



# Stormwater Management Plan

Town of Bedford

June 2019

*This Stormwater Management Plan is based on EPA's Template and is designed to be updated annually based on progress implementing the Town's Stormwater Management Program. Tighe & Bond has added language and information and provided corrected deadlines for requirements where EPA's Template was in error. Page numbers have not been noted in the Table of Contents below because they are anticipated to change annually.*

## **FY 2019-2024 Small MS4 Permit 5-Year Workplan**

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- Stormwater Management Program (SWMP)
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J:\B\B0782 Bedford Stormwater Assistance\002 NPDES Phase II MS4 GP Eng Services\SWMP\SWMP\SWMP TOC rev1.docx

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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"/>					
Retain all records and documentation		Ongoing		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Annual Report		Annually by Sept 30			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Prepare Stormwater Management Plan		June 30, 2019 and update annually		<input checked="" type="checkbox"/>	<input 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: Distribute and display educational stormwater materials for <u>Residents</u> at Bedford Day, including pet waste bags with information on proper pet waste disposal		Distribute/display educational information twice within the permit term at least one year apart by June 30, 2023		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MCM 1: Maintain stormwater website with educational and outreach materials for <u>Businesses, Institutions and Commercial Facilities</u> , including lawn maintenance and proper management of parking lots		Distribute two messages on website at least one year apart by June 30, 2023			<input type="checkbox"/>		<input type="checkbox"/>		
MCM 1: Distribute brochures to <u>Developers</u> including erosion control and LID design principles		Distribute two messages at least one year apart by June 30, 2023			<input type="checkbox"/>		<input type="checkbox"/>		
MCM 1: Develop and distribute a pamphlet to <u>Industrial Facilities</u> emphasizing pollution prevention techniques		Distribute two messages at least one year apart by June 30, 2023			<input type="checkbox"/>		<input type="checkbox"/>		



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MCM 1: Public Education (cont.)	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5
<b>Impaired Waters/TMDL Requirement:</b> Seasonal Message to residents on stormwater topics of significance. Annual spring messages will encourage proper disposal of grass clippings and the use of slow release and phosphorus-free fertilizers. Annual summer messages will encourage proper pet waste management, noting Article 43 of the Town of Bedford Bylaws. Annual fall messages will encourage proper disposal of leaf litter.	Distribute three messages per year each year, one in the spring, summer and fall	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Impaired Waters/TMDL Requirement:</b> Seasonal Message to businesses, institutions and commercial facilities on stormwater topics of significance. Annual spring messages will encourage proper disposal of grass clippings and the use of slow release and phosphorus-free fertilizers. Annual summer messages will encourage proper pet waste management, noting Article 43 of the Town of Bedford Bylaws. Annual fall messages will encourage proper disposal of leaf litter.	Distribute three messages per year each year, one in the spring, summer and fall	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Impaired Waters/TMDL Requirement:</b> Distribute educational materials to dog owners instructing proper management of pet waste at the time of issuance or renewal of a dog license, or other appropriate time.	Ongoing requirement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Impaired Waters/TMDL Requirement:</b> Distribute educational materials to owners of septic systems within catchment areas of the Concord River, Shawsheen River, Elm Brook, Vine Brook and Spring Brook, on proper septic system maintenance.	Ongoing requirement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<b>MCM 2: Public Participation</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Comply with State Public Notice Requirement (MGL Ch 30A, Sections 18-25) for all public involvement and participation	Ongoing	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Make Annual reports and SWMP available to the public in person and online	Ongoing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Maintain hotline/email address for reporting problems and violations	Ongoing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assist with volunteer clean-ups and provide support as needed	Ongoing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>MCM 3: Illicit Discharge Detection and Elimination</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Adopt bylaw prohibiting illicit discharges and authorizing investigation, repair and enforcement	Due on May 1, 2008 as part of 2003 Permit	<input checked="" type="checkbox"/>				
Identify all known SSOs that occurred during last five years	June 30, 2019 and update annually thereafter	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notify EPA / DEP of SSO orally in 24hrs and in writing in 5 days	Ongoing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notify responsible party immediately upon identification of illicit discharge or illegal connection	Ongoing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<b>MCM 3: Illicit Discharge Detection and Elimination (cont.)</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Eliminate known illicit discharges or set expeditious schedule in 60 days	Ongoing	<input checked="" type="checkbox"/>	<input 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 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 type="checkbox"/>			
Annually train IDDE staff	Annually by June 30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<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		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finish "Phase I" system mapping requirements, including the following elements: - 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 as identified in the most recent EPA Approved Massachusetts Integrated List - Initial catchment delineation	June 30, 2020		<input 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"/>

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<b>MCM 4: Construction Site Erosion &amp; Sedimentation</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Bylaw for sediment, erosion, debris, litter and sanitary waste	Due on May 1, 2008 as part of 2003 Permit	<input checked="" type="checkbox"/>				
Written procedure for site plan review/inspection/enforcement	June 30, 2019	<input checked="" type="checkbox"/>				
Require contractors to manage proper disposal of building materials, concrete truck wash out, chemicals, litter and sanitary wastes	June 30, 2019	<input checked="" type="checkbox"/>				
<b>MCM 5: New Development and Redevelopment</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Bylaw meeting 2003 post-construction requirements	Due on May 1, 2008 as part of 2003 Permit	<input checked="" type="checkbox"/>				
<b>MCM 5:</b> Update post-construction stormwater bylaw (see permit for detailed list)  <b>Impaired Waters/TMDL Requirement:</b> Include a requirement that new development and redevelopment BMPs be optimized for phosphorus removal	June 30, 2020		<input type="checkbox"/>			
<b>Impaired Waters/TMDL Requirement:</b> Require stormwater management systems designed on commercial and industrial land use area draining to Elm Brook or the Shawsheen River (segment MA83-01) 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		<input type="checkbox"/>			

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<b>MCM 5: New Development and Redevelopment (cont.)</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Report evaluating street design, parking guidelines and related rules	June 30, 2022 and update 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 update annually thereafter				<input type="checkbox"/>	<input type="checkbox"/>
Require submission of as-built drawings for on-site stormwater control to ensure longterm operation and maintenance	June 30, 2020		<input type="checkbox"/>			
<b>MCM 6: Good Housekeeping</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Inventory permittee-owned parks/open space, buildings/facilities and vehicles/equipment	June 30, 2020 and update annually thereafter			<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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean catch basins per plan	Annually by June 30	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<b>MCM 6: Good Housekeeping (cont.)</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Sweep streets throughout Town twice per year, once in the spring and once in the fall, at a minimum.	Annually by June 30	<input type="checkbox"/>	<input 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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implement winter road maintenance program including road salt use optimization.	Develop by June 30, 2019 and implement every winter thereafter	<input checked="" type="checkbox"/>	<input 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		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cover or enclose salt piles	June 30, 2020 and implement continuously thereafter		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Concord River Phosphorus Impairment</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Complete a Phosphorus Source Identification Report (see permit for detailed list)	June 30, 2022				<input type="checkbox"/>	
Evaluate all properties identified in the retrofit inventory and the Phosphorus Source Identification Report that are within the Concord River catchment area, for structural BMP installation	June 30, 2023					<input type="checkbox"/>

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<b>Concord River Phosphorus Impairment (cont.)</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Track existing or installed structural BMPs and document the BMP type, total area treated, design storage volume and estimated phosphorus removed by mass in each annual report.	September 30, 2019 and annually thereafter		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other requirements for the Concord River Phosphorus Impairment have been included in previous sections of the checklist.						
<b>Bacteria Impairments (Concord River) and TMDL (Shawsheen River, Elm Brook, Vine Brook, Kiln Brook and Spring Brook)</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Requirements for Bacteria Impairments and TMDLs have been included in previous sections of the checklist.						
<b>Solids Impairments (Elm Brook and Shawsheen River)</b>	<b>Deadline</b>	<b>FY19 Permit Year 1</b>	<b>FY20 Permit Year 2</b>	<b>FY21 Permit Year 3</b>	<b>FY22 Permit Year 4</b>	<b>FY23 Permit Year 5</b>
Requirements for Solids Impairment have been included in previous sections of the checklist.						

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.



# **Stormwater Management Program (SWMP)**

Town of Bedford

314 Great Road      MA      01730

EPA NPDES Permit Number MAR 041028

# 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 David Manugian, Director of Public Works

Signature

*David Manugian*

Date

6/26/19

[Click Here for Revisions](#)

# Background

## Stormwater Regulation

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

## Permit Program Background

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

## Stormwater Management Program (SWMP)

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

## Town Specific MS4 Background (optional)

Attached in Appendix C.

# Small MS4 Authorization

The NOI was submitted on Sep 21, 2019

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

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

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Authorization to Discharge was granted on Dec 14, 2018

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

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

# Stormwater Management Program Team

## SWMP Team Coordinator

Name	Kristin Dowdy	Title	Environmental Engineer
Department	Department of Public Works		
Phone Number	781-275-7605 x4263	Email	kdowdy@bedfordma.gov
Responsibilities	Manage the Town of Bedford's Stormwater Management Program and compliance with the General Permit; Oversee the Department of Public Work's stormwater operations including public education and outreach, the IDDE Program, construction and post-construction stormwater management and the good housekeeping program.		

## SWMP Team

Name	Adrienne St. John	Title	Public Works Engineer
Department	Department of Public Works		
Phone Number	781-275-7605	Email	astjohn@bedfordma.gov
Responsibilities	Assist in managing the Town's Stormwater Management Program and the Department of Public Work's stormwater operations including public education and outreach, the IDDE Program, construction and post-construction stormwater management and the good housekeeping program.		

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Name	Chris Nelson	Title	GIS Analyst
Department	Department of Public Works		
Phone Number	781-275-7605 x4264	Email	cnelson@bedfordma.gov
Responsibilities	Oversee GIS tasks for Stormwater Program, including mapping stormwater system and using GIS to track and manage the Town's IDDE Program.		

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Name	David Manugian, PE	Title	Director of Public Works
Department	Department of Public Works		
Phone Number	781-275-7605 x4252	Email	dmanugian@bedfordma.gov
Responsibilities	Supervises stormwater program and Department of Public Works; assists in managing the		

Responsibilities

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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 the NOI and Attached in Appendix B.

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"/>	
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		<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"/>	
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Click here to lengthen table



# Eligibility: Endangered Species and Historic Properties

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

---

## Attachments:

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

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

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

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: Special Events/Festivals/Fairs**

**BMP Number (Optional)** \_\_\_\_\_

**Document Name and/or Web Address:**

**Description:**

Purchase give-away materials to distribute at Bedford Day, including pet waste bags with proper disposal information, and display boards with stormwater pollution education. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

**Targeted Audience:**

Residents

**Responsible Department/Parties:**

Department of Public Works and Town Clerk

**Measurable Goal(s):**

Distribute and display a minimum of two educational stormwater messages over the permit term spaced at least a year apart on Bedford Day. Annually distribute a minimum of 400 rolls of pet waste bags annually.

