surface drinking water supplies or tributaries to surface drinking water supplies within the MS4.

**MS4 Record Keeping Update
Bellingham, MA
October 2020**

Reporting includes:

- Year 1 Annual Report and attachments:
 - SSO Inventory (January 1, 2014 – June 30, 2019)
 - Outfall and Interconnection Inventory and Initial Ranking (*available electronically*)
 - Outfall Sampling Results Summary
 - Spring 2019 Outfall Inventory and Sampling map
 - Illicit Discharge Removal Report
 - Catch Basin Cleaning Optimization Plan Schedule
- Year 2 Annual Report and attachments:
 - Summary of Bellingham's TMDLs and Impaired Waters
 - Outfall Sampling Results Summary

Permit Year 1

(May 1, 2018 – June 30, 2019)

Year 1 Annual Report

Massachusetts Small MS4 General Permit

Reporting Period: May 1, 2018-June 30, 2019

*****Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form*****

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed.

Part I: Contact Information

Name of Municipality or Organization:

EPA NPDES Permit Number:

Primary MS4 Program Manager Contact Information

Name:

Title:

Street Address Line 1:

Street Address Line 2:

City:

State:

Zip Code:

Email:

Phone Number:

Fax Number:

Stormwater Management Program (SWMP) Information

SWMP Location (web address):

Date SWMP was Last Updated:

If the SWMP is not available on the web please provide the physical address and an explanation of why it is not posted on the web:

Part II: Self Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4.

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/Pathogens
 ☐ Metals
 ☐ Nitrogen
 ☐ Phosphorus

Clear Impairments and TMDLs

Next, check off all requirements below that have been completed. **By checking each box you are certifying that you have completed that permit requirement fully.** If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.

Year 1 Requirements

- ☒ Develop and begin public education and outreach program
☒ Identify and develop inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years
 - ☒ The SSO inventory is attached to the email submission
 - ☐ The SSO inventory can be found at the following website:☒ Develop written IDDE plan including a procedure for screening and sampling outfalls
☒ IDDE ordinance complete
☒ Identify each outfall and interconnection discharging from MS4, classify into the relevant category, and priority rank each catchment for investigation
 - ☒ The priority ranking of outfalls/interconnections is attached to the email submission
 - ☐ The priority ranking of outfalls/interconnections can be found at the following website:☒ Construction/ Erosion and Sediment Control (ESC) ordinance complete
☒ Develop written procedures for site inspections and enforcement of sediment and erosion control measures
☒ Develop written procedures for site plan review
☒ Keep a log of catch basins cleaned or inspected
☒ Complete inspection of all stormwater treatment structures

Annual Requirements

- ☒ Annual opportunity for public participation in review and implementation of SWMP
- ☒ Comply with State Public Notice requirements
- ☒ Keep records relating to the permit available for 5 years and make available to the public
- ☒ Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- ☒ Annual training to employees involved in IDDE program
- ☒ All curbed roadways have been swept a minimum of one time per year

Bacteria/ Pathogens (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- ☒ Annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Permittee or its agents disseminate educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- ☒ Provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

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

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- ☒ Increase street sweeping frequency of all municipal owned streets and parking lots to a schedule to target areas with potential for high pollutant loads
- ☐ Prioritize inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Clean catch basins more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings

Charles River Watershed Phosphorus TMDL

- ☒ Begin Phase 1 Phosphorus Control Plan (PCP)

Use the box below to input additional details on any unchecked boxes above or any additional information you would like to share as part of your self assessment:

Bacteria/Pathogens Public Education and Outreach: While disseminating information about proper pet waste management during dog license renewals was not completed during Permit Year 1, multiple educational materials about proper pet waste management have been distributed, posted on the Town's website, and placed on display at municipal buildings throughout the Permit Year. The Town intends to begin distributing messaging during dog license renewals in Permit Year 2.

Solids Good Housekeeping: The Town tracks catch basins cleaning and inspections using a GIS-based tablet application. The tracking form includes depth measurements that can be used to calculate percent full. Therefore, the Town can complete targeted catch basin cleaning to reduce instances of excessive sediment loading. In Permit Year 1, the Town was severely short staffed and the cleaning equipment was not available

until spring of 2019, so the planned cleaning schedule was greatly reduced. Cleaning has been ongoing since spring of 2019, and increased cleaning quantities will be reported in Permit Year 2.

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

Yes ☐ No ☒

If yes, describe below, including any relevant impairments or TMDLs:

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed during the reporting period:

Below, report on the educational messages completed during the first year. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.

BMP: 1A Education and Outreach to Residents (Multi-media Methods)

Message Description and Distribution Method:

Educational material on stormwater pollution prevention for households including proper car maintenance and washing, disconnection of downspouts and rain barrel installation, proper lawn maintenance and use of fertilizer, and proper pet waste, dumping, and septic system management was displayed on the Town's website.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

This messaging is available to all visitors of the Town's DPW Stormwater Pollution Prevention for Households webpage.

Message Date(s):

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: 1D Education and Outreach to Industrial Facilities (Multi-media Methods)

Message Description and Distribution Method:

Educational material on stormwater pollution prevention for industrial sites including illicit discharge elimination, erosion prevention and sediment control, dust control, spill prevention, and salt storage is displayed on the Town's website.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

This messaging is available to all visitors of the Town's Planning Board Stormwater Management Best

Practices webpage.

Message Date(s): Ongoing

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: 1B Education and Outreach to Businesses (Multi-media Methods)

Message Description and Distribution Method:

Educational material on stormwater pollution prevention for businesses including the importance and benefits of pollution prevention, source reduction, reuse/recycling, energy recovery, and best management practices for anti-icing to minimize sand and salt use is displayed on the Town's website.

Targeted Audience: Businesses, Institutions, and Commercial Facilities

Responsible Department/Parties: Planning Board

Measurable Goal(s):

This messaging is available to all visitors of the Town's Planning Board Stormwater Management Best Practices webpage.

Message Date(s): Ongoing

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: 1C Education and Outreach to Developers (Multi-media Methods)

Message Description and Distribution Method:

Educational materials on stormwater pollution prevention for developers including site selection, low impact development practices, sediment and erosion control measures, and other methods to prevent stormwater pollution are displayed on the Town's website. Additionally, a handout entitled "10 Steps to Stormwater Pollution Prevention on Small Residential Construction Sites" is distributed by the Building Department to all contractors seeking a building permit for all sites with an acre of disturbance or more.

Targeted Audience: Developers

Responsible Department/Parties: Planning Board

Measurable Goal(s):

This messaging is available to all visitors of the Town's Planning Board Stormwater Management Best Practices webpage.

Message Date(s): Ongoing

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP:

Message Description and Distribution Method:

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Message Date(s):

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☐

If yes, describe why the change was made:

Add an Educational Message

MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) during the reporting period:

The Stormwater Management Plan (SWMP) was posted for public review and made publicly available on the

Town's website. The SWMP was also presented at a public Planning Board meeting on August 23, 2018 where public comments and feedback were solicited. State Public Notice requirements were followed, and the Planning Board meeting was advertised in advance.

Was this opportunity different than what was proposed in your NOI? Yes ☐ No ☒

Describe any other public involvement or participation opportunities conducted during the reporting period:

The Town sponsored an annual Earth Day Charles River Cleanup on April 27, 2019, where local volunteers conducted a cleanup throughout the Charles River watershed.

The Town's DPW held Yard Waste Curbside Pickup days on October 30, 2018 and May 7, 2019.

The Board of Health hosted an annual Household Hazardous Waste Day on June 22, 2019.

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Below, report on the number of SSOs identified in the MS4 system and removed during this reporting period.

Number of SSOs identified:

Number of SSOs removed:

Below, report on the total number of SSOs identified in the MS4 system and removed to date. At a minimum, report SSOs identified since 2013.

Total number of SSOs identified:

Total number of SSOs removed:

MS4 System Mapping

Describe the status of your MS4 map, including any progress made during the reporting period (phase I map due in year 2):

Most Phase I mapping elements are complete. Many Phase II mapping elements are complete, including manholes, catch basins, and most connectivity. The Town will continue to improve the map as modifications are made and the IDDE Program is implemented.

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses.

- ☒ The outfall screening data is attached to the email submission
- ☐ The outfall screening data can be found at the following website:

Below, report on the number of outfalls/interconnections screened during this reporting period.

Number of outfalls screened:

Below, report on the percent of total outfalls/ interconnections screened to date.

Percent of total outfalls screened:

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

- ☐ The catchment investigation data is attached to the email submission
☒ The catchment investigation data can be found at the following website:

Below, report on the number of catchment investigations completed during this reporting period.

Number of catchment investigations completed this reporting period:

Below, report on the percent of catchments investigated to date.