**Message Date(s):**

2018 (PY1), 2020 (PY3)

---

### **BMP: Web Page**

**BMP Number (Optional)** \_\_\_\_\_

**Document Name and/or Web Address:**

<https://www.bedfordma.gov/departments-of-public-works/pages/stormwater-management>

**Description:**

Maintain Town's stormwater website with educational information on topics significant to businesses, institutions and commercial facilities, including lawn maintenance and proper management of parking lots. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

**Targeted Audience:**

Businesses, institutions and commercial facilities

**Responsible Department/Parties:**

Department of Public Works and Conservation Commission

**Measurable Goal(s):**

Distribute a minimum of two educational stormwater messages over the permit term spaced at least a year apart. Track visitors to the website and aim to increase by 10% annually.

**Message Date(s):**

2020 (PY3), 2022 (PY5)

---

### **BMP: Brochures and Pamphlets**

**BMP Number (Optional)** \_\_\_\_\_

**Document Name and/or Web Address:**

**Description:**

Distribute brochures to developers on stormwater topics of significance, including erosion control and LID design principles. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

**Targeted Audience:**

**Responsible Department/Parties:**

**Measurable Goal(s):**

Distribute a minimum of two educational stormwater messages over the permit term spaced at least a year apart.

**Message Date(s):**

---

**BMP: Brochures and Pamphlets**

**BMP Number (Optional)**

**Document Name and/or Web Address:**

**Description:**

Develop and distribute an educational pamphlet emphasizing pollution prevention techniques. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

**Targeted Audience:**

**Responsible Department/Parties:**

**Measurable Goal(s):**

Distribute a minimum of two educational stormwater messages over the permit term spaced at least a year apart.

**Message Date(s):**

---

**BMP: N/A**

**BMP Number (Optional)**

**Document Name and/or Web Address:**

**Description:**

N/A

**Targeted Audience:**

**Responsible Department/Parties:**

**Measurable Goal(s):**  

N/A

**Message Date(s):**

---

**BMP: N/A**

**BMP Number (Optional)**

**Document Name and/or Web Address:**

**Description:**  

N/A

**Targeted Audience:**

**Responsible Department/Parties:**

**Measurable Goal(s):**

**Message Date(s):**

---

**BMP: N/A**

**BMP Number (Optional)**

**Document Name and/or Web Address:**

**Description:**  

N/A

**Targeted Audience:**

**Responsible Department/Parties:**

**Measurable Goal(s):**

**Message Date(s):**

---

**BMP: N/A**

**BMP Number (Optional)** \_\_\_\_\_

**Document Name and/or Web Address:**

**Description:**

N/A

**Targeted Audience:**

**Responsible Department/Parties:**

**Measurable Goal(s):**

**Message Date(s):**

---

Add BMP

## **MCM 2**

# **Public Involvement and Participation**

### **Permit Part 2.3.3**

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



### **BMP: Public Review of Stormwater Management Program**

**BMP Number (Optional)** \_\_\_\_\_

**Location of Plan and/or Web Address:** Department of Public Works and Town website (<https://www.bedfordma.gov/departments-of-public-works/pages/stormwater-management>)

**Responsible Department/Parties:** Department of Public Works

**Measurable Goal(s):**

Allow annual review of the Stormwater Management Plan and Annual Reports and make available on website.

---

### **BMP: Public Participation in Stormwater Management Program Development**

**BMP Number (Optional)** \_\_\_\_\_

**Description:**

Maintain hotline for reporting problems and violations

**Responsible Department/Parties:** Department of Public Works and Code Enforcement

**Measurable Goal(s):**

Provide contact information on website for public to report on stormwater issues. Track reported issues through work order system.

---

### **BMP: Public Participation**

**BMP Number (Optional)** \_\_\_\_\_

**Document Name and/or Web Address:** \_\_\_\_\_

**Description:**

Assist with volunteer clean-ups of roads, shorelines and generally throughout the Town. Support as needed.

**Responsible Department/Parties:** Department of Public Works

**Measurable Goal(s):**

Conduct a minimum of two (2) clean up activities per year.

---

Add BMP

# MCM 3

## Illicit Discharge Detection and Elimination (IDDE) Program

Permit Part 2.3.4

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

### Examples and Templates:

[IDDE Program Template and SOPs](#)

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

### **BMP: IDDE Legal Authority**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** (by May 1, 2008) ☐

**Ordinances Link or Reference:** General Bylaws Article 55: Stormwater Management

**Department Responsible for Enforcement:** Stormwater Agency (Selectmen and Department of Public Works)

---

### **BMP: Sanitary Sewer Overflow (SSO) Inventory**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** (by year 1) ☒

**Document Name and/or Web Address:** SSO Inventory included in Appendix F.

**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:** DPW Operations

**Measurable Goal(s):**

Develop SSO Inventory by June 20, 2019, in accordance with the permit conditions. 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)** \_\_\_\_\_

**Phase I Completed** ☐  
(by year 2)

**Phase II Completed** ☐  
(by year 10)

**Document Location and/or Web Address:** GIS Coordinator's Computer

**Description:**

Revise completed map to meet permit requirements.

**Responsible Department/Parties:** Department of Public Works, Engineering and GIS

**Measurable Goal(s):**

By June 30, 2020, complete Phase I: update map and include 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)** \_\_\_\_\_

**Written Document Completed** (by year 1) ☒

**Document Name and/or Web Address:** Written IDDE Program located at the Department of Public Works

**Description:**

Create written IDDE program. Complete outfall/interconnection inventory and initial ranking, dry weather outfall screening and sampling, and catchment investigations. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

**Responsible Department/Parties:** Department of Public Works and Conservation Commission

**Measurable Goal(s):**

By June 30, 2019, develop written IDDE program and complete outfall/interconnection and initial ranking. Annually update the written IDDE program, and update the 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.

**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)** \_\_\_\_\_**Description:**

Train employees on IDDE implementation.

**Responsible Department/Parties:** DPW Operations**Measurable Goal(s):**

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

---

**BMP: N/A****BMP Number (Optional)** \_\_\_\_\_**Completed** ☐**Document Name and/or Web Address:** \_\_\_\_\_**Description:**

N/A

**Responsible Department/Parties:** \_\_\_\_\_**Measurable Goal(s):**

Add BMP



# MCM 4

## Construction Site Stormwater Runoff Control

### Permit Part 2.3.5

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

#### **Examples and Templates:**

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

**BMP: Sediment and Erosion Control Ordinance**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** (by May 1, 2008) ☐

**Ordinances Link or Reference:** General Bylaws Article 55 Stormwater Management

**Department Responsible for Enforcement:** Stormwater Agency (Department of Public Works)

---

**BMP: Site Plan Review Procedures**

**BMP Number (Optional)** \_\_\_\_\_

**Written procedures completed** (by year 1) ☒

**Document Name and/or Web Address:** \_\_\_\_\_

**Description:**

Develop and implement written procedures for site plan review per Part 2.3.5 of the General Permit.

**Responsible Department/Parties:** Department of Public Works, Engineering, Planning Department, Zoning E

**Measurable Goal(s):**

Review current procedures and, if necessary, modify by June 30, 2019.

---

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

**BMP Number (Optional)** \_\_\_\_\_

**Completed** (by year 1) ☒

**Document Name and/or Web Address:** \_\_\_\_\_

**Description:**

Develop and implement written procedures for site inspection and enforcement of sediment and erosion control measures per Part 2.3.5 of the General Permit.

**Responsible Department/Parties:** Department of Public Works, Engineering and Conservation Commission

**Measurable Goal(s):**

Review current procedures and, if necessary, modify by June 30, 2019.

---

**BMP: Waste Control**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** ☐

**Document Name and/or Web Address:**

**Description:**

Require contractors to manage proper disposal of building materials, concrete truck wash out, chemicals, litter and sanitary waste.

**Responsible Department/Parties:** Code Enforcement

**Measurable Goal(s):**

Implement waste control requirements for contractors by June 30, 2019.

---

Add BMP

# **MCM 5**

## **Post Construction Stormwater Management in New Development and Redevelopment**

### **Permit Part 2.3.6**

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

#### **Examples and Templates:**

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

### **BMP: Post-Construction Ordinance**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** (by year 2) ☐

**Town Ordinances Link or Reference:**

**Department Responsible for Enforcement:**

---

### **BMP: Street Design and Parking Lot Guidelines Report**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** (by year 4) ☐

**Document Name and/or Web Address:**

**Description:**

**Responsible Department/Parties:**

**Measurable Goal(s):**

---

### **BMP: Green Infrastructure Report**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** (by year 4) ☐

**Document Name and/or Web Address:**

**Description:**

**Responsible Department/Parties:**

**Measurable Goal(s):**

## **BMP: List of Municipal Retrofit Opportunities**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** (by year 4) ☐

**Document Name and/or Web Address:** \_\_\_\_\_

**Description:**

By June 30, 2022, develop a 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. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

**Responsible Department/Parties:** Department of Public Works, Engineering, Planning Department and Conservation

**Measurable Goal(s):**

Complete report no later than four (4) years after permit effective date. Beginning in Year 5 keep a running list of at least five (5) retrofit sites and report annually on retrofitted properties. Report reduction of impervious area in Annual Report and aim to remove 1,000 square feet of impervious area per year.

---

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

**BMP Number (Optional)** \_\_\_\_\_

**Completed** ☐

**Document Name and/or Web Address:** \_\_\_\_\_

**Description:**

Establish procedures to require submission of as-built drawings and ensure long term operational and maintenance of stormwater controls.

**Responsible Department/Parties:** Department of Public Works, Planning, Code Enforcement and Conservation

**Measurable Goal(s):**

By June 30, 2020, require submission of as-built plans for completed projects.

---

Add BMP

# MCM 6

## Good Housekeeping and Pollution Prevention for Permittee Owned Operations

Permit Part 2.3.7

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

### **Examples and Templates:**

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

## PERMITTEE OWNED FACILITIES

### BMP: Parks and Open Spaces Operations and Maintenance Procedures

BMP Number (Optional) \_\_\_\_\_

Written Document Completed (by year 2) ☐

Document Name and/or Web Address:

**Description:**

By June 30, 2020, create inventory and develop written Operations & Maintenance procedures for all Town-owned parks and open spaces. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

**Responsible Department/Parties:** Department of Public Works and Recreation Department

**Measurable Goal(s):**

Complete and implement within 2 years of permit effective date. Update inventory annually.

**Properties List (Optional):**

---

### BMP: Buildings and Facilities Operations and Maintenance Procedures

BMP Number (Optional) \_\_\_\_\_

Written Document Completed (by year 2) ☐

Document Name and/or Web Address:

**Description:**

By June 30, 2020, create inventory and develop written Operations & Maintenance procedures for all Town-owned buildings and facilities.

**Responsible Department/Parties:** Department of Public Works

**Measurable Goal(s):**

Complete and implement within 2 years of permit effective date. Update inventory annually.

**Properties List (Optional):**

---

### BMP: Vehicles and Equipment Operations and Maintenance Procedures

BMP Number (Optional) \_\_\_\_\_

Written Document Completed (by year 2) ☐



**Document Name and/or Web Address:**

**Description:**

By June 30, 2020, create inventory and develop written Operations & Maintenance procedures for all Town-owned vehicles and equipment.

**Responsible Department/Parties:** Department of Public Works

**Measurable Goal(s):**

Complete and implement within 2 years of permit effective date. Update inventory annually.

**Properties List (Optional):**

---

## INFRASTRUCTURE

### BMP: Infrastructure Operations and Maintenance Procedures

**BMP Number (Optional)** \_\_\_\_\_

**Written Procedure Completed (by year 2)** ☐

**Document Name and/or Web Address:**

**Description:**

By June 30, 2020, establish and implement program for repair and rehabilitation of MS4 infrastructure. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

**Responsible Department/Parties:** Department of Public Works, Engineering and Highway Departments

**Measurable Goal(s):**

Establish written program and implement within 2 years of permit effective date. Town's goal is to repair a minimum of ten (10) failing catch basins annually.

---

### BMP: Catch Basin Cleaning Program

**BMP Number (Optional)** \_\_\_\_\_

**Written Procedure Completed (by year 1)** ☒

**Document Name and/or Web Address:**

A hard copy of the Catch Basin Cleaning Program is available at the DPW in the Memo to File Re: Stormwater Management Plan - Good Housekeeping Requirements for MS4 Permit.

**Description:**

By June 30 2019, begin to improve procedures to ensure that each catch basin is no more than 50% full. Formalize in Town-wide Operations & Maintenance Plan by June 30, 2020. Implement catch basin cleaning based on developed schedule and procedures. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

**Responsible Department/Parties:** DPW Operations

**Measurable Goal(s):**

Clean catch basins based on established schedule. Report number of catch basins cleaned and volume of material removed annually. Town's goal is to annually clean catch basins in critical areas, such as commercial districts and at the bottom of steep slopes.

---

**BMP: Street Sweeping Program**

**BMP Number (Optional)** \_\_\_\_\_

**Written Procedure Completed (by year 1)** ☒

**Document Name and/or Web Address:**

A hard copy of the Street Sweeping Program is available at the DPW in the Memo to File Re: Stormwater Management Plan - Good Housekeeping Requirements for MS4 Permit.

**Description:**

By June 30, 2019, implement procedures for street and parking lot sweeping. Per Appendix H requirements for discharges to a waterbody impaired for phosphorus and solids, Bedford will conduct street and parking lot sweeping twice per year at a minimum, once in the spring and at least once in the fall.

**Responsible Department/Parties:** DPW Operations

**Measurable Goal(s):**

Sweep all streets and Town-owned parking lots in accordance with the requirements of the General Permit. Annually track number of miles cleaned or the volume or mass of material removed.

---

**BMP: Winter Road Maintenance Program**

**BMP Number (Optional)** \_\_\_\_\_

**Written Procedure Completed (by year 1)** ☒

**Document Name and/or Web Address:**

A hard copy of the Winter Road Maintenance Program is available at the DPW in the Memo to File Re: Stormwater Management Plan - Good Housekeeping Requirements for MS4 Permit.

**Description:**

By June 30, 2019, establish and implement a program to minimize the use of road salt.

**Responsible Department/Parties:** DPW Operations

**Measurable Goal(s):**

Implement salt use optimization during the deicing season and evaluate at least one salt/chloride alternative for use in the municipality.

---

**BMP: Stormwater Treatment Structures Inspection and Maintenance Procedures**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** (by year 1) ☐

**Document Name and/or Web Address:**

A hard copy of the Stormwater Treatment Structures Inspection and Maintenance Procedures is available at the DPW in the Memo to File Re: Stormwater Management Plan - Good Housekeeping Requirements for MS4 Permit.

**Description:**

By June 30, 2019, establish and implement inspection and maintenance procedures and frequencies for stormwater treatment structures.

**Responsible Department/Parties:** DPW Operations

**Measurable Goal(s):**

Annually inspect and maintain stormwater treatment structures. Report on inspection and maintenance conducted in annual reports.

---

**BMP: SWPPP**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** (by year 2) ☐

**Document Name and/or Web Address:**

**Description:**

Create and implement SWPPPs for maintenance garages, transfer stations and other waste-handling facilities.

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

**Measurable Goal(s):**

Complete and implement SWPPPs by June 30, 2020.

---

**BMP: N/A**

**BMP Number (Optional)** \_\_\_\_\_

**Completed** ☐

**Document Name and/or Web Address:**

**Description:**

N/A

**Responsible Department/Parties:**

**Measurable Goal(s):**

---

Add BMP

# Annual Evaluation

## Year 1 Annual Report

**Document Name and/or Web Address:**

Insert link to EPA website and include copy in Appendix I.

## Year 2 Annual Report

**Document Name and/or Web Address:**

Insert link to EPA website and include copy in Appendix I.

## Year 3 Annual Report

**Document Name and/or Web Address:**

Insert link to EPA website and include copy in Appendix I.

## Year 4 Annual Report

**Document Name and/or Web Address:**

Insert link to EPA website and include copy in Appendix I.

## Year 5 Annual Report

**Document Name and/or Web Address:**

Insert link to EPA website and include copy in Appendix I.

## Year X Annual Report

**Document Name and/or Web Address:**

Insert link to EPA website and include copy in Appendix I.

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
Concord River (MA82A-07)		<input type="checkbox"/> + <input type="checkbox"/> -
Kiln Brook (MA83-10)	Fecal Coliform TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Shawsheen River (MA83-01, MA83-08, MA83-17)	Fecal Coliform TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Elm Brook (MA83-05)	Fecal Coliform TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Vine Brook (MA83-06)	Fecal Coliform TMDL	<input type="checkbox"/> + <input type="checkbox"/> -
Spring Brook (MA83-14)	Fecal Coliform TMDL	<input type="checkbox"/> + <input type="checkbox"/> -

### Annual Requirements Beginning Year 1

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

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

The Town of Bedford will implement the IDDE program described in MCM 3. Additionally, catchments draining to any of the waterbodies listed above, which are impaired for bacteria or pathogens, will 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:

The Town of Bedford will supplement the residential public education program described in MCM 1 with an annual message about the proper management of pet waste, including noting Article 43 of the Town of Bedford Bylaws.

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:

The Town of Bedford will supplement the residential public education program described in MCM 1 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:

The Town of Bedford will supplement the residential public education program described in MCM 1 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., Concord River, Shawsheen River, Elm Brook, Vine Brook and Spring 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
Elm Brook (MA83-05)		<input type="button" value="+"/> <input type="button" value="-"/>
Shawsheen River (MA83-01)		<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 Bedford will implement the IDDE program described in MCM 3. Additionally, catchments draining to any of the waterbodies listed above, which are impaired for solids, will be designated as 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 of Bedford must increase the frequency of the street sweeping program over the baseline requirements. 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. As noted in MCM 6, the Town will conduct street sweeping twice per year to meet this requirement.

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 MCM 6, the Town of Bedford 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 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 of Bedford will amend local code such that projects that disturb one or more acres will require stormwater management systems on commercial and industrial land draining directly to target waterbodies incorporate shutdown and containment where appropriate. These amendments will also consider enhanced infiltration requirements, as appropriate. This requirement will be coordinated with the requirements of MCM 5.

# Phosphorus

## Combination of Impaired Waters Requirements and TMDL Requirements as Applicable

Applicable Receiving Waterbody(ies)	TMDL Name (if applicable)	Add/Delete Row
Concord River (MA82A-07)		<input type="button" value="+"/> <input type="button" value="-"/>

### Annual Requirements Beginning Year 1

#### *Public Education and Outreach*

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

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

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 Bedford will supplement its residential and commercial/institutional public education programs described in MCM 1 with an annual spring message encouraging the proper disposal of grass clippings and the use of slow-release and phosphorus-free fertilizers.

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

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

The Town of Bedford will supplement the residential public education program described in MCM 1 with an annual message about the proper management of pet waste, including noting Article 43 of the Town of Bedford Bylaws.

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

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

The Town of Bedford will supplement its residential and commercial/institutional public education programs described in MCM 1 with an annual fall message encouraging the proper disposal of leaf litter.

#### *Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

---

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

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

As part of the Town's Operation & Maintenance procedures for street and parking lot sweeping established as part of MCM 6, Bedford will increase street and parking lot sweeping to a minimum of two occurrences per year, once in the spring and at least once in the fall.

---

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

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

BEGIN IN PERMIT YEAR 2 (Note: EPA Template provides incorrect deadline) As part of the Town's Operations & Maintenance procedures for Town-owned properties established as part of MCM 6, the Town of Bedford will establish a program to properly manage grass cuttings and leaf litter on Town-owned properties. This program will prohibit blowing organic waste onto impervious surfaces.

#### *Stormwater Management in New Development and Redevelopment*

---

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

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

DUE IN PERMIT YEAR 4 (Note: EPA Template provides incorrect deadline, this requirement is included under the Requirements for Permit Year 4). The retrofit inventory and priority ranking described in MCM 5 will include consideration of BMPs to reduce phosphorus discharges.

#### *Phosphorus Reduction Tracking BMP*

---

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

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

This information will be recorded in Appendix I of this document and updated annually.

---

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

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 MCM 5, the Regulations will be modified to require that new development and redevelopment stormwater management BMPs be optimized for phosphorus removal.

#### Requirements Due by Year 4

---

Complete a Phosphorus Source Identification Report

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

The Town of Bedford shall complete the Phosphorus Source Identification Report by June 30, 2022, which will include the following components:

- calculation of the total MS4 area draining to the Concord River or its tributaries, including updated mapping and catchment delineations completed under the IDDE program;
- all screening and monitoring results targeting the Concord River;
- impervious area and directly connected impervious area for the Concord River catchment area;
- identification, delineation and prioritization of potential catchments with high phosphorus loading; and identification of potential retrofit opportunities or opportunities for the installation of structural BMPs during redevelopment.

#### *Stormwater Management in New Development and Redevelopment*

---

Retrofit inventory and priority ranking under 2.3.6.1.b. shall include consideration of BMPs that infiltrate stormwater where feasible

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

The retrofit inventory and priority ranking described in MCM 5 will include consideration of BMPs that infiltrate stormwater where feasible.

#### Requirements Due by Year 5

##### *Potential Structural BMPs*

---

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

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

The Town of Bedford will evaluate properties identified in the retrofit inventory and the Phosphorus Source Identification report that are within the drainage area of the Concord River or its tributaries, for structural BMP installation. A hard copy of the evaluation will be available at the DPW when complete.

---

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

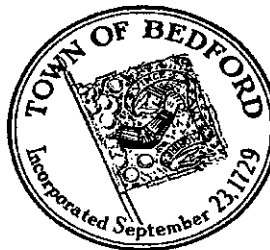
The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

The Town of Bedford will provide a list of planned structural BMPs and a plan and schedule for implementation. Hard copies of the list, plan and schedule for implementation will be available at the DPW when complete.

## **Appendix A**

### Delegation of Authority Memorandum

TOWN OF BEDFORD  
BEDFORD, MASSACHUSETTS 01730



Sarah A. Stanton, *Town Manager*

Town Hall  
Bedford, MA 01730  
781-275-1111  
bedfordma.gov

June 18, 2019

MEMO TO FILE

Re: Documentation for delegation of "Authorized Representative" for NPDES 2016  
**Massachusetts** Small Municipal Separate Storm Sewer System (MS4) General Permit

This document serves to affirm that the **Public Works Director** has responsibility for the operation of the MS4 and is hereby designated as an authorized person for signing all reports including but not limited to the Stormwater Management Plan (SWMP), Stormwater Pollution Prevention Plans (SWPPPs), inspection reports, annual reports, monitoring reports, reports on training, and other information required by the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in **Massachusetts** for the **Town of Bedford**. 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 I meet the following requirements to make such a designation as set forth in Part B.11 of Appendix B 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.*

"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."