Percent of total catchments investigated:

Optional: Provide any additional information for clarity regarding the catchment investigations below:

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

- ☒ The illicit discharge removal report is attached to the email submission
☐ The illicit discharge removal report can be found at the following website:

Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed during this reporting period.

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed:

Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed since the effective date of the permit.

Total number of illicit discharges identified:

Total number of illicit discharges removed:

Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:

Employee Training

Describe the frequency and type of employee training conducted during the reporting period:

An IDDE employee training was held in 2018, and an inter-departmental meeting was held on May 16, 2019, which reviewed the overall purpose and scope of the IDDE program and IDDE Program responsibilities. An IDDE form for documenting illicit discharges was updated and is stored in DPW trucks for use in the event of an illicit discharge. Town staff attended the Metropolitan Area Planning Council's Climate Resiliency workshop on March 19, 2019 and Charles River Watershed Associations's Climate Compact on August 1, 2019 which discussed moving towns, regions, and watersheds forward toward improved stormwater management.

MCM4: Construction Site Stormwater Runoff Control

Below, report on the construction site plan reviews, inspections, and enforcement actions completed during this reporting period.

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

MCM5: Post-Construction Stormwater Management in New Development and Redevelopment

Ordinance Development

Describe the status of the post-construction ordinance required to be complete in year 2 of the permit term:

Section 7 of the Planning Board's Procedural Regulations includes requirements for post-construction stormwater management. The Town will review existing regulations to determine whether updates or additions are needed to meet the requirements of the General Permit in Permit Year 2.

As-built Drawings

Describe the status of the measures the MS4 has utilized to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites required to be complete in year 2 of the permit term:

This requirement has been met through the adoption of Section 7 of the Planning Board's Procedural Regulations and the Planning Board's As-Built Policy, which requires the submission of as-built drawings and an operations and maintenance plan for permanent stormwater management systems.

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

Preparation for the Street Design and Parking Lots Report has not yet begun as this requirement is due in Permit Year 4.

Green Infrastructure Report

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

Preparation for the Green Infrastructure Report has not yet begun as this requirement is due in Permit Year 4.

Retrofit Properties Inventory

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

Preparation for the Retrofit Properties Inventory has not yet begun as this requirement is due in Permit Year 4.

MCM6: Good Housekeeping**Catch Basin Cleaning**

Describe the status of the catch basin cleaning optimization plan:

A schedule to complete data collection for the catch basin cleaning optimization plan is attached.

If complete, attach the catch basin cleaning optimization plan or the schedule to gather information to develop the optimization plan:

- ☒ The catch basin cleaning optimization plan or schedule is attached to the email submission
- ☐ The catch basin cleaning optimization plan or schedule can be found at the following website:

Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins during this reporting period.

Number of catch basins inspected:

Number of catch basins cleaned:

Total volume or mass of material removed from all catch basins:

Below, report on the total number of catch basins in the MS4 system, if known.

Total number of catch basins:

If applicable:

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

Street Sweeping

Describe the status of the written procedures for sweeping streets and municipal-owned lots:

Written procedures for street sweeping will be formalized during development of a written operation and maintenance plan in Permit Year 2. The Town completed street sweeping twice throughout the reporting period, sweeping 62 miles of road in the fall and 107 miles of road and all municipal and school parking lots in the spring.

Report on street sweeping completed during the reporting period using one of the three metrics below.

☒ Number of miles cleaned:

☐ Volume of material removed: [UNITS]

☐ Weight of material removed: [UNITS]

If applicable:

For rural uncurbed roadways with no catch basins, describe the progress of the inspection, documentation, and targeted sweeping plan:

Winter Road Maintenance

Describe the status of the written procedures for winter road maintenance including the storage of salt and sand:

Written procedures for winter road maintenance will be formalized during development of a written operation and maintenance plan in Permit Year 2.

Inventory of Permittee-Owned Properties

Describe the status of the inventory, due in year 2 of the permit term, of permittee-owned properties, including parks and open spaces, buildings and facilities, and vehicles and equipment, and include any updates:

The Town has created an initial inventory of Town-owned properties in Permit Year 1, which will be finalized pending confirmation of several properties and site inspections during Permit Year 2.

O&M Procedures for Parks and Open Spaces, Buildings and Facilities, and Vehicles and Equipment

Describe the status of the operation and maintenance procedures, due in year 2 of the permit term, of permittee-owned properties (parks and open spaces, buildings and facilities, vehicles and equipment) and include maintenance activities associated with each:

Operation and maintenance procedures associated with the properties included in the inventory will be formalized during development of a written operation and maintenance plan in Permit Year 2.

Stormwater Pollution Prevention Plan (SWPPP)

Describe the status of any SWPPP, due in year 2 of the permit term, for permittee-owned or operated facilities including maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater:

The Town will identify what properties and facilities are in need of a SWPPP and will prepare these in accordance with the General Permit in Permit Year 2.

Below, report on the number of site inspections for facilities that require a SWPPP completed during this reporting period.

Number of site inspections completed:

Describe any corrective actions taken at a facility with a SWPPP:

N/A

O&M Procedures for Stormwater Treatment Structures

Describe the status of the written procedure for stormwater treatment structure maintenance:

Written procedures for operation and maintenance of stormwater treatment structures will be formalized during development of a written operation and maintenance plan in Permit Year 2.

Additional Information

Monitoring or Study Results

Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.

- ☒ Not applicable
- ☐ The results from additional reports or studies are attached to the email submission
- ☐ The results from additional reports or studies can be found at the following website(s):

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

Additional Information

Optional: Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above:

Bellingham completed a portion of the dry weather screening field effort at the end of Permit Year 1. The data included in this annual report should be considered draft as it is being finalized by the Town's stormwater consultant. The Town continues to implement its IDDE Program and complete dry weather outfall screening in accordance with the General Permit schedule.

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 2 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

- Complete system mapping Phase I
- Begin investigations of catchments associated with Problem Outfalls
- Develop or modify an ordinance or other regulatory mechanism for post-construction stormwater runoff from new development and redevelopment
- Establish and implement written procedures to require the submission of as-built drawings no later than two years after the completion of construction projects
- Develop, if not already developed, written operations and maintenance procedures
- Develop an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; review annually and update as necessary
- Establish a written program detailing the activities and procedures the permittee will implement so that the MS4 infrastructure is maintained in a timely manner
- Develop and implement a written SWPPP for maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater
- Enclose or cover storage piles of salt or piles containing salt used for deicing or other purposes
- Develop, if not already developed, written procedures for sweeping streets and municipal-owned lots
- Develop, if not already developed, written procedures for winter road maintenance including storage of salt and sand
- Develop, if not already developed, a schedule for catch basin cleaning
- Develop, if not already developed, a written procedure for stormwater treatment structure maintenance
- Develop a written catchment investigation procedure (*18 months*)

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all uncurbed streets at least annually

Provide any additional details on activities planned for permit year 2 below:

The Town acknowledges the General Permit Year 2 requirements and will complete as many activities as possible based on funding and staff availability.

Part V: Certification of Small MS4 Annual Report 2019

40 CFR 144.32(d) Certification

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 gather and evaluate 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, I certify that 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.

Name:

Donald DiMartino

Title:

DPW Director

Signature:



Date:

9/25/2019

[Signatory may be a duly authorized representative]

Appendix C – SSO Inventory and Reporting

SSO Inventory for Bellingham, MA (January 1, 2014 – June 30, 2019)

Below is a summary table of sanitary sewer overflows that have occurred in the Town of Bellingham from 2014 through June 30, 2019. Following the summary table are detailed descriptions of each SSO occurrence. These SSOs have been reported to MassDEP in accordance with state regulations.

Date	Time	Location	Discharge to surface water or MS4	Estimated SSO Volume	Cause of SSO	Mitigation/Corrective Measures Completed
1/13/2014	1:20 PM	Pine Grove Ave.	Yes – Pete’s River	2,000 Gallons	Blockage	See detailed descriptions below
2/27/2015	1:00 PM	Pine Grove Ave.	Yes – Pete’s River	100 Gallons	Blockage	
3/21/2015	5:00 PM	Wrentham Manor	No	3,900 Gallons	Pump/Lift Station Failure	
10/25/2015	4:30 PM	Old Bridge Lane Sewer Station	No	8,000 – 10,000 gallons	Pump/Lift Station Failure	
8/2/2018	8:00 PM	Wrentham Manor	No	2,000 Gallons	Pump/Lift Station Failure	

Detailed descriptions:

- On **January 14th, 2014** at approximately 1:20 PM, the Sewer Department was notified of sewage coming out of manhole on Pine Grove Ave. After responding and investigating, it was discovered that a brick had fallen into the flow channel blocking flow through the siphon. Sewer department staff removed debris from the flow channel and patched under the casting with cement. The total volume of wastewater discharged to Pete’s River was estimated to be 2,000 gallons.
- On **February 27th, 2015** at approximately 1:00 PM, the Sewer Department was notified of sewage coming out of a manhole on Pine Grove Ave. After responding and investigating, a brick from the SMH invert was discovered to be blocking the upper end of the siphon. The total volume of wastewater discharged to Pete’s River was approximately 100 gallons. Town staff removed the brick from the invert and pumped out and jetted the lines. Town staff made plans to reconstruct the brickwork.
- On **March 21st, 2015** at approximately 5:00 PM, the Sewer Department was notified of sewage coming out of a manhole at Wrentham Manor (Wrentham Road). After responding and investigating, it was discovered that the pump had shorted out and killed power to the entire control and alarm panel. The total volume of water discharged to the lawn area of the housing authority was approximately 3,900 gallons. Town staff repaired both pumps. The force main may be frozen, as the heat tape breaker was off. The town continues to have issues with the force main pipe. The pumps are operating but not pumping out the force main. The town staff has jet cleaned much of the force main but have more to do. Town staff is manually monitoring the wet well while debugging the force main issue.

Appendix C – SSO Inventory and Reporting

- On **October 25th, 2015** at approximately 4:30 PM, the Sewer Department was notified of sewage coming out of a manhole at the Old Bridge Lane Sewer Station. After responding and investigating, it was discovered that the automated controls did not start the pumps at the sewer station, and that the alarm system did not send an alarm. The total volume of wastewater discharged to the ground surface (no receiving water was impacted) was approximately 8,000 – 10,000 gallons. There were no signs of any puddles of wastewater or flow in any adjacent areas. The nearest wetlands are >175' away. Release flow was minimal (flow from 92 condo units and fire station). The flow was not sufficient enough to create an observable channel in pine needles on the ground surface. The pump controls were reset and operational by 11/25 noon.
- On **August 2nd, 2018** at approximately 8:00 PM, the Sewer Department was notified of sewage coming out of a manhole at Wrentham Manor (Wrentham Road). After responding and investigating, it was discovered that the pump/lift station failed and that the Mission Dialer failed to call out the alarms. The total volume of wastewater discharged to groundwater was approximately 2,000 gallons (no receiving water was impacted). Town staff repaired both pumps and investigated pump changes to eliminate clogging. The town is working with an electrician to get an alarm if power is lost due to mission dialer unit.

Outfall and Interconnection Inventory and Initial Ranking

The Outfall and Interconnection Inventory and Initial Ranking from Permit Year 1 is available electronically in the Bellingham Department of Public Work's record keeping files.

Outfall Sampling Results Summary - Bellingham, MA

Location				Laboratory Analysis ⁽¹⁾					Water Quality Meter/Test Kit ⁽¹⁾					
Date	Outfall ID	Street	Sample Location	Ammonia	Surfactants	E. coli	Fecal Coliform	Total Phosphorus	Temperature	Salinity ⁽³⁾	Conductivity	Chlorine	Dissolved Oxygen	Ammonia
				mg/L	mg/L	CFU/100mL	CFU/100mL	mg/L	°F	ppt	µS/cm ⁽²⁾	mg/L	mg/L	mg/L
5/23/2019	1-1	Beechwood Road	Outfall	0.179	ND	26.0	-	ND	55.6	0.08	261	0.00	-	
5/23/2019	1-3	Beechwood Road	Outfall	0.299	0.060	470.0	-	0.048	60.2	0.13	368	0.00	-	0.50
5/22/2019	2-2	Standish Road	Outfall	ND	ND	2.0	-	ND	57.3	0.17	508	0.00	-	0.00
5/22/2019	2-3	Apache Road	Outfall	ND	ND	ND	-	0.01	58.9	0.22	613	0.02	-	0.50
5/23/2019	4-8	Phillip Drive	Upstream Manhole	ND	ND	ND	-	ND	56.7	0.31	867	0.00	-	0.25
5/23/2019	5-4	Hartford Avenue	Outfall	0.186	0.060	44.0	-	0.018	55.5	0.19	563	0.00	-	0.50
5/22/2019	5-8	Plymouth Road	Outfall	ND	ND	98.0	54.0	0.014	59.9	0.44	1,153	0.00	-	0.50
5/22/2019	5-9	Plymouth Road	Outfall	ND	ND	2.0	2.0	0.014	57.7	0.18	525	0.00	-	0.50
5/22/2019	5-10	John Alden Circle	Outfall	ND	0.060	2.0	-	0.01	55.9	0.21	619	0.00	-	0.00
6/4/2019	7-3	Wethersfield Road	Outfall	0.106	ND	10.0	-	0.037	57.8	0.35	948	0.00	-	0.00
6/4/2019	7-6	Caroline Drive	Outfall	0.301	0.060	74.0	-	0.028	52.7	0.17	540	0.00	-	0.25
6/4/2019	7-11	Roger Belanger Drive	Outfall	0.106	ND	ND	-	ND	54.6	0.11	342	0.00	-	0.00
5/22/2019	11-2	Stonehedge Road	Outfall	0.084	ND	2.0	-	ND	50.9	0.16	520	0.04	-	0.25
6/3/2019	13-1	David Road	Outfall	0.380	0.050	8.0	-	0.05	57.7	0.33	913	0.00	-	0.25
6/3/2019	13-4	Mill Street	Outfall	0.097	0.050	56.0	-	ND	57.3	0.64	1,688	0.00	-	0.00
6/3/2019	15-7	Blackstone Street	Outfall	0.130	0.050	8.0	-	0.015	63.4	0.43	1,075	0.00	-	0.00
5/24/2019	21-18	Newland Avene	Outfall	ND	ND	18.0	-		56.8	0.09	269	0.00	-	0.00

REPORTING LIMITS

Ammonia = 0.075 mg/L
Surfactants = 0.050 mg/L
E. coli = 2 CFU/100mL
Fecal Coliform = 2 CFU/100mL
Total Phosphorus = 0.01 mg/L
"ND" = none detected

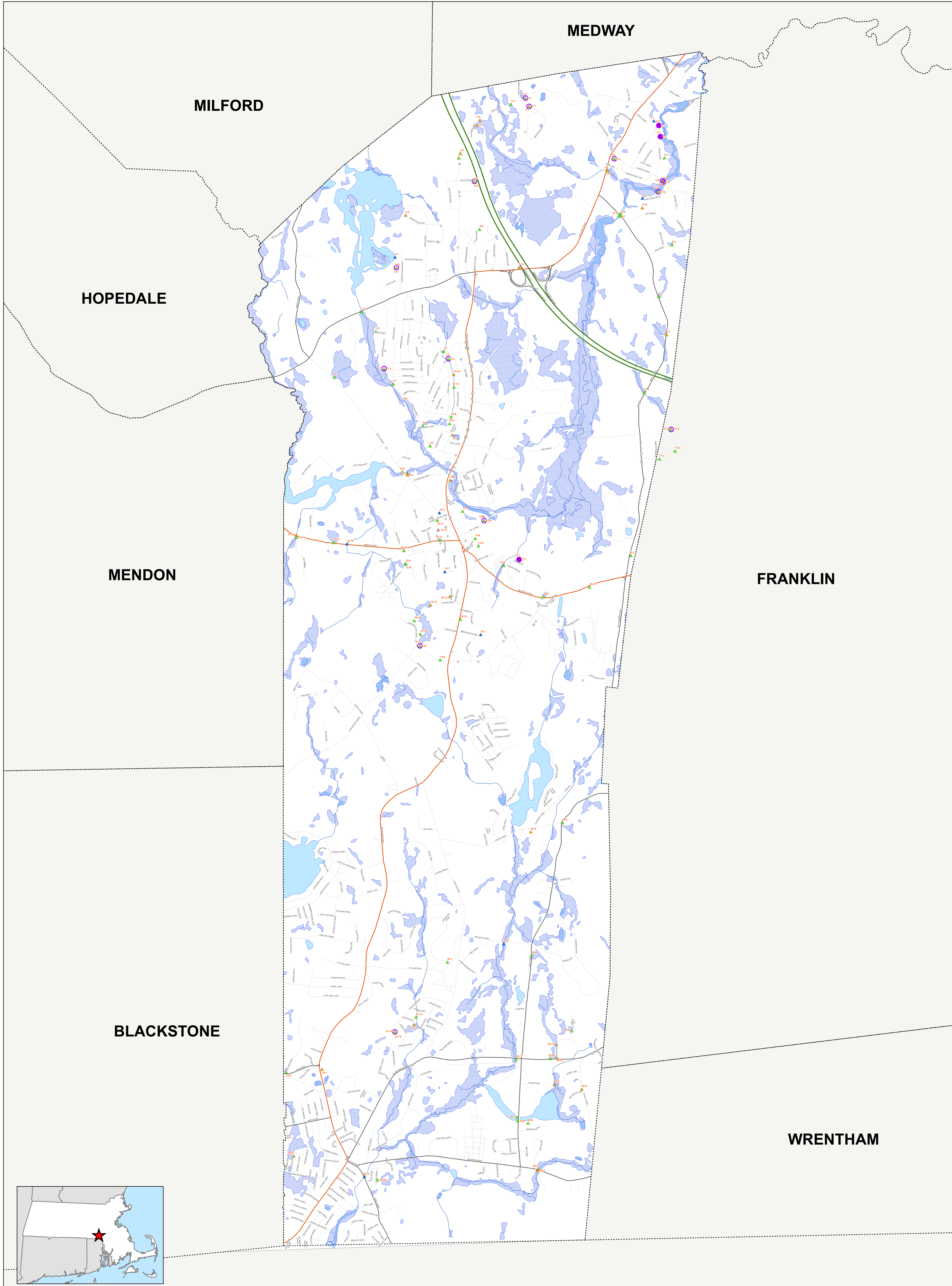
COLOR KEY (benchmarks are bold)											
	Ammonia	Surfactants	E. coli	Fecal Coliform	Toal Phosphorus	Temperature	Salinity	Conductivity	Chlorine	Dissolved Oxygen	Ammonia
	mg/L	mg/L	CFU/100 mL	CFU/100 mL	mg/L	°F	ppt	µS/cm	mg/L	mg/L	mg/L
	≥ 6.000	≥ 1.000	≥ 10,000	≥ 10,000	≥ 0.908		≥ 1.00	≥ 2,000	≥ 1.00		≥ 6.0
	≥ 1.000	≥ 0.500	≥ 1,260	≥ 1,000	≥ 0.466		≥ 0.75	≥ 1,500	≥ 0.30		≥ 1.0
	≥ 0.500	≥ 0.250	≥ 235	≥ 200	≥ 0.024	≥ 83.0	≥ 0.50	≥ 1,000	≥ 0.02	< 5.0	≥ 0.5
	< 0.5	< 0.25	< 235	< 200	< 0.024	< 83	< 0.5	< 1,000	< 0.02	≥ 5.0	< 0.5