  
Sarah Stanton  
Town Manager

  
Date



## **Appendix B**

Notice of Intent, Comments from EPA and Town's Response,  
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)

<b>Illicit Discharge Detection and Elimination (IDDE) Authority Adopted?</b> <i>(Part II, III, IV or V, Subpart B.3.(b.) of 2003 permit)</i>	<input type="text" value="Yes"/>	<b>Effective Date or Estimated Date of Adoption (MM/DD/YY):</b>	<input type="text" value="03/27/12"/>
<b>Construction/Erosion and Sediment Control (ESC) Authority Adopted?</b> <i>(Part II,III,IV or V, Subpart B.4.(a.) of 2003 permit)</i>	<input type="text" value="Yes"/>	<b>Effective Date or Estimated Date of Adoption (MM/DD/YY):</b>	<input type="text" value="03/27/12"/>
<b>Post- Construction Stormwater Management Adopted?</b> <i>(Part II, III, IV or V, Subpart B.5.(a.) of 2003 permit)</i>	<input type="text" value="Yes"/>	<b>Effective Date or Estimated Date of Adoption (MM/DD/YY):</b>	<input type="text" value="03/27/12"/>

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

### Part II: Summary of Receiving Waters

Please list the waterbodies to which your MS4 discharges. For each waterbody, please report the number of outfalls discharging into it and, if applicable, the segment ID and any impairments.

Massachusetts list of impaired waters: *Massachusetts 2014 List of Impaired Waters*- <http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf>

Waterbody that receives flow from the MS4 and segment ID if applicable	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
Beaver Brook	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"/>	
Concord River (MA82A-07)	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fecal Coliform, Mercury in Fish Tissue
Elm Brook (MA83-05)	21	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fecal Coliform
Fawn Lake (MA83004)	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"/>	
Mill Brook	4	<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"/>	
Mill Pond	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"/>	
Mongo Brook	20	<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"/>	
Peppergrass Brook	4	<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"/>	
Shawsheen River (MA83-01)	21	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fecal Coliform
Shawsheen River (MA83-08)	3	<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"/>	Fecal Coliform
Shawsheen River (MA83-17)	14	<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"/>	Fecal Coliform
Spring Brook (MA83-14)	11	<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"/>	Fecal Coliform
Vine Brook (MA83-06)	3	<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"/>	Fecal Coliform
Unnamed Ditch/Swale/Detention Basin	25	<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"/>	
Unnamed Intermittent Stream	77	<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"/>	
Unnamed Perennial Stream	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"/>	
Unnamed Pond	12	<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"/>	
Unnamed Wet Area	72	<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 an 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 requires a target audience). **Use the drop-down menus in each table or enter your own text to override the drop down menu.**

#### MCM 1: Public Education and Outreach

<b>BMP Media/Category</b> (enter your own text to override the drop down menu)	<b>BMP Description</b>	<b>Targeted Audience</b>	<b>Responsible Department/Parties</b> (enter your own text to override the drop down menu)	<b>Measurable Goal</b>	<b>Beginning Year of BMP Implementation</b>
Special Events/Festivals/Fairs	Purchase give-away materials to distribute at Bedford Day, including pet waste bags with proper disposal information, and display boards with stormwater pollution education	Residents	Department of Public Works & Town Clerk	Distribute and Display a minimum of two educational stormwater messages spaced at least a year apart; annually at Bedford Day. Goal is to distribute a minimum of 400 rolls of pet waste bags annually.	2018
Web Page	Stormwater website with education and outreach including lawn maintenance and proper management of parking lots.	Businesses, Institutions and Commercial Facilities	Department of Public Works & Conservation	Distribute a minimum of two educational stormwater messages over the permit term. Goal is to track visitors to the website and increase 10% annually.	2020
Brochures/Pamphlets	Distribute brochures to developers including erosion control and LID design principles.	Developers (construction)	Department of Public Works & Code Enforcement	Distribute a minimum of two educational stormwater messages over the permit term.	2019

[illegible]

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

### Part III: Stormwater Management Program Summary (continued)

## MCM 2: Public Involvement and Participation

[illegible]

[illegible]

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

### Part III: Stormwater Management Program Summary (continued)

#### MCM 3: Illicit Discharge Detection and Elimination (IDDE)

<b>BMP Categorization</b> (enter your own text to override the drop down menu)	<b>BMP Description</b>	<b>Responsible Department/Parties</b> (enter your own text to override the drop down menu)	<b>Measurable Goal</b> (all text can be overwritten)	<b>Beginning Year of BMP Implementation</b>
SSO inventory	Develop SSO inventory in accordance of permit conditions	DPW Operations	Complete within 1 year of effective date of permit	2019
Storm sewer system map	Revise completed MS4 map with permit requirements	Department of Public Works/Engineering & GIS	Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit	2019
Written IDDE program	Create written IDDE program	Department of Public Works	Complete within 1 year of the effective date of permit and update as required	2019
Assessment and Priority Ranking of Outfalls/ Interconnections	Complete initial inventory and ranking to assess illicit discharge potential	Department of Public Works & Conservation	Complete within 1 year of effective date of permit	2019
Employee training	Train employees on IDDE implementation	DPW Operations	Annually train employees and inspectors	2019
Conduct dry weather screening	Conduct in accordance with outfall screening procedure and permit conditions	Department of Public Works	Complete 3 years after effective date of permit. Goal is to complete 50% screening by permit year 2.	2019
Conduct wet weather screening	Conduct in accordance with outfall screening procedure	Department of Public Works	Complete 10 years after effective date of permit	2022



[illegible]

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

### Part III: Stormwater Management Program Summary *(continued)*

#### MCM 4: Construction Site Stormwater Runoff Control

<b>BMP Categorization</b> (enter your own text to override the drop down menu or entered text)	<b>BMP Description</b>	<b>Responsible Department/Parties</b> (enter your own text to override the drop down menu)	<b>Measurable Goal</b> (all text can be overwritten)	<b>Beginning Year of BMP Implementation</b>
Site inspection and enforcement of Sediment and Erosion Control measures	Complete written procedures of site inspections and enforcement procedures	DPW Engineering/Conservation	Complete within 1 year of the effective date of permit	2019
Site plan review and inspection and enforcement	Complete written procedures of site plan review and begin implementation	DPW Engineering/Planning/Zoning/Conservation	Complete within 1 year of the effective date of permit	2019
Bylaw and regulations for construction site stormwater runoff control	Modify local bylaw if necessary and establish regulations that require use of sediment and erosion control practices at construction sites	Department of Public Works	Review current program and modify if necessary within 1 year of the effective date of permit	2019
Waste Control	Require contractors to manage proper disposal of building materials, concrete truck wash out, chemicals, litter, and sanitary wastes	Code Enforcement	Implement within 1 year of the effective date of the permit	2019

[illegible]

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

### Part III: Stormwater Management Program Summary (continued)

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

<b>BMP Categorization</b> (enter your own text to override the drop down menu or entered text)	<b>BMP Description</b>	<b>Responsible Department/Parties</b> (enter your own text to override the drop down menu)	<b>Measurable Goal</b> (all text can be overwritten)	<b>Beginning Year of BMP Implementation</b>
Bylaw and regulations for post-construction stormwater management	Modify local bylaw if necessary and establish regulations to meet provisions of section 2.3.6.a. Regulations will require infiltration of roof runoff from new buildings.	Department of Public Works	Review current program and modify if necessary within 2 years of the effective date of permit. Provide infiltration for a minimum of 20,000 sf of roof area annually.	2019
Target properties to reduce impervious areas	Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually	DPW Engineering/Planning/Conservation	Complete 4 years after effective date of permit and report annually on retrofitted properties. Report reduction of impervious area in Annual Report, targeting 1,000 s.f. minimum per year.	2021
As-built plans for on-site stormwater control	The procedures to require submission of as-built drawings and ensure long term operation and maintenance will be part of SWMP	Department of Public Works/Planning/Code/Conservation	Require submission of as-built plans for completed projects within 2 years after effective date of permit	2019

[illegible]


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

### Part III: Stormwater Management Program Summary (continued)

#### MCM 6: Municipal Good Housekeeping and Pollution Prevention

<b>BMP Categorization</b> (enter your own text to override the drop down menu or entered text)	<b>BMP Description</b>	<b>Responsible Department/Parties</b> (enter your own text to override the drop down menu)	<b>Measurable Goal</b> (all text can be overwritten)	<b>Beginning Year of BMP Implementation</b>
Operation & Maintenance Program	Develop written O&M procedures including all requirements contained in 2.3.7.a.ii for parks and open spaces, buildings and facilities, and vehicles and equipment and include in SWMP	Department of Public Works	Complete and implement within 2 years after effective date of permit	2019
Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment	Create inventory	Department of Public Works/Recreation Department	Complete 2 years after effective date of permit and implement annually	2019
Infrastructure O&M	Establish and implement program for repair and rehabilitation of MS4 infrastructure	DPW Engineering and Highway Department	Complete 2 years after effective date of permit. Goal of repairing a minimum of 10 failing catch basins annually.	2019
Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities	DPW Engineering	Complete and implement 2 years after effective date of permit	2020
Catch basin cleaning	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule	DPW Operations	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material removed annually. Goal to clean catch basins in critical areas such as commercial districts and at the bottom of steep slopes annually.	2019

[illegible]



### Part III: Stormwater Management Program Summary (continued)

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]

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

### Part III: Stormwater Management Program Summary (continued)

## Actions for Meeting Requirements Related to Water Quality Limited Waters

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. In addition, if you are subject to additional requirements due to a downstream nutrient impairment (see Part 2.2.2 of the permit) select the pollutant of concern and indicate applicable waterbody IDs or write "all waterbodies" if applicable. 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.

With regard to the Endangered Species Act Determination under Criterion C in Part I, the Town of Bedford agrees that stormwater discharges and actions planned under the permit will have no effect on the Northern Long Eared Bat and also that US Fish & Wildlife will be consulted as needed during the permit term on any future best management practices.

## 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 Rosen

Title:

Asst. Town Manager (Acting Town Manager)

Signature:

*Michael Rosen*

Date:

*9/20/18*

[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

## Small MS4 NOI Information Requested - Town of Bedford

To: Adrienne St. John astjohn@bedfordma.gov  
MS4 Operator: Town of Bedford  
NPDES ID: MAR041028

Please provide corrected or additional information for the following:

*Note: you do not need to resubmit your entire NOI form; please respond to the email you received from the EPA review team member as soon as possible, but within 30 days, with the requested information below.*

2003 Information:

ESA eligibility: Please submit the output from the USFW IPaC process and indicate that that your planned discharge activities will not adversely affect the endangered species present. Also, and attach all correspondence with USFW if applicable.

NHPA eligibility:

Receiving waters:

Public Education MCM:

Public Participation MCM:

IDDE MCM:

Construction MCM:

Post-construction MCM:

Good Housekeeping MCM:

TMDLs:

Impairments:

Certification Information:



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

**VIA EMAIL**

December 14, 2018

Michael Rosen  
Acting town manager

And;

Adrienne St. John  
Public Works Engineer  
314 Great Road  
Bedford, MA. 01730  
astjohn@bedfordma.gov

Re: National Pollutant Discharge Elimination System Permit ID #: MAR041028, Town of Bedford

Dear Adrienne St. John:

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

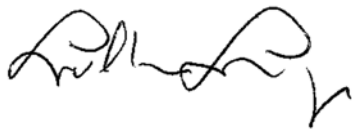
any questions regarding this permit please contact Newton Tedder at [tedder.newton@epa.gov](mailto:tedder.newton@epa.gov) or (617) 918-1038.