Notes for Results Summary:

- (1) "-" means no analysis was completed
(2) µS/cm is equivalent to µmhos/cm
(3) Salinity was measured in µS/cm units on the YSI Meter and then converted to ppt

Benchmark Sources:

Ammonia, Surfactants, and Chlorine - *EPA General Permit for Stormwater Discharges from Small MS4 in Massachusetts*
E. coli, Temperature, and Dissolved Oxygen - *314 CMR 4.00: Massachusetts Surface Water Quality Standards*
Total Phosphorus - *EPA Ambient Water Quality Criteria Recommendations for Rivers and Streams in Nutrient Ecoregion XIV*
Fecal coliform - *MWRA Water Quality Standards for Class B and Class SB Waters*
Salinity - *EPA Volunteer Estuary Monitoring: A Methods Manual*
Conductivity - *Center for Watershed Protection Illicit discharge Detection and Elimination Guidance Manual*



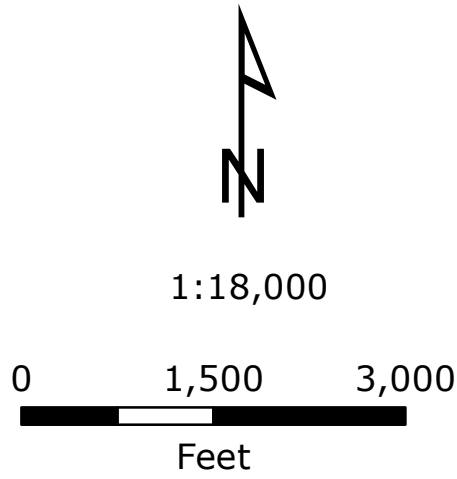
Legend

Outfall

Screening Status

- ▲ Investigation Attempted - Could Not Access
- ▲ Investigation Attempted - Could Not Locate
- ▲ Investigation Complete
- ▲ Other
- Sampled

- Town Boundary
- Public Surface Water Supply
- Lake, Pond, River or Impoundment
- Inland Wetlands
- Stream/Intermittent Stream



**ATTACHMENT 2
SPRING 2019 OUTFALL
INVENTORY AND SAMPLING**

Illicit Discharge Detection and
Elimination Plan
Bellingham, Massachusetts

June 2019

Tighe&Bond
Engineers | Environmental Specialists

Illicit Discharge Removal Report

The Town of Bellingham

Reporting Period: May 1, 2018 – June 30, 2019

The Town of Bellingham has found one (1) illicit discharge during the reporting period. The source was a direct discharge from a septic system at 21 Wrentham Road, which discharged into Peters River. The discharge did not enter the drainage system.

The Board of Health received a complaint that grey water was discharging directly into the river. On May 6, 2019, the owner informed the DPW Assistant Director that he was not going to modify his drain that was discharging to the river. On May 9, 2019, the Board of Health took enforcement action by sending the owner a letter that gave him 14 days to pull a permit to tie the discharge into the existing septic system. On May 15, 2019, the owner filed a permit with the town to tie into the on-site septic system. On June 25, 2019, the Health Agent completed a final inspection that the discharge had been removed from the river and was tied into the septic system

Following this repair, the owner then submitted a sewer service connection application to DPW and connected to sewer on August 8, 2019. A final inspection was completed by DPW on the same date.

The volume of sewage removed from the discharge was conservatively estimated based on typical residential sewer use: 2.5 people per household (avg) x 70 gpd (avg) = 175-250 gpd.

Bellingham Catch Basin Cleaning Optimization Plan Schedule

To: Bellingham Stormwater Management Program Files

DATE: September 2019

Section 2.3.7.a.iii.2 of the 2016 Small MS4 General Permit requires that Bellingham optimize routine inspections, cleaning, and maintenance of catch basins to meet the following criteria:

- Prioritize inspection and maintenance for catch basins located near construction activities and clean catch basins more frequently if excessive sediment or debris loadings is found.
- Establish a catch basin cleaning schedule that ensures no catch basin is ever more than 50 percent full.

Historically, Town-owned catch basins have been cleaned by Town staff on a rotating basis. The Town has employed a GIS-based tablet application to track catch basin cleaning and inspections, including tracking depth to sediment and depth to the bottom of the basin, which can be used to calculate the percent full. During Permit Year 1, the Town intended to clean each basin at least once annually and record information in GIS. Due to being severely short staffed during a significant duration of the permit year reporting period and necessary catch basin cleaning equipment arriving later than anticipated, Bellingham was unable to achieve the anticipated Town-wide cleaning in Permit Year 1.

In Permit Year 2, the Town is focusing cleaning efforts on catch basins that were not cleaned in Permit Year 1 and is anticipating completing the Town-wide cleaning now that the Town is fully staffed. Additionally, the Town will continue to track sediment loading in catch basins during future cleanings. The data collected during future rounds of catch basin cleaning will be analyzed to determine which catch basins require more frequent cleaning, to help to prioritize cleaning locations, and to identify and address areas in Town that may experience excessive sediment or debris loading.

The catch basin cleaning optimization plan will be finalized in conjunction with development of the written Town-wide infrastructure operation and maintenance program due at the end of Permit Year 2 and updated as the catch basin cleaning program is implemented throughout the Permit Term.

Permit Year 2

(July 1, 2019 – June 30, 2020)

Year 2 Annual Report

Massachusetts Small MS4 General Permit

Reporting Period: July 1, 2019-June 30, 2020

****Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form****

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2019 and June 30, 2020 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization:

EPA NPDES Permit Number:

Primary MS4 Program Manager Contact Information

Name:

Title:

Street Address Line 1:

Street Address Line 2:

City:

State:

Zip Code:

Email:

Phone Number:

Stormwater Management Program (SWMP) Information

SWMP Location (web address):

Date SWMP was Last Updated:

If the SWMP is not available on the web please provide the physical address:

Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here: <https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state>

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/Pathogens
 ☐ Metals
 ☐ Nitrogen
 ☐ Phosphorus

Clear Impairments and TMDLs

Next, check off all requirements below that have been completed. **By checking each box you are certifying that you have completed that permit requirement fully.** If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.

Year 2 Requirements

- ☒ Completed Phase I of system mapping
☒ Developed a written catchment investigation procedure and added the procedure to the SWMP
☒ Developed written procedures to require the submission of as-built drawings and ensure the long term operation and maintenance of completed construction sites and added these procedures to the SWMP
☒ Enclosed or covered storage piles of salt or piles containing salt used for deicing or other purposes
☒ Developed written operations and maintenance procedures for parks and open space, buildings and facilities, and vehicles and equipment and added these procedures to the SWMP
☒ Developed an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment and added this inventory to the SWMP
☒ Completed a written program for MS4 infrastructure maintenance to reduce the discharge of pollutants
 Developed written SWPPPs, included in the SWMP, for all of the following permittee owned or
☐ operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above year 2 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

The Town and stormwater consultant performed a SWPPP inspection at the DPW facility on June 19, 2020. See COVID-19 impacts section. Due to the delay in inspection, the SWPPP was prepared in Permit Year 3. Additional evaluation of the Transfer Station was conducted in Permit Year 2 as part of the O&M Plan

development; it was determined that a SWPPP is also needed for this site. This plan will be finalized in Permit Year 3.

Annual Requirements

- ☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- ☒ Kept records relating to the permit available for 5 years and made available to the public
- ☒ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
 - ☐ This is not applicable because we do not have sanitary sewer
 - ☒ This is not applicable because we did not find any new SSOs
 - ☐ The updated SSO inventory is attached to the email submission
 - ☐ The updated SSO inventory can be found at the following website:
- ☒ Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- ☐ Provided training to employees involved in IDDE program within the reporting period
- ☒ All curbed roadways were swept at least once within the reporting period
- ☒ Updated outfall and interconnection inventory and priority ranking as needed

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above annual requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

Due to COVID-19 restrictions, the IDDE Training scheduled for Permit Year 2 had to be redesigned and recorded to be accessed on-demand in small groups without the trainer present. Training did not occur until August 2020 (17 DPW employees were trained).

Bacteria/ Pathogens (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

- ☒ Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- ☒ Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- ☒ Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

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

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- ☒ Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads
- ☒ Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Cleaned catch basins more frequently if inspection and maintenance activities indicated excessive sediment or debris loadings

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Charles River Watershed Phosphorus TMDL

- ☒ Completed Legal Analysis

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Optional: Use the box below to provide any additional information you would like to share as part of your self-assessment:

New Stormwater Utility. The Selectboard placed an article on the November 13, 2019 Town Meeting Warrant to establish a Stormwater Management Enterprise Fund. The Finance Committee held the public hearing and recommended the article on September 30, 2019. The Town meeting voted 116 for and 23 against approving the Stormwater Enterprise Fund. 2. The Selectboard discussed and approved an initial Stormwater fee schedule at their meeting on June 8, 2020. The Stormwater utility budget was approved at the June 22, 2020 Town Meeting. The Selectboard held a public hearing on acceptance of the Stormwater Utility Fee Regulations and revised Stormwater Fee Schedule as part of their meeting August 24, 2020. The first bills are expected to go out in October 2020. More information in this FAQ: https://www.bellinghamma.org/sites/g/files/vyhlf2796/f/uploads/stormwater_utility_handout_final.pdf

Charles River Phosphorus TMDL. During Permit Year 2, Bellingham completed construction of one stormwater best management practice (BMP) retrofit consisting of an infiltration basin and associated pre-treatment (sediment forebay) that manages 0.92 acres of impervious area, along with creation of landscaped park that reduces 0.31 acres of directly connected impervious cover, at the Town's Municipal Center located a

10 Mechanic Street, Bellingham, MA. Removed 1.4 lbs/year of phosphorus and just under 5,000 col/mL of bacteria from leaving the site and entering the Charles River. The work is a high-priority recommendation from work completed under a 604(b) grant prepared by Charles River Watershed Association (CRWA) and Nitsch Engineering as documented in the 2011 report titled “Subwatershed Management Plan for Bellingham, MA”. Previously, stormwater runoff from the Municipal Center parking area discharges without treatment to the Charles River Watershed which results in the discharge of pollutants including nutrients, pathogens, sediments, and metals. Installing the BMP and creating a green space that decreases paved area will reduce the concentrations of pollutants in stormwater runoff, reduce thermal impacts, and reduce peak runoff during small precipitation events. In addition, this project included public education and outreach through an unveiling ceremony and installation of educational signage on site that will provide visitors to the frequently visited municipal center with information on the Town’s stormwater management efforts.

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

☒ Yes

☐ No

If yes, describe below, including any relevant impairments or TMDLs:

Bellingham's NOI listed receiving waters based on the water quality limited waters within the Town's urbanized area that were included in the 2014 303(d) List. The Town has evaluated changes to the impairments and/or receiving waters based on the final 2016 303(d) List and enclosed the analysis herein. The enclosed document will be included in the Town's SWMP. Based on this review, the following impairments were added in the 2016 Integrated List of Waters:

-Mine Brook (MA72-14): E. Coli impairment was added

-Hopping Brook (MA72-35): E. Coli impairment was added and Hopping Brook was reclassified as a Category 5 waterbody.

During Permit Year 2, the Town has modified its outfall mapping due to outfall investigation field work. 9 outfalls were removed from the MS4 mapping and will be recategorized as a different structure (e.g., culvert, BMP inlet) or removed because they did not exist. These modifications did not add or change any receiving waterbodies or impairments/TMDLs listed in the NOI.

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed **during this reporting period:**

*Below, report on the educational messages completed **during this reporting period**. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.*

BMP: Education and Outreach to Residents (Multi-media Methods)

Message Description and Distribution Method:

-Educational material on stormwater pollution prevention for households including proper car maintenance and washing, disconnection of downspouts and rain barrel installation, proper lawn maintenance and use of fertilizer, and proper pet waste, dumping, and septic system management was displayed on the Town's website.

-Scoop the Poop postcard is at the Town Clerk's office where people register their dogs. Pet waste education is also hung in public buildings and displayed as a slide on local cable TV. A pet waste PSA is included once a year in the "Bellingham Bulletin" newspaper.

-The 2019 Annual Drinking Water Quality Report included information about stormwater's impact on water quality (posted June 2020):<https://www.bellinghamma.org/home/news/2019-annual-drinking-water-quality-report-now-available>.

-In May 2020 DPW announces outfall inspections and advertised contact information to report suspected illicit discharges: <https://www.bellinghamma.org/home/news/storm-drain-outfall-inspections-get-underway>

-The following education was conducted as part of the 319 Nonpoint Source Grant funded Phase 1 Implementation of Bellingham's Subwatershed Management Plan Project # 18-05/319:

1. 319 sign titled "Our Solution to Stormwater Pollution" posted on June 29, 2020, at Municipal Center
2. Educational event at 300th Anniversary Park Dedication & Town Birthday Party with CRWA held on September 29, 2019
3. Article titled "Residents Gather for 300th Anniversary Park Dedication & Town Birthday Party" posted in the Bellingham Bulletin on October 30, 2020
4. Press release issued by CRWA on 6/29/2020 titled "Greening Town Hall to Address the #1 Pollutant to Massachusetts Rivers"
5. Posters were created to be hung in public spaces

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Message Date(s):

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Education and Outreach to Industrial Facilities (Multi-media Methods)

Message Description and Distribution Method:

Educational material on stormwater pollution prevention for industrial sites including illicit discharge elimination, erosion prevention and sediment control, dust control, spill prevention, and salt storage is displayed on the Town's website: <https://www.bellinghamma.org/planning-board/pages/stormwater-management-best-practices>

Targeted Audience: Industrial Facilities

Responsible Department/Parties: Planning Board

Measurable Goal(s):

This messaging is available to all visitors of the Town's Planning Board Stormwater Management Best Practices webpage.

Message Date(s): Ongoing

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Education and Outreach to Businesses (Multi-media Methods)

Message Description and Distribution Method:

Educational material on stormwater pollution prevention for businesses including the importance and benefits of pollution prevention, source reduction, reuse/recycling, energy recovery, and best management practices for anti-icing to minimize sand and salt use is displayed on the Town's website: <https://www.bellinghamma.org/planning-board/pages/stormwater-management-best-practices>

Targeted Audience: Businesses, Institutions, and Commercial Facilities

Responsible Department/Parties: Planning Board

Measurable Goal(s):

This messaging is available to all visitors of the Town's Planning Board Stormwater Management Best Practices webpage.

Message Date(s): Ongoing

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

BMP: Education and Outreach to Developers (Multi-media Methods)

Message Description and Distribution Method:

Educational materials on stormwater pollution prevention for developers including site selection, low impact development practices, sediment and erosion control measures, and other methods to prevent stormwater pollution are displayed on the Town's website: <https://www.bellinghamma.org/planning-board/pages/stormwater-management-best-practices> Additionally, a handout entitled "10 Steps to Stormwater Pollution Prevention on Small Residential Construction Sites" is distributed by the Building Department to to all contractors seeking a building permit for all sites with an acre of disturbance or less illustrating how they too should maintain stormwater during construction.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

This messaging is available to all visitors of the Town's Planning Board Stormwater Management Best Practices webpage.