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 C**

Town Specific MS4 Background and Urbanized Area Map



Bedford is located in Middlesex County, approximately 15 miles northwest of the City of Boston. Bedford is bordered by the towns of Burlington, Billerica, Carlisle, Concord, and Lexington and the Hanscom Air Force Base. There are approximately 0.1 square miles of water within its 13.9 square mile footprint. According to the 2010 United States Census, Bedford is home to approximately 13,320 residents in more than 5,100 households. The entire Town is within the urbanized area<sup>1</sup> and therefore, regulated by EPA under the MS4 program.



**Figure 1** Location of Bedford, Massachusetts

The majority of the Town of Bedford is located within the Shawsheen River Watershed. The northwestern portion of the Town is within the SuAsCo (Sudbury, Assabet and Concord Rivers) Watershed. Protecting the quality of Bedford's water resources, including lakes, ponds, rivers and groundwater supplies, is a priority for the Town. Pollutants from stormwater runoff are a contributing factor to the impairment of Bedford's waterbodies, including bacterial contamination and nutrient pollution.

The Town of Bedford 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.

The Town of Bedford has taken advantage of low-cost and innovative approaches to provide stormwater education and outreach, primarily to residential audiences. The Town distributes flyers to residents and local businesses on stormwater topics of significance and publishes stormwater information on the Town website and local cable channel. The Town provides opportunities for public participation in the Stormwater Management Program through the Local Stormwater Committee meetings and Household Hazardous Waste Collection Days.

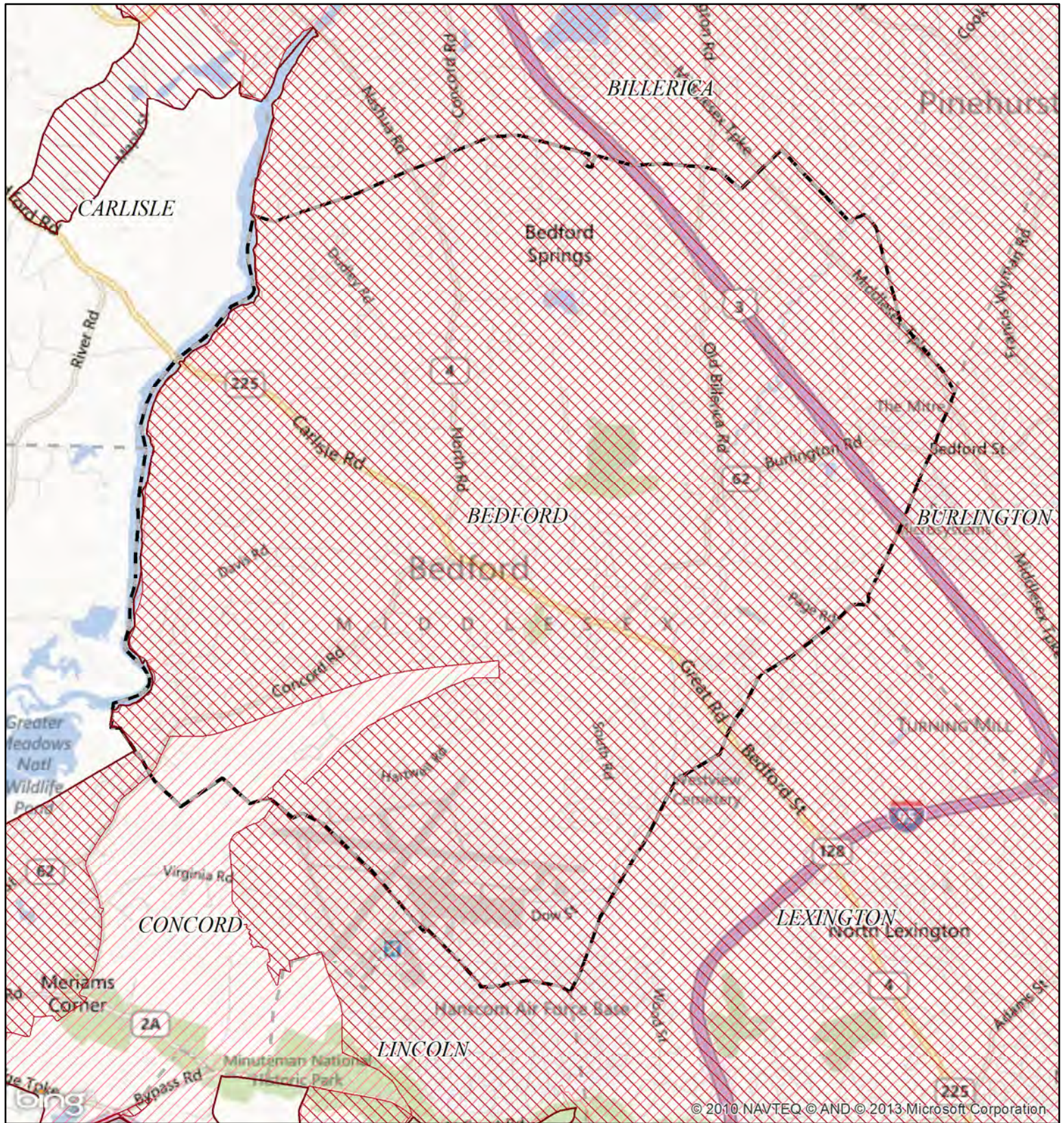
The Town has made significant progress in mapping the stormwater system and developing a map of outfalls, catch basins, manholes, the pipe network and receiving waterbodies. The Town adopted the Stormwater Management Bylaw, Article 55 of the Town's General Bylaws, which prohibits non-stormwater discharges to the MS4, requires erosion and sediment controls at construction sites that disturb one acre or more, and regulates stormwater runoff from new development and redevelopment projects.

The Town has established an active Good Housekeeping Program for stormwater pollution prevention including active street sweeping, catch basin cleaning, and promoting the use of alternative fertilizers and pesticides.

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<sup>1</sup> Map of Urbanized Area in the Town of Bedford,  
<https://www3.epa.gov/region1/npdes/stormwater/ma/ram/bedford.pdf>  
Town of Bedford Stormwater Management Program



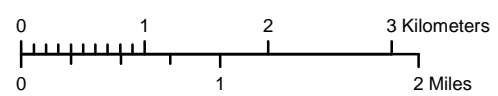


# NPDES Phase II Stormwater Program Automatically Designated MS4 Areas

## Bedford MA

Regulated Area:

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



Town Population: 13320  
Regulated Population: 13320  
(Populations estimated from 2010 Census)



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



## **Appendix D**

### Endangered Species Act Eligibility Criteria Documentation

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Middlesex County, Massachusetts



## Local office

New England Ecological Services Field Office

☎ (603) 223-2541

📠 (603) 223-0104

70 Commercial Street, Suite 300  
Concord, NH 03301-5094

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

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Mammals

NAME

STATUS

Northern Long-eared Bat *Myotis septentrionalis*  
No critical habitat has been designated for this species.  
<https://ecos.fws.gov/ecp/species/9045>

Threatened

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).



For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

**Bald Eagle** *Haliaeetus leucocephalus*

Breeds Oct 15 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

**Black-billed Cuckoo** *Coccyzus erythrophthalmus*

Breeds May 15 to Oct 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9399>

**Bobolink** *Dolichonyx oryzivorus*

Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

**Buff-breasted Sandpiper** *Calidris subruficollis*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9488>

**Canada Warbler** *Cardellina canadensis*

Breeds May 20 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

**Dunlin** *Calidris alpina arctica*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<p><b>Eastern Whip-poor-will</b> <i>Antrostomus vociferus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 1 to Aug 20
<p><b>Evening Grosbeak</b> <i>Coccothraustes vespertinus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p><b>Golden Eagle</b> <i>Aquila chrysaetos</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p><a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a></p>	Breeds elsewhere
<p><b>King Rail</b> <i>Rallus elegans</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/8936">https://ecos.fws.gov/ecp/species/8936</a></p>	Breeds May 1 to Sep 5
<p><b>Lesser Yellowlegs</b> <i>Tringa flavipes</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a></p>	Breeds elsewhere
<p><b>Nelson's Sparrow</b> <i>Ammodramus nelsoni</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 15 to Sep 5
<p><b>Prairie Warbler</b> <i>Dendroica discolor</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 1 to Jul 31
<p><b>Prothonotary Warbler</b> <i>Protonotaria citrea</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 1 to Jul 31
<p><b>Red-headed Woodpecker</b> <i>Melanerpes erythrocephalus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 10 to Sep 10
<p><b>Red-throated Loon</b> <i>Gavia stellata</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere



Ruddy Turnstone *Arenaria interpres morinella*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds elsewhere

Rusty Blackbird *Euphagus carolinus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Saltmarsh Sparrow *Ammodramus caudacutus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 15 to Sep 5

Semipalmated Sandpiper *Calidris pusilla*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Short-billed Dowitcher *Limnodromus griseus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9480>

Breeds elsewhere

Snowy Owl *Bubo scandiacus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds elsewhere

Willet *Tringa semipalmata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Apr 20 to Aug 5

Wood Thrush *Hylocichla mustelina*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Aug 31

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be

used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

#### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

#### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

#### No Data (—)

A week is marked as having no data if there were no survey events for that week.

#### Survey Timeframe

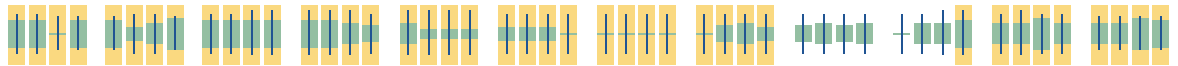
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

---

■ probability of presence   ■ breeding season   | survey effort   — no data

SPECIES      JAN      FEB      MAR      APR      MAY      JUN      JUL      AUG      SEP      OCT      NOV      DEC

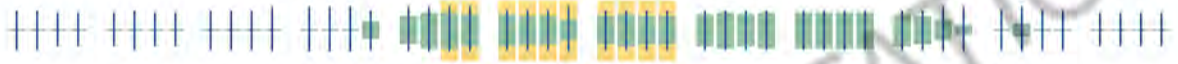
Bald Eagle  
Non-BCC Vulnerable  
(This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Black-billed Cuckoo  
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Bobolink  
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Buff-breasted Sandpiper  
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



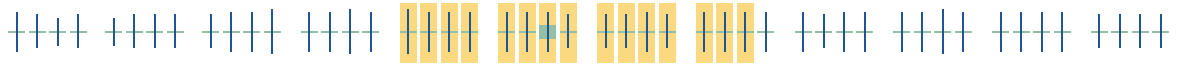
Canada Warbler  
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Dunlin  
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Eastern Whip-poor-will  
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



A horizontal number line with arrows at both ends. It has major tick marks labeled 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, and 100. The number 50 is highlighted with a green square.