Message Date(s):

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ☐ No ☒

If yes, describe why the change was made:

[Add an Educational Message](#)

MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) **during this reporting period:**

The Stormwater Management Plan (SWMP) was posted for public review and made publicly available on the Town's website.

The Stormwater Management Program and associated current & future costs were discussed at multiple public meetings in Permit Year 2:

-November 13, 2019 Town Meeting (Establish Stormwater Management Enterprise Fund)

- September 30, 2019 Finance Committee meeting (recommended Stormwater fee)
- June 8, 2020 Selectboard discussed and approved an initial Stormwater fee schedule
- June 22, 2020 Selectboard stormwater utility budget approved

Was this opportunity different than what was proposed in your NOI? Yes ☐ No ☒

Describe any other public involvement or participation opportunities conducted **during this reporting period:**

- The Town offered discounted rain barrels for all residents and advertised this discount on the Town DPW's Facebook page and on the Town's website.
- The Town provides curbside Christmas tree collection for all residents one day in January.
- The Town's DPW held Yard Waste Curbside Pickup days on November 9 and November 16, 2019.
- The Town's annual Earth Day Charles River Cleanup was canceled due to COVID-19. Instead, the Town encouraged all residents to designate time to pick up trash throughout the month of April.
- The Household Hazardous Waste Day was held on July 11, 2020.

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

- ☐ This SSO section is NOT applicable because we DO NOT have sanitary sewer

*Below, report on the number of SSOs identified in the MS4 system and removed **during this reporting period.***

Number of SSOs identified:

Number of SSOs removed:

MS4 System Mapping

Below, check all that apply.

The following elements of the Phase I map have been completed:

- ☒ Outfalls and receiving waters
- ☒ Open channel conveyances
- ☐ Interconnections
- ☒ Municipally-owned stormwater treatment structures
- ☒ Waterbodies identified by name and indication of all use impairments
- ☒ Initial catchment delineations

Optional: Describe any additional progress you made on your map during this reporting period or provide additional status information regarding your map:

Phase I mapping reflects the location of Town drainage to the best of our knowledge and was developed from record drawings, field assessments, and institutional knowledge. The Town has no known interconnections to another MS4. The Town will update system mapping during ongoing fieldwork efforts.

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses.

- ☒ The outfall screening data is attached to the email submission
☐ The outfall screening data can be found at the following website:

*Below, report on the number of outfalls/interconnections screened **during this reporting period.***

Number of outfalls screened:

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

- ☐ The catchment investigation data is attached to the email submission
☐ The catchment investigation data can be found at the following website:

*Below, report on the number of catchment investigations completed **during this reporting period.***

Number of catchment investigations completed this reporting period:

*Below, report on the percent of catchments investigated **to date.***

Percent of total catchments investigated:

Optional: Provide any additional information for clarity regarding the catchment investigations below:

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

- ☐ The illicit discharge removal report is attached to the email submission
☐ The illicit discharge removal report can be found at the following website:

*Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed **during this reporting period.***

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed: gallons/day

*Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed **since the effective date of the permit (July 1, 2018)**.*

Total number of illicit discharges identified:

Total number of illicit discharges removed:

Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:

Employee Training

Describe the frequency and type of employee training conducted **during the reporting period:**

Town personnel completed a virtual IDDE Refresher training. Training did not occur until August 25, 2020 (17 DPW employees were trained).

MCM4: Construction Site Stormwater Runoff Control

*Below, report on the construction site plan reviews, inspections, and enforcement actions completed **during this reporting period**.*

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

Optional: Enter any additional information relevant to construction site plan reviews, inspections, and enforcement actions:

MCM5: Post-Construction Stormwater Management in New Development and Redevelopment

Ordinance or Regulatory Mechanism

Below, select the option that describes your ordinance or regulatory mechanism progress.

- ☐ Bylaw, ordinance, or regulations are updated and adopted consistent with permit requirements
- ☐ Bylaw, ordinance, or regulations are updated consistent with permit requirements but are not yet adopted
- ☒ Bylaw, ordinance, or regulations have not been updated or adopted

As-built Drawings

Describe the measures the MS4 has utilized to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites:

This requirement has been met through the adoption of Section 7 of the Planning Board's Procedural Regulations and the Planning Board's As-Built Policy, which requires the submission of as-built drawings and an operations and maintenance plan for permanent stormwater management systems. The September 2016 Planning Board As-Built Policy Handbook and Certificate are here: <https://www.bellinghamma.org/planning-board/pages/built-policy-handbook-certificate>

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

Preparation for the Street Design and Parking Lots Report has not yet begun as this requirement is due in Permit Year 4.

Green Infrastructure Report

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

Preparation for the Green Infrastructure Report has not yet begun as this requirement is due in Permit Year 4.

Retrofit Properties Inventory

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

Preparation for the Retrofit Properties Inventory has not yet begun as this requirement is due in Permit Year 4.

Catch Basin Cleaning

*Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins **during this reporting period**.*

Number of catch basins inspected:

Number of catch basins cleaned:

Total volume or mass of material removed from all catch basins:

Below, report on the total number of catch basins in the MS4 system.

Total number of catch basins:

If applicable:

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

Not applicable during this permit year. The Town tracks catch basins cleaning and inspections using a GIS-based tablet application. The tracking form includes depth measurements that can be used to calculate percent full. Therefore, the Town can complete targeted catch basin cleaning to reduce instances of excessive sediment loading. However, DPW staff were reduced during the COVID-19 pandemic, which impaired the Town's ability to complete catch basin cleaning. Cleaning has been ongoing since Spring 2019 and increased cleaning quantities have been reported for Permit Year 2. The Stormwater Utility will provide the funds needed to improve this program.

Street Sweeping

*Report on street sweeping completed **during this reporting period** using one of the three metrics below.*

☒ Number of miles cleaned:

☐ Volume of material removed:

☐ Weight of material removed:

O&M Procedures and Inventory of Permittee-Owned Properties

Below, check all that apply.

The following permittee-owned properties have been inventoried:

- ☒ Parks and open spaces
- ☒ Buildings and facilities
- ☒ Vehicles and equipment

The following O&M procedures for permittee-owned properties have been completed:

- ☒ Parks and open spaces
- ☒ Buildings and facilities
- ☒ Vehicles and equipment

Stormwater Pollution Prevention Plan (SWPPP)

*Below, report on the number of site inspections for facilities that require a SWPPP completed **during this reporting period**.*

Number of site inspections completed:

Describe any corrective actions taken at a facility with a SWPPP:

Additional Information**Monitoring or Study Results**

Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.

- ☒ Not applicable
- ☐ The results from additional reports or studies are attached to the email submission
- ☐ The results from additional reports or studies can be found at the following website(s):

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

Additional Information

Optional: Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above:

Updates to the stormwater regulations were planned for Permit Year 2, however due to delay in the MA Stormwater Handbook updates and the Small MS4 General Permit revisions, the Town plans to complete these updates in Permit Year 3.

The Town has also developed portions of a draft Charles River Phosphorus Control Plan, including a legal analysis and an evaluation of life-cycle costs for various phosphorus reduction practices. The Town has developed a credit policy for the Stormwater Utility that will incentivize phosphorus reduction on private property.

COVID-19 Impacts

Optional: If any of the above year 2 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

All public meetings for the stormwater utility fee after March 2020 were conducted with Zoom.

The DPW site inspection was delayed due to COVID-19 safety restrictions; therefor the SWPPP was prepared in Permit Year 3.

DPW staff were reduced during the COVID-19 pandemic, which impaired the Town's ability to complete catch basin cleaning.

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 3 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

- Inspect all outfalls/ interconnections (excluding Problem and Excluded outfalls) for the presence of dry weather flow
- Complete follow-up ranking as dry weather screening becomes available

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all uncurbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary

Provide any additional details on activities planned for permit year 3 below:

The Town acknowledges the General Permit Year 3 requirements and will complete as many activities as possible based on funding and staff availability.

Part V: Certification of Small MS4 Annual Report 2020**40 CFR 144.32(d) Certification**

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 gather and evaluate 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, I certify that 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.

Name:

Donald DiMartino

Title:

DPW Director

Signature:



Date:

9/28/20

[Signatory may be a duly authorized representative]

Note: When prompted during signing, save the document under a new file name.

Annual Report Submission

Please submit the form electronically via email to both EPA and MassDEP by clicking on one of the links below or using the email addresses listed below. Please ensure that all required attachments are included in the email and not attached to this PDF.

EPA: stormwater.reports@epa.govMassDEP: laura.schifman@mass.gov**Paper Signature:**

If you did not sign electronically above, you can print the signature page by clicking the button below.

Print Signature Page

Optional: If you did not sign electronically above, you may lock the form by clicking the "Lock Form" button below which will prompt you to save the locked version of the form. Save this locked version under a new file name.

Lock Form

Summary of Bellingham's TMDLs and Impaired Waters^{1, 2, 3}



Receiving Waterbody	2014 Category	2014 Water Quality Impairments ⁴	2016 Category	2016 Water Quality Impairments ⁴	Applicable General Permit Section	Change to Permit Requirements
Arnolds Brook (MA51-32)	5	E. Coli	5	E. Coli	Appendix H, Section III - Pathogens	None
Beaver Brook (MA72-12)	5	E. Coli	5	E. Coli	Appendix H, Section III - Pathogens	None
Peters River (MA51-18)	5	E. Coli Copper Lead	5	E. Coli Copper Lead	Appendix H, Section III - Pathogens Appendix H, Section V - Solids	None
Beaver Pond (MA72004)	4a		4a			None
Charles River (MA72-04)	5	Other Flow Regime Alterations Chlordane DDT Fishes Bioassessments Mercury in Fish Tissue	5	Flow Regime Modifications Chlordane in Fish Tissue DDT in Fish Tissue Fishes Bioassessments Mercury in Fish Tissue		None
Charles River ⁵ (MA72-03)	5	DDT	5	DDT in Fish Tissue		None
Jenks Reservoir (MA51075)	4c	Non-Native Aquatic Plants	4c	Non-Native Aquatic Plants		None
Mine Brook ⁵ (MA72-14)	5	Habitat Assessment (Streams) Water Temperature	5	Habitat Assessment Temperature <i>E. Coli</i>	Appendix H, Section III - Pathogens	Requirements of Appendix H, Section III - Pathogens apply to this segment
Hopping Brook (MA72-35)	2		<i>5</i>	<i>E. Coli</i>	Appendix H, Section III - Pathogens	Requirements of Appendix H, Section III - Pathogens apply to this segment
Silver Lake (MA51150)	4c	Non-Native Aquatic Plants	4c	Non-Native Aquatic Plants		None
Lake Hiawatha (MA51062)	3		3			None
TMDL for Pathogens within the Charles River Watershed					Appendix F, Section A.III - Bacteria and Pathogen TMDL	None
Final TMDL for Nutrients in the Lower Charles River Basin					Appendix F, Section A.I - Charles River Watershed Phosphorus TMDL	None
TMDL for Nutrients in the Upper/Middle Charles River					Appendix F, Section A.I - Charles River Watershed Phosphorus TMDL	None

¹TMDLs associated with major rivers may apply to additional waterbodies within the watershed.

²Any TMDL or impairments related to nutrients (nitrogen and phosphorus) apply to all receiving waterbodies within the watershed.

³Impairments in *blue* were added in the 2016 Integrated List of Waters.

⁴Impairments *without* an approved TMDL as of July 1, 2018. Note that some impairments have been renamed between 2014 and 2016 Integrated List of Waters: Other Flow Regime Alterations -> Flow Regime Modifications; Chlordane -> Chlordane in Fish Tissue; DDT -> DDT in Fish Tissue; Fishes Bioassessments -> Fish Bioassessments; Habitat Assessment (Streams) -> Habitat Assessment; Water Temperature -> Temperature

⁵Waterbody does not receive direct discharge from the MS4. MS4 discharges to a tributary/wetland of the waterbody. Included for reference only.

Outfall Sampling Results Summary - Bellingham, MA

Location				Laboratory Analysis ⁽¹⁾							Water Quality Meter/Test Kit ⁽¹⁾					
Date	Outfall ID	Street	Sample Location	Ammonia	Surfactants	E. coli	Total Copper	Total Lead	Fecal Coliform	Total Phosphorus	Temperature	Salinity	Conductivity	Chlorine	Dissolved Oxygen	Ammonia
				mg/L	mg/L	col/100mL			col/100mL	mg/L	°F	ppt	µS/cm ⁽²⁾	mg/L	mg/L	mg/L
5/14/2020	15-6	Irene Court	Outfall	0.168	0.090	2.0	-	-	-	-	47.2	0.53	724	0.00	-	0.00
5/14/2020	16-15	Debra Lane	Upstream CB	ND	ND	ND	-	-	-	0.035	49.8	0.1	152	0.00	-	0.00
5/28/2020	18-3	Dorothy Avenue	Outfall	ND	ND	2.0	-	-	-	-	57.0	0.38	609	0.07	-	0.00
5/14/2020	19-9	Gail Drive	Upstream CB	ND	ND	ND	-	-	-	-	53.0	0.05	84	0.04	-	0.00
5/27/2020	21-12	Littletree Lane	Outfall	ND	ND	5.0	-	-	-	-	60.2	0.23	394	0.00	-	0.25
5/14/2020	21-15	Lizotte Drive	Outfall	3.710	0.090	3.0	-	-	-	-	58.0	0.62	1,051	0.10	-	1.00
5/27/2020	21-9	Fox Run Road	Outfall	ND	ND	ND	-	-	-	-	64.0	0.32	564	0.04	-	0.00
5/20/2020	22-3	Park Street	Outfall	0.050	ND	74.3	-	-	-	-	58.8	0.31	519	0.50	-	0.00
5/14/2020	23-7	Harpin Street	Outfall	0.107	0.070	ND	-	-	-	-	57.5	0.4	638	0.11	-	0.00
5/27/2020	23-8	Bellstone Drive	Outfall	0.091	ND	44.0	-	-	-	-	63.0	0.08	149	0.10	-	0.00
5/20/2020	24-2	Locust Street	Upstream CB	ND	ND	ND	-	-	-	-	61.5	0.08	149	0.15	-	0.00
5/13/2020	25-2	Summer Street	Outfall	0.130	0.060	11.0	ND	ND	-	-	49.8	-	451	0.01	9.98	0.00
5/13/2020	25-22	Orchard Street	Upstream CB	0.135	ND	ND	ND	ND	-	-	47.1	1.01	1,343	0.03	12.36	0.00

REPORTING LIMITS

Ammonia = 0.075 mg/L
Surfactants = 0.050 mg/L
E. coli = 2.0 col/100mL
Fecal Coliform = 2.0 col/100mL
Total Phosphorus = 0.010 mg/L
"ND" = none detected

COLOR KEY (benchmarks are bold)														
	Ammonia	Surfactants	E. coli	Copper	Lead	Fecal Coliform	Total Phosphorus	Temperature ^(a)	Salinity	Conductivity	Chlorine	Dissolved Oxygen ^(a)	Ammonia	
	mg/L	mg/L	CFU/100 mL	mg/L	mg/L	CFU/100 mL	mg/L	°F	ppt	µS/cm	mg/L	mg/L	mg/L	
	≥ 6.000	≥ 1.000	≥ 10,000	0.013	0.065	≥ 10,000	≥ 0.908		≥ 1.00	≥ 2,000	≥ 1.00		≥ 6.0	
	≥ 1.000	≥ 0.500	≥ 1,260	1.176	1.169	≥ 1,000	≥ 0.466		≥ 0.75	≥ 1,500	≥ 0.30		≥ 1.0	
	≥ 0.500	≥ 0.250	≥ 235	≥ 0.009	≥ 0.003	≥ 200	≥ 0.024	≥ 83.0	≥ 0.50	≥ 1,000	≥ 0.02	< 5.0	≥ 0.5	
	< 0.500	< 0.250	< 235	< 0.009	< 0.0025	< 200	< 0.024	< 83.0	< 0.50	< 1,000	< 0.02	≥ 5.0	< 0.5	

Notes for Results Summary:

- (1) "-" means no analysis was completed
(2) µS/cm is equivalent to µmhos/cm

^(a) Arnolds Brook and Peters River are Class B cold waters. Therefore, benchmarks for outfalls discharging to these receiving waters (outfalls 21-15, 25-2, 25-22) should be: Temperature ≥ 68 oF, Dissolved Oxygen < 6.0 mg/L

Benchmark Sources:

Ammonia, Surfactants, and Chlorine - *EPA General Permit for Stormwater Discharges from Small MS4 in Massachusetts*
E. coli, Temperature, and Dissolved Oxygen - *314 CMR 4.00: Massachusetts Surface Water Quality Standards*
Total Phosphorus - *EPA Ambient Water Quality Criteria Recommendations for Rivers and Streams in Nutrient Ecoregion XIV*
Fecal coliform - *MWRA Water Quality Standards for Class B and Class SB Waters*
Salinity - *EPA Volunteer Estuary Monitoring: A Methods Manual*
Conductivity - *Center for Watershed Protection Illicit discharge Detection and Elimination Guidance Manual*