[illegible]



Age Group	Number of People
0-10	10
11-20	15
21-30	20
31-40	25
41-50	30
51-60	35
61-70	40
71-80	45
81-90	50
91-100	55

||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||

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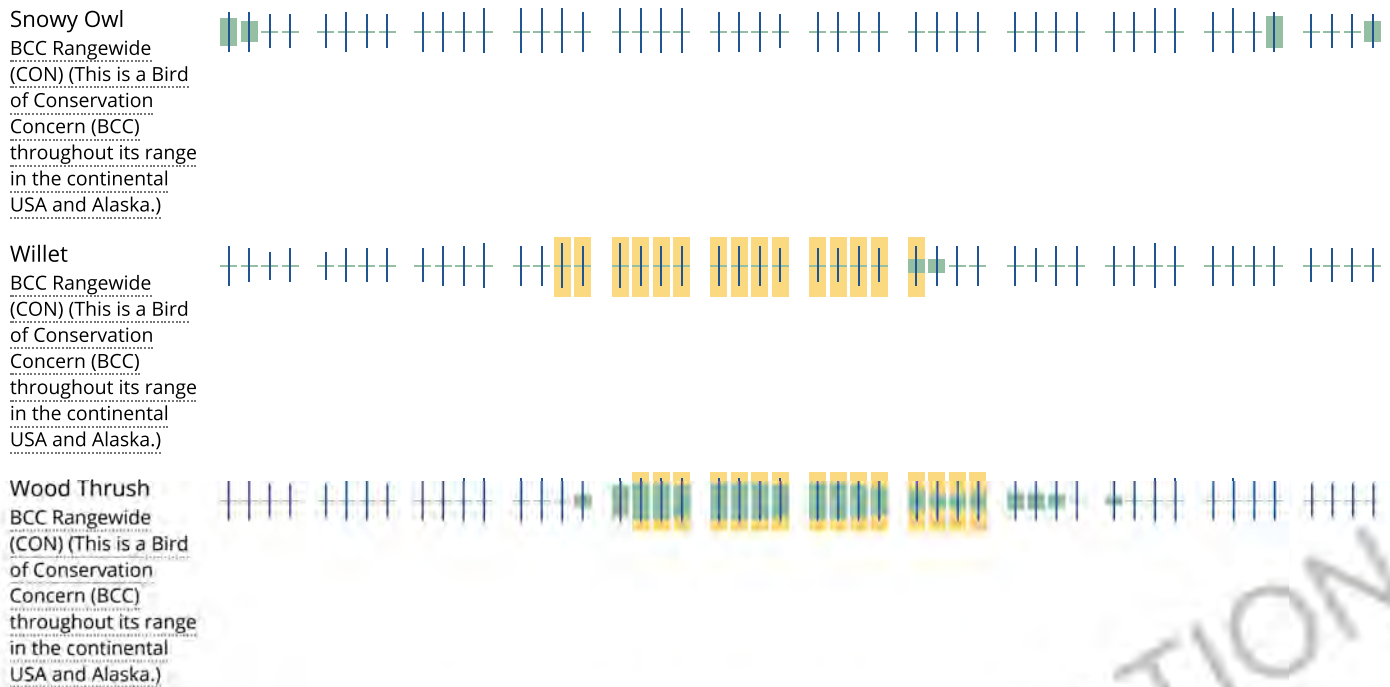
ANS

**Figure 7**

[illegible]

PRC

LEON



**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).



Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look

## Facilities

This location overlaps the following National Wildlife Refuge lands:

☎ (978) 443-4661

 (978) 443-2898

## MAILING ADDRESS

C/o Eastern Massachusetts Nwr Complex  
73 Weir Hill Road  
Sudbury, MA 01776-1420

## PHYSICAL ADDRESS

Great Meadows Nwr  
73 Weir Hill Road  
Sudbury, MA 01776-1420

<https://www.fws.gov/refuges/profiles/index.cfm?id=53511>

## Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.



# Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

## FRESHWATER EMERGENT WETLAND

[PEM1/SS1E](#)  
[PEM1E](#)  
[PEM1C](#)  
[PEM1Cd](#)  
[PEM1Ed](#)  
[PEM1Eg](#)  
[PEM1/UBF](#)  
[PEM1/UBFx](#)

## FRESHWATER FORESTED/SHRUB WETLAND

[PFO1E](#)  
[PFO1Ed](#)  
[PSS1E](#)  
[PFO1Eg](#)  
[PFO1/4E](#)  
[PFO1/4Ed](#)  
[PSS1Ed](#)  
[PFO1/4Eg](#)  
[PFO1/SS1Ed](#)  
[PFO4Eg](#)  
[PFO1/4Eb](#)  
[PFO1C](#)  
[PFO4Eb](#)  
[PSS1/EM1E](#)  
[PFO1/EM1Ed](#)  
[PFO1Eb](#)  
[PFO1A](#)  
[PSS1Eb](#)  
[PFO4E](#)  
[PSS1/EM1Ed](#)  
[PFO1Fb](#)  
[PFO4C](#)

## FRESHWATER POND

[PUBHh](#)

[PUBH](#)

[PUBHx](#)

[PUBHb](#)

LAKE

[L1UBH](#)

RIVERINE

[R2UBH](#)

[R2UBHx](#)

[R4SBCx](#)

[R4SBC](#)

[R5UBH](#)

[R4SBA](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

#### **Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

#### **Data exclusions**


Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

#### **Data precautions**

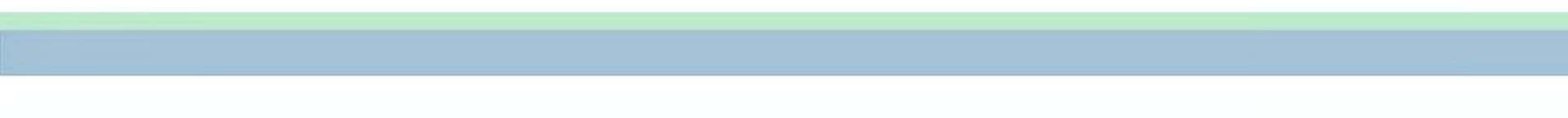
Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

## **Appendix E**

### Historic Properties Eligibility Criteria Documentation



***Our municipality conducted a National Historic Property Act eligibility determination for coverage under the 2003 permit. Must we now repeat this process?***

- If you are not proposing any MS4 work that will affect federal historic properties, you can certify compliance with the Historic Preservation Act requirements under Criterion A in the Eligibility Determination section of the NOI. There's no need to conduct a new survey.
- 



Hand-enter Your Transmittal Number

Logged VHS

1028

W 041280

Transmittal Number

Your unique Transmittal Number can be accessed online: <http://www.state.ma.us/scripts/dep/trasmfrm.stm> or call DEP's InfoLine at 617-338-2255 or 800-462-0444 (from 508, 781, and 978 area codes).

## Massachusetts Department of Environmental Protection

# Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application.  
Copy 2 must accompany your fee payment.  
Copy 3 should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to DEP, P.O. Box 4062, Boston, MA 02211

For DEP Use Only  
Permit No. \_\_\_\_\_  
Rec'd Date \_\_\_\_\_  
Reviewer \_\_\_\_\_

### A. Permit Information

BRP WM 08A

Permit Code: 7 or 8 character code from permit instructions

Notice of Intent

Type of Project or Activity

NPDES Stormwater General Permit

Name of Permit Category

### B. Applicant Information - Firm or Individual

Town of Bedford

Name of Firm - Or, if party needing this approval is an individual enter name below:

Last Name of Individual

314 The Great Road

Street Address

Bedford

City/Town

Adrienne St. John

Contact Person

First Name of Individual

MI

MA

State

01730

Zip Code

781 275-7605

Telephone # and extension

adrienne@town.bedford.ma.us

e-mail address (optional)

### C. Facility, Site or Individual Requiring Approval

Town of Bedford

Name of Facility, Site or Individual

314 Great Road

Street Address

Bedford

City/Town

DEP Facility Number (if Known)

Federal I.D. Number (if Known)

e-mail address (optional)

MA

State

01730

Zip Code

781 275-7605

Telephone # and extension

### D. Application Prepared by (if different from Section B)

Name of Firm Or Individual

Address

City/Town

State

Zip Code

Telephone # and extension

Contact Person

LSP Number (21E only)

### E. Permit - Project Coordination

Is this project subject to MEPA review? ☐ yes ☒ no If yes, enter the project's EOE file number - assigned when an Environmental Notification Form is submitted to the MEPA unit: EOE file number

Is an Environmental Impact Report Required? ☐ yes ☒ no

Is this application part of a larger project for which two or more DEP permits are being or will be sought? ☐ yes ☒ no

List any other DEP permits that apply to this project:

Permit Category

Date of Submission (tentative or actual)

Transmittal # if application already submitted

### F. Amount Due

#### Special Provisions:

- ☒ Fee Exempt\* (city, town or municipal housing authority) (state agency if fee is \$100 or less)  
☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c)  
☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10)

\*There are no fee exemptions for 21E, regardless of applicant status

Check Number

Dollar Amount

7/30/03

Date

Please make check payable to the Commonwealth of Massachusetts and mail check and one copy of this form to:  
DEP, P.O. Box 4062, Boston, MA 02211

**COPY**



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Watershed Management

W 041280  
Transmittal Number

**BRP WM 08A NPDES Stormwater General Permit**  
**Notice of Intent for Discharges from Small Municipal Separate**  
**Storm Sewer Systems (MS4s)**

Facility ID (if known)

**A. Instructions**

**Important:**  
When filling out  
forms on the  
computer, use  
only the tab key  
to move your  
cursor - do not  
use the return  
key.



Submission of this Notice of Intent constitutes notice that the entity named at item B1. of this form intends to be authorized by the DEP General Permit issued jointly with EPA for stormwater discharges from the small municipal separate storm sewer system (MS4), in the location identified at item B2. of this form. Submission of the Notice of Intent also constitutes notice that the party identified at item B1. has read, understands and meets the eligibility conditions of Part I.B. of the NPDES Small MS4 General Permit, agrees to comply with all applicable terms and conditions of the NPDES Small MS4 General Permit, and understands that continued authorization to discharge is contingent on maintaining eligibility for coverage. **In order to be granted coverage, all information required on BRP WM 08A, including the Stormwater Management Program Summary and Time Frames form, must be completed. Please read the permit and make sure you comply with all requirements, including the requirement to develop and implement a stormwater management program.**

**B. Applicant Information**

1. Small MS4 Operator/Owner Information:

Adrienne St. John

Name

314 Great Road

Mailing Address

Bedford

City/Town

781 275-7605

Telephone Number

MA

State

adrienne@town.bedford.ma.us

Email (if available)

2. Municipality Name

Bedford

City/Town

3. Legal Status:

☐ Federal

☒ City/Town

☐ State

☐ Tribal

☐ Private

☐ Other public entity:

Specify Public Entity

4. Other regulated MS4(s) within municipal boundaries:

5. Based on the instructions provided in Part I of the NPDES Small MS4 General Permit, have the eligibility criteria for "listed species" and critical habitat been met?

☐ yes

☒ pending

☐ no



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Watershed Management

W041280

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**BRP WM 08A NPDES Stormwater General Permit**

**Notice of Intent for Discharges from Small Municipal Separate  
Storm Sewer Systems (MS4s)**

Facility ID (if known)

**B. Applicant Information (cont.)**

6. Based on the instructions provided in Part I of the NPDES Small MS4 General Permit, have the eligibility criteria for protection of historic properties been met?