Phase I MS4 System Map

Summary of Bellingham's TMDLs and Impaired Waters 1, 2, 3



Receiving Waterbody	2014 Category	2014 Water Quality Impairments 4	2016 Category	2016 Water Quality Impairments 4	Applicable General Permit Section	Change to Permit Requirements
Arnolds Brook (MA51-32)	5	E. Coli	5	E. Coli	Appendix H, Section III - Pathogens	None
Beaver Brook (MA72-12)	5	E. Coli	5	E. Coli	Appendix H, Section III - Pathogens	None
Peters River (MA51-18)	5	Copper Lead	5	Copper Lead	Appendix H, Section III - Pathogens Appendix H, Section V - Solids	None
Beaver Pond (MA72004)	4a		4a			None
Charles River (MA72-04)	5	Other Flow Regime Alterations Chlordane DDT Fishes Bioassessments Mercury in Fish Tissue	5	Flow Regime Modifications Chlordane in Fish Tissue DDT in Fish Tissue Fishes Bioassessments Mercury in Fish Tissue		None
Charles River5 (MA72-03)	5	DDT	5	DDT in Fish Tissue		None
Jenks Reservoir (MA51075)	4c	Non-Native Aquatic Plants	4c	Non-Native Aquatic Plants		None
Mine Brook5 (MA72-14)	5	Habitat Assessment (Streams) Water Temperature	5	Habitat Assessment Temperature E. Coli	Appendix H, Section III - Pathogens	Requirements of Appendix H, Section III - Pathogens apply to this segment
Hopping Brook (MA72-35)	2		5	E. Coli	Appendix H, Section III - Pathogens	Requirements of Appendix H, Section III - Pathogens apply to this segment
Silver Lake (MA51150)	4c	Non-Native Aquatic Plants	4c	Non-Native Aquatic Plants		None
Lake Hiawatha (MA51062)	3		3			None
TMDL for Pathogens within the Charles River Watershed					Appendix F, Section A.III - Bacteria and Pathogen TMDL	None
Final TMDL for Nutrients in the Lower Charles River Basin					Appendix F, Section A.I - Charles River Watershed Phosphorus TMDL Appendix F, Section A.I - Charles River Watershed Phosphorus TMDL	None
TMDL for Nutrients in the Upper/Middle Charles River						None

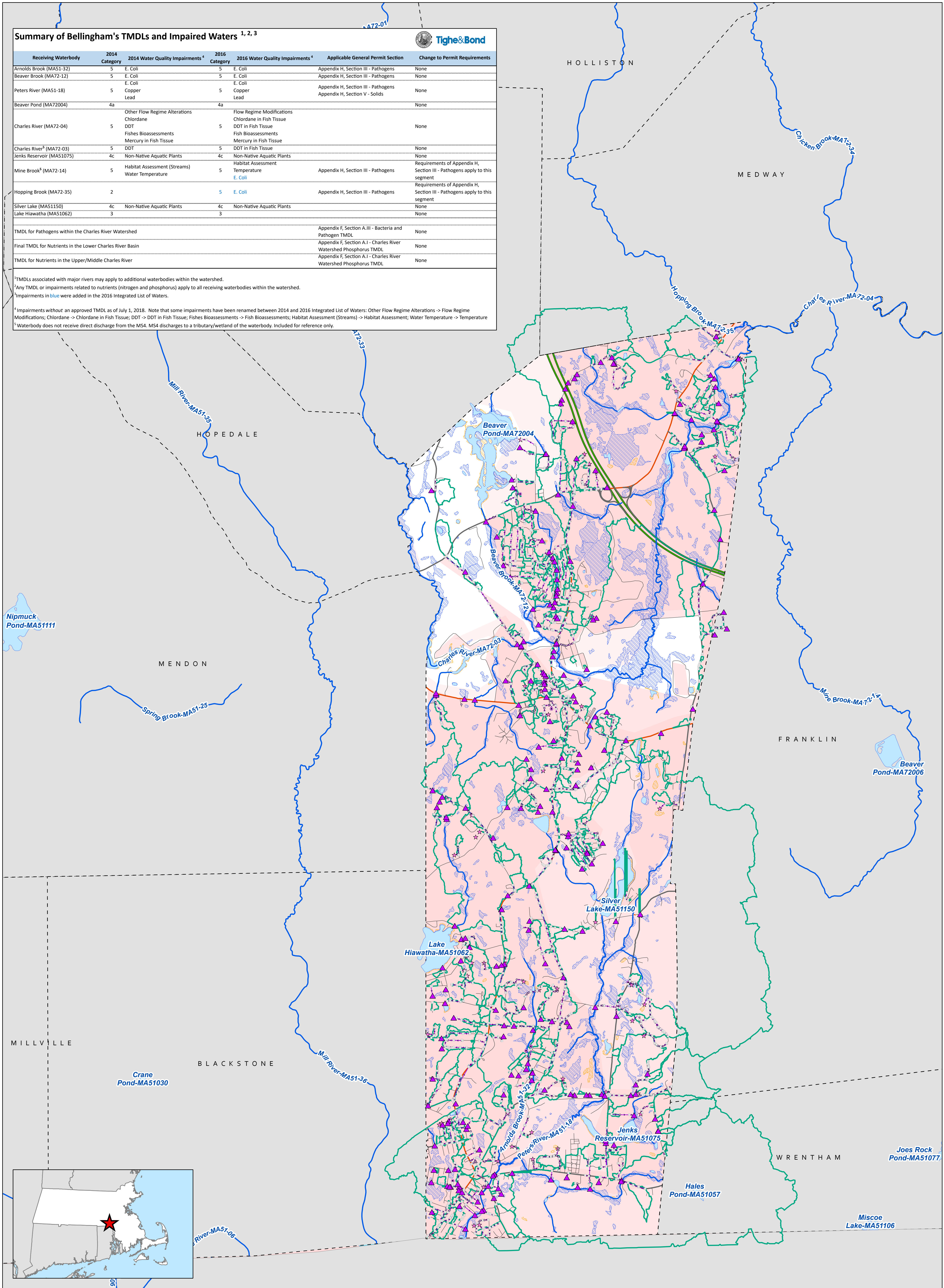
1TMDLs associated with major rivers may apply to additional waterbodies within the watershed.

2Any TMDL or impairments related to nutrients (nitrogen and phosphorus) apply to all receiving waterbodies within the watershed.

3Impairments in blue were added in the 2016 Integrated List of Waters.

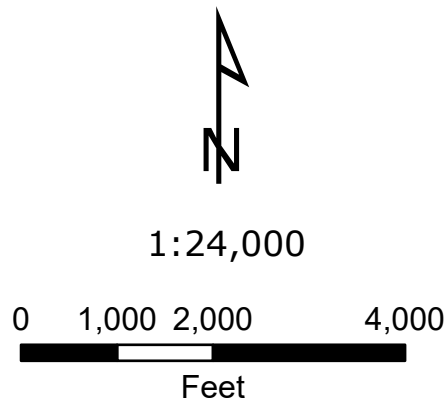
4Impairments without an approved TMDL as of July 1, 2018. Note that some impairments have been renamed between 2014 and 2016 Integrated List of Waters: Other Flow Regime Alterations -> Flow Regime Modifications; Chlordane -> Chlordane in Fish Tissue; DDT -> DDT in Fish Tissue; Fishes Bioassessments -> Fish Bioassessments; Habitat Assessment (Streams) -> Habitat Assessment; Water Temperature -> Temperature

5Waterbody does not receive direct discharge from the MS4. MS4 discharges to a tributary/wetland of the waterbody. Included for reference only.



LEGEND

- ★ BMP Point
- Manhole
- Drain Inlet
- Catch Basin
- ▲ Outfall
- ★ Open Channel Point
- Drain Pipe
- Culvert
- Outfall Catchment
- MassDEP Open Water
- MassDEP Inland Wetlands
- Stream/Intermittent Stream
- Public Surface Water Supply (PSWS)
- Water Bodies
- Town Boundary
- Urbanized Area 2010
- Urbanized Area 2000
- Limited Access Highway
- Multi-Lane Highway, NOT Limited Access
- Other Numbered Highway
- Major Road - Collector
- Minor Street or Road



PHASE 1 MAPPING

Permit Year 2 Annual Report
Bellingham, Massachusetts

November 2020



Permit Year 3

(July 1, 2020 – June 30, 2021)

Permit Year 4

(July 1, 2021 – June 30, 2022)

Permit Year 5

(July 1, 2022 – June 30, 2023)

Permit Year 6

(July 1, 2023 – June 30, 2024)