☒ yes ☐ pending ☐ no

**Note:**

Section C may be duplicated to accommodate a larger list of receiving waters

**C. Names of (Presently Known) Receiving Waters**

Receiving Water:	No. of Outfalls	Listed as Impaired?	Impairment
Concord River Name	6 est. Number	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	metals, nutrients Specify
Shawsheen River Name	31 Number	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	unk. toxicity, low DO, pathogens, metals Specify
Elm Brook Name	11 Number	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	pathogens, turbidity Specify
Vine Brook Name	17 Number	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	pathogens Specify
Beaver Brook Name	6 Number	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Specify
Spring Brook Name	11 Number	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Specify
Mongo Brook Name	6 Number	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Specify
Peppergrass Brook Name	4 Number	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Specify
Fawn Lake Name	2 Number	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	noxious aquatic plants Specify
Tributary to Mill Brook Name	4 Number	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Specify
Wetland from Town Forest Name	7 Number	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Specify
Name	Number	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify
Name	Number	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify
Name	Number	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify
Name	Number	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify
Name	Number	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify
Name	Number	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify
Name	Number	<input type="checkbox"/> Yes <input type="checkbox"/> No	Specify



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Watershed Management

W041280

Transmittal Number

**BRP WM 08A** NPDES Stormwater General Permit

Notice of Intent for Discharges from Small Municipal Separate  
Storm Sewer Systems (MS4s)

Facility ID (if known)

**D. Stormwater Management Program Summary**

1. Public Education:

1-1 BMP ID # Stormwater flyer to residents Specify Best Management Practice	DPW, SuAsCo Responsible Dept./Person Name	distribute to 75% of residents Specify Measurable Goal
1-2 BMP ID # Education program to 5 <sup>th</sup> graders	DPW, SuAsCo, Bedford Schools	teach in 1 5 <sup>th</sup> grade class Specify Measurable Goal
1-3 BMP ID # Develop website link Specify Best Management Practice	DPW Responsible Dept./Person Name	have in place by 7/05 Specify Measurable Goal
1-4 BMP ID # Stormwater flyer to businesses Specify Best Management Practice	DPW, SuAsCo, Chamber of Commerce	distribute to 50% of businesses
1-5 BMP ID # Stormwater info video Specify Best Management Practice	DPW, SuAsCo Responsible Dept./Person Name	show video at public meetings and on local cable station

2. Public Participation:

2-1 BMP ID # Stormwater Display Specify Best Management Practice	DPW, SuAsCo Responsible Dept./Person Name	3 mos. at library, Town Hall, schools
2-2 BMP ID # Local Stormwater Committee Specify Best Management Practice	Selectmen, Cons. Comm, DPW, Planning Board	form committee by 12/04 Specify Measurable Goal
2-3 BMP ID # Local Stormwater Meetings Specify Best Management Practice	SW Committee Responsible Dept./Person Name	meet 3x/year Specify Measurable Goal
2-4 BMP ID # Attend Stormwater Summit Specify Best Management Practice	SW Committee Responsible Dept./Person Name	share information, distribute "self Test"
BMP ID # Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal





Massachusetts Department of Environmental Protection  
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W041280

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**BRP WM 08A** NPDES Stormwater General Permit  
Notice of Intent for Discharges from Small Municipal Separate  
Storm Sewer Systems (MS4s)

Facility ID (if known)

**D. Stormwater Management Program Summary (Cont.)**

3. Illicit Discharge Detection and Elimination:

3-1 BMP ID # Purchase GPS equipment Specify Best Management Practice	DPW Responsible Dept./Person Name	in place by 7/04 Specify Measurable Goal
3-2 BMP ID # Map SW outlets >8" Specify Best Management Practice	DPW, MRWC Responsible Dept./Person Name	75% capture rate Specify Measurable Goal
3-3 BMP ID # Identify critical resources Specify Best Management Practice	DPW, Conservation Comm. Responsible Dept./Person Name	map, notify abutters, develop BMP's
3-4 BMP ID # Perform water quality testing Specify Best Management Practice	DPW, MRWC Responsible Dept./Person Name	3 sites - residential, municipal, commercial, industrial
3-5 BMP ID # Local bylaw prohibiting illicit discharge to storm system	Selectmen, DPW, Planning Responsible Dept./Person Name	In place by 7/06 Specify Measurable Goal

4. Construction Site Runoff Control:

4-1 BMP ID # Develop awareness of construction site issues	DPW, Cons. Comm, Code Enforcement	write guidelines, distribute to all builders with permit
4-2 BMP ID # Control construction site waste Specify Best Management Practice	Code Enforcement, Cons. Comm., DPW	reduce litter, erosion, dust, sediment on adjacent streets
4-3 BMP ID # Require ESC plans for disturbances > 5,000 s.f.	Code Enforcement, Cons. Comm., DPW	draft bylaw by 7/07 Specify Measurable Goal
4-4 BMP ID # Develop O&M plan for existing Town owned systems	DPW Responsible Dept./Person Name	in place by 7/08 Specify Measurable Goal
BMP ID # Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal



Massachusetts Department of Environmental Protection  
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**BRP WM 08A** NPDES Stormwater General Permit  
Notice of Intent for Discharges from Small Municipal Separate  
Storm Sewer Systems (MS4s)

Facility ID (if known)

**D. Stormwater Management Program Summary (Cont.)**

3. Illicit Discharge Detection and Elimination:

3-2		
BMP ID #		
Map SW outlets	DPW, MRWC	75% capture rate
Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal
BMP ID #		
Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal
BMP ID #		
Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal
BMP ID #		
Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal
BMP ID #		
Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal

4. Construction Site Runoff Control:

BMP ID #		
Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal
BMP ID #		
Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal
BMP ID #		
Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal
BMP ID #		
Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal
BMP ID #		
Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Watershed Management

W041280

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**BRP WM 08A** NPDES Stormwater General Permit  
Notice of Intent for Discharges from Small Municipal Separate  
Storm Sewer Systems (MS4s)

Facility ID (if known)

**D. Stormwater Management Program Summary (Cont.)**

5. Post Construction Runoff Control:

5-1 BMP ID # Develop bylaws to address stormwater impacts	Selectmen, Planning, Cons. Comm., DPW, SW Committee	in place by 12/05 Specify Measurable Goal
5-2 BMP ID # Promote infiltration in new developments	Planning, DPW, Cons. Comm. Responsible Dept./Person Name	no increase in flooding levels or locations
5-3 BMP ID # Expand grass plots, reduce pavement widths	DPW, Planning, SW Comm. Responsible Dept./Person Name	improve infiltration Specify Measurable Goal
5-4 BMP ID # Research rain barrels Specify Best Management Practice	SW Committee Responsible Dept./Person Name	distribute to 10 households for pilot program
BMP ID # Specify Best Management Practice	Responsible Dept./Person Name	Specify Measurable Goal

6. Municipal Good Housekeeping:

6-1 BMP ID # Street sweeping, CB cleaning Specify Best Management Practice	DPW Responsible Dept./Person Name	2x per year in critical areas Specify Measurable Goal
6-2 BMP ID # Inspect older sewer mains Specify Best Management Practice	DPW, MWRA Responsible Dept./Person Name	TV 1 mile per year Specify Measurable Goal
6-3 BMP ID # Promote/use alternative fertilizers and pesticides	Cons. Comm., DPW Responsible Dept./Person Name	reduce nitrogen loading Specify Measurable Goal
6-4 BMP ID # Develop spill prevention plan Specify Best Management Practice	Fire Dept, DPW, DEP Responsible Dept./Person Name	purchase spill control equipment
6-5 BMP ID # Site better snow dump Specify Best Management Practice	DPW, Cons. Comm. Responsible Dept./Person Name	locate appropriate site by 12/05



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Watershed Management

**BRP WM 08A** NPDES Stormwater General Permit  
Notice of Intent for Discharges from Small Municipal Separate  
Storm Sewer Systems (MS4s)

W041280  
Transmittal Number

Facility ID (if known)

**D. Stormwater Management Program Summary (cont.)**

7. BMPs for Meeting TMDL:

BMP ID #

Specify Best Management Practice

Responsible Dept./Person Name

Specify Measurable Goal

BMP ID #

Specify Best Management Practice

Responsible Dept./Person Name

Specify Measurable Goal

BMP ID #

Specify Best Management Practice

Responsible Dept./Person Name

Specify Measurable Goal

BMP ID #

Specify Best Management Practice

Responsible Dept./Person Name

Specify Measurable Goal

BMP ID #

Specify Best Management Practice

Responsible Dept./Person Name

Specify Measurable Goal

**E. 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.

Richard Reed, Town Administrator

Printed Name

Signature

7/30/03  
Date



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Watershed Management

**BRP WM 08A NPDES Stormwater General Permit Notice of Intent**  
**for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)**

**F. Storm Water Management Program TIME FRAMES**

Transmittal Number W041280

Facility ID (if known)

Page 1 of 1

BMP ID #		PERMIT YEAR ONE				PERMIT YEAR TWO				PERMIT YEAR THREE				PERMIT YEAR FOUR				PERMIT YEAR FIVE				Next Permit
		Spring 03	Summer 03	Fall 03	Winter 03-04	Spring 04	Summer 04	Fall 04	Winter 04-05	Spring 05	Summer 05	Fall 05	Winter 05-06	Spring 06	Summer 06	Fall 06	Winter 06-07	Spring 07	Summer 07	Fall 07	Winter 07-08	
1/1	flyer - res.			X																		X
1/2	5th grade							X														X
1/3	website								X													X
1/4	flyer - bus.											X										
1/5	video																					
																				X		
2/1	display																					
2/2	committee																					
2/3	meetings								X													
2/4	summit							X	X			X	X	X		X	X	X		X	X	
																		X				
3/1	GPS						X															
3/2	mapping																					
3/3	crit. areas																					
3/4	testing																					
3/5	bylaw																					
4/1	site issues																					
4/2	site waste																					
4/3	ESC plan																					
4/4	O & M plan																					
5/1	bylaws																					
5/2	infiltration																					
5/3	grass plots																					
5/4	rain barrels											X				X						
6/1	DPW road																					
6/2	TV sewer							X				X										
6/3	fertilizers															X				X		
6/4	spill prev.																					
6/5	snow dump														X							

## **Appendix F**

### Sanitary Sewer Overflow Inventory

## SSO Inventory for Bedford, MA (July 1, 2014 – June 30, 2019)

Summary table:

Date	Time	Location	Discharge to surface water or MS4	Estimated SSO Volume	Cause of SSO	Mitigation/Corrective Measures Completed
1/16/2019	12:30 PM	155 Middlesex Turnpike	Yes – wetland adjacent to Shawsheen River	3,000 gallons	Blockage	See detailed descriptions below
8/29/2018	8:00 AM	131 Middlesex Turnpike	No	12,000 – 15,000 gallons	Pump Station Failure	
6/8/2017	3:00 PM	20 Hemlock Lane	Yes – Shawsheen River	216,000 gallons	Pump Station Failure	
4/20/2017	8:00 AM	297 Great Road	Yes – Shawsheen River	7,200 gallons	Pump Station Failure	
5/13/2016	9:00 AM	17 Evans Avenue Sewer Pump Station	No	3,000 gallons	Pump Station Failure	
3/31/2015	3:00 PM	48 Shawsheen Rd	Yes – Shawsheen River	108,000 gallons	Insufficient Capacity in System	
12/5/2014	9:00 AM	Ramp at Exit #31B from I-95 North (Lexington)	No	100 gallons	Broken force main (external corrosion)	
10/6/2014	4:30 AM	Ramp at Exit #31B from I-95 North onto Route 4/225 (Lexington)	Yes – Kiln Brook, Shawsheen River	42,000 gallons	External corrosion of force main	

Detailed descriptions:

- On **January 16, 2019** at approximately 12:30 PM, a MassDOT construction inspector discovered an SSO from a sanitary sewer manhole near 155 Middlesex Turnpike during roadway construction. The SSO was caused by a sewer system blockage and approximately 3,000 gallons were discharged to a wetland area adjacent to the Shawsheen River. The contractor on-site set up a by-pass to pump around blockage. Bedford DPW used a vacuum truck with a water jet to clear the sewer manhole and adjacent sewer main. Erosion controls were in place at toe of slope for road construction project and flow was contained in wetland area. On January 17<sup>th</sup>, Bedford DPW had a private contractor clean additional length of downstream sewer main.

- On **August 29, 2018** at 8:00 AM, an employee of the Bedford Sewer Division discovered an SSO discharge from the pump station at 131 Middlesex Turnpike. Due to pump station failure, approximately 12,000 to 15,000 gallons were discharged to a wooded area near the Shawsheen River, however the river elevation was seasonally low and wastewater infiltrated prior to reaching surface water. High water alarm was not received due to Verizon lines being down. The station pumps lost vacuum prime due to solenoid failure and was repaired by 4:00 PM. Verizon arrived August 29<sup>th</sup> at 9:00 AM to ensure alarm lines were back in operation. The area was covered with lime to neutralize.
- On **June 8, 2017** at approximately 4:00 PM, a neighbor at 20 Hemlock Lane discovered an SSO discharge from a sanitary sewer manhole with a direct connection to the Shawsheen River. The resident left a message after hours with DPW. The Sewer Division responded at 8:30 AM on June 9<sup>th</sup> and found the downstream pump station was off-line. Sewer personnel turned pump on to lower wetwell and surcharge was eliminated in line to stop SSO at approximately 10:00 AM. Approximately 216,000 gallons were discharged and the impacted area was covered with 200 pounds of lime to neutralize. The Town's alarm company did not notify staff of high water alarm. Alarm company was notified that conditions were back to normal and any future alarm conditions must be conveyed to the Town.
- On **April 20, 2017** at approximately 8:00 AM, the alarm company notified the sewer department of an SSO in the parking lot at 297 Great Road. The discharge was coming from a sanitary sewer manhole that released approximately 7,200 gallons to a catch basin that discharges to the Shawsheen River. The SSO was stopped at 10:00 AM, air was purged from the control line and the pump was reset. The impact area was cleaned and disinfected and the parking lot was mechanically swept on April 21, 2017.
- On **May 13, 2016** at approximately 9:00 AM, a neighbor reported sewage at the Evans Avenue sewer pump station located at 17 Evans Avenue. The pump station had failed and the Town's alarm company did not promptly notify staff of the high water alarm. Approximately 3,000 gallons discharged to ground surface with no release to surface water. The SSO was stopped by 1:00 PM. The faulty air valve was replaced and the area was cleaned and disinfected.
- On **March 31, 2015** at approximately 3:00 PM, an abutter to 48 Shawsheen Road discovered an SSO discharge from a sanitary sewer manhole. Approximately 108,000 gallons were discharged directly to the Shawsheen River. The SSO was caused by insufficient capacity in the system and was stopped at approximately 7:30 PM. At the time of the SSO, the Town had been by-passing the existing 20-inch diameter failed force main with a 12-inch HDPE pipe to avoid failure under the Route 95 interchange. The smaller diameter pipe was able to maintain flow from both the Town and Hanscom, however with the rain events that occurred the week of March 23<sup>rd</sup>, the increased flow exceeded the capacity of the by-pass pipe. The Town opened a by-pass valve in Lexington to take flow from the Bedford/Hanscom system. This reduced pressure in the downstream main so that both could function.
- On **December 5, 2014**, at approximately 9:00 AM, passing motorists reported the SSO to Revoli Construction and Weston & Sampson Engineers, who were currently under contract with the Town to install a liner in the force main. The break in the force main occurred on the ramp at Exit #31B from Route 95 North onto Route 4/225 in Lexington, approximately 10



feet from the release on October 6 noted below. The failure was due to external corrosion of the 20-inch force main. The Town notified MassDEP and MassDOT, and the SSO was stopped at 9:30 AM. The excavation pit was pumped to an adjacent gravity sewer manhole. A ten foot section of the force main was replaced with ductile iron pipe and the area was regraded with a plan to seed and lime when the weather improved.

- On **October 6, 2014**, at approximately 4:30 AM, a MassDOT field inspector discovered an SSO at the Exit #31B ramp from I-95 onto Route 4/225 in Lexington. The SSO was due to external corrosion of the 20-inch force main that was being repaired in Bedford. The estimated discharge volume was 42,000 gallons to a catch basin tying into the Kiln Brook and Shawsheen River. A gravel berm was constructed to keep flow running across a grassed area and not onto roadway with catch basin. The pipe was repaired with a stainless steel repair clamp and the disturbed area was limed and reseeded. The SSO was stopped at 11:00 AM. As a result of the SSO, the 2,700-ft force main rehabilitation project underway in Bedford (following a break in January of 2014) was projected to be expanded to include the remaining 8,000 linear feet of pipe between Bedford and Lexington.

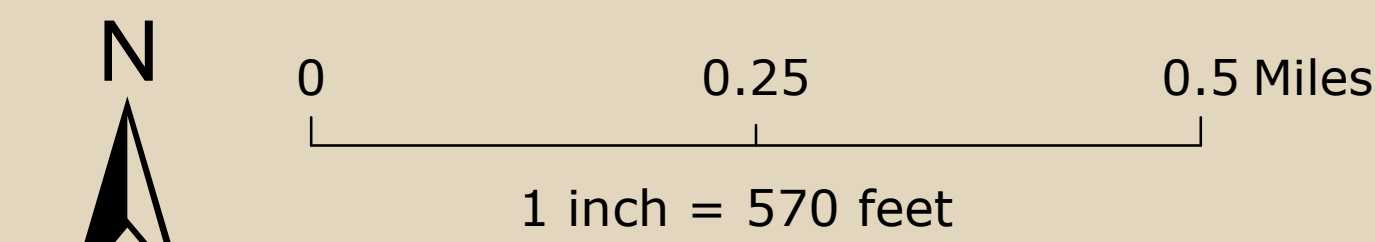
## **Appendix G**

### MS4 Map

Note: Most updated map is located in Engineering Department  
with the GIS Coordinator.



# Drainage Outfalls



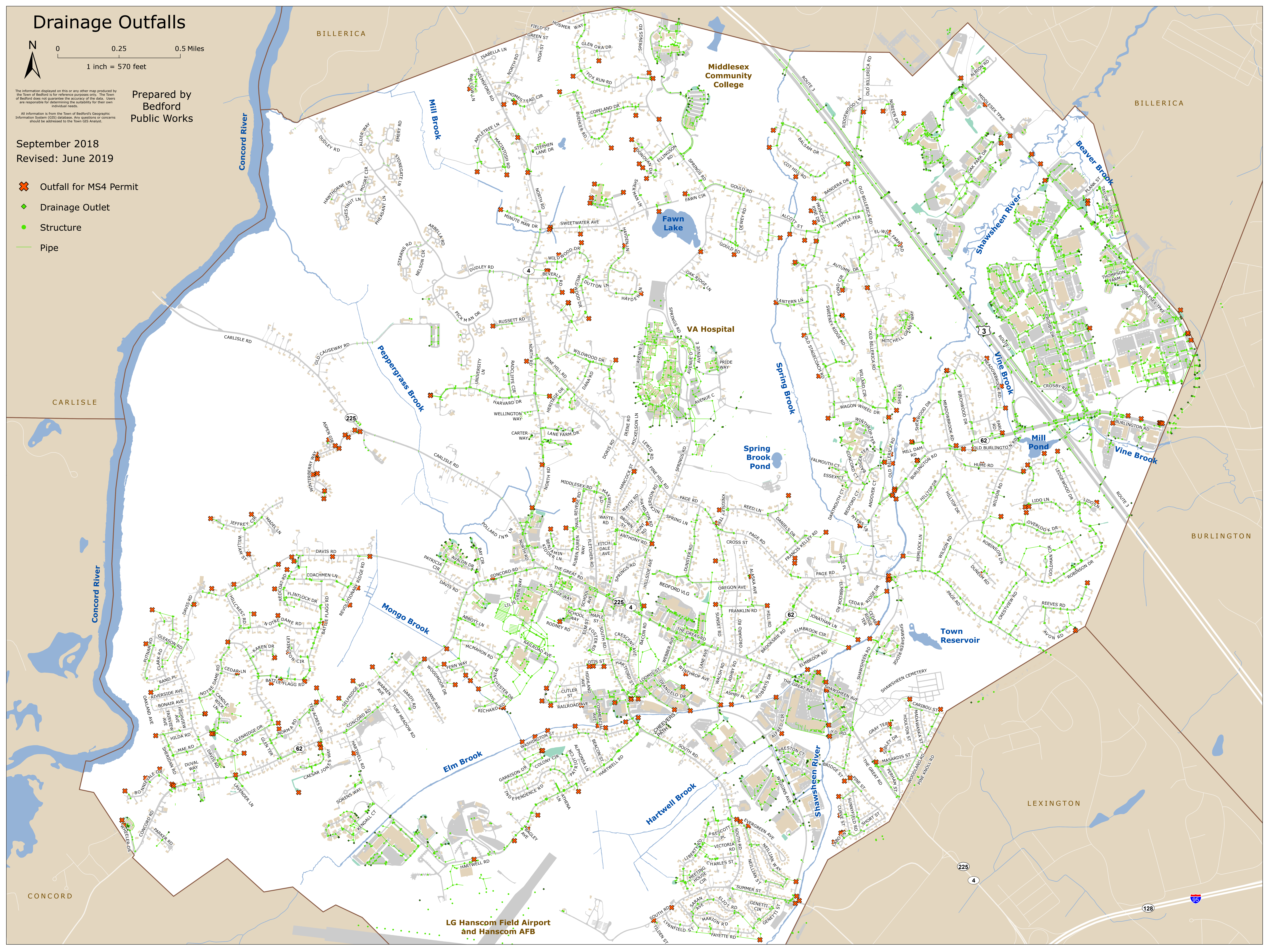
The information displayed on this or any other map produced by the Town of Bedford is for reference purposes only. The Town of Bedford does not guarantee the accuracy of the data. Users are responsible for determining the suitability for their own individual needs.

All information is from the Town of Bedford's Geographic Information System (GIS) database. Any questions or concerns should be addressed to the Town GIS Analyst.

Prepared by  
Bedford  
Public Works

September 2018  
Revised: June 2019

- ✕ Outfall for MS4 Permit
- ◆ Drainage Outlet
- Structure
- Pipe





## **Appendix H**

### Plan Amendment Log

## STORMWATER MANAGEMENT PLAN AMENDMENT LOG

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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 I**

### Annual Reports and Record Keeping

## Annual Report Reporting Requirements

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 an assessment provided to EPA and more robust documentation outlined in the Checklist of Key Documentation.

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.*