Stormwater Management Program (SWMP)

Town of Winchendon

109 Front Street MA 01475

EPA NPDES Permit Number MAR041244

This Stormwater Management Plan is based on the EPA's Template and is designed to be updated annually based on the progress of the Town's Stormwater Management Program. Tighe & Bond has added language and information and 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 MS4 Permit Workplan

Checklist of Key Documentation

Certification

Background

- Stormwater Regulation
- Permit Program Background
- Stormwater Management Program (SWMP)
- Town Specific MS4 Background

Small MS4 Authorization

Stormwater Management Program Team

Receiving Waters

Eligibility: Endangered Species and Historic Properties

Minimum Control Measures (MCMs)

- MCM 1: Public Education and Outreach
- MCM 2: Public Involvement and Participation
- MCM 3: Illicit Discharge Detection and Elimination (IDDE) Program
- MCM 4: Construction Site Stormwater Runoff Control
- MCM 5: Post Construction Stormwater Management in New Development and Redevelopment
- MCM 6: Good Housekeeping and Pollution Prevention for Permittee Owned Operations

Annual Evaluation

TMDLs and Water Quality Limited Waters[1]

- Millers Basin Lakes - Phosphorus TMDL
- Long Island Sound - Nitrogen TMDL

[1] Applicable TMDLs and discharges to water quality limited waters may change as outfalls are located during mapping.

Millers River - Phosphorus and Fecal Coliform Impairments
Otter River - Fecal Coliform and Turbidity Impairments

Appendices

Appendix A Town Specific MS4 Background
Appendix B Notice of Intent, System Map and Authorization to Discharge Letter from EPA
Appendix C Endangered Species Act Eligibility Criteria Documentation
Appendix D Historic Properties Eligibility Criteria Documentation
Appendix E Sanitary Sewer Overflow Inventory
Appendix F Plan Amendment Log
Appendix G Reference Documents
Appendix H Annual Reports and Reporting Requirements
Appendix I TMDL Reporting and Evaluations

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Town of Winchendon
FY2019-2024 MS4 Permit 6-Year Workplan

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

FY19 Permit Year 1 May 2018 - June 2019	FY20 Permit Year 2 July 2019 - June 2020	FY21 Permit Year 3 July 2020 - June 2021	FY22 Permit Year 4 July 2021 - June 2022	FY23 Permit Year 5 July 2022 - June 2023	FY24 Permit Year 6 July 2023 - June 2024

Reporting	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	FY24 Permit Year 6
Notice of Intent	Oct. 1, 2018	☑					
Annual Report	Annually by Sept. 28		☐	☐	☐	☐	☐
Prepare Stormwater Management Plan	June 30, 2019 and update annually	☑	☐	☐	☐	☐	☐
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**	**FY24 Permit Year 6**
MCM 1 Requirement: Message to residents on stormwater topics of significance.	Distribute one message by June 30, 2023. Target to distribute in PY2 per NOI.		☑				
Impaired Waters/TMDL Requirement: Seasonal messages to residents. 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 Section 173 of the Town of Winchendon Bylaws. Annual fall messages will encourage proper disposal of leaf litter.	Starting in Permit Year 3, distribute three messages per year each year, one in the spring, summer and fall			☐	☐	☐	☐

Town of Winchendon
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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	FY24 Permit Year 6
MCM 1 Requirement: Message to businesses, institutions and commercial facilities on stormwater topics of significance.	Distribute one message by June 30, 2023. Target to distribute in PY3 per NOI.			☐			
Impaired Waters/TMDL Requirement: 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 Section 173 of the Town of Winchendon Bylaws. Annual fall messages will encourage proper disposal of leaf litter.	Starting in Permit Year 3, distribute three messages per year each year, one in the spring, summer and fall			☐	☐	☐	☐
MCM 1 Requirement: Message to developers and construction companies on stormwater topics of significance, including proper sediment and erosion control management practices.	Distribute one message by June 30, 2023. Target to distribute in PY2 per NOI.		☐				
MCM 1 Requirement: Message to industrial facilities on stormwater topics of significance, including proper maintenance of parking lot surfaces.	Distribute one message by June 30, 2023. Target to distribute in PY3 per NOI.			☐			

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MCM 2: Public Participation	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	FY24 Permit Year 6
Comply with State Public Notice Requirements (MGL Ch 30A, Sections 18-25) for all public involvement and participation	Ongoing	☑	☐	☐	☐	☐	☐
Provide public with an opportunity to participate in SWMP review and implementation	Annually by June 30	☑	☐	☐	☐	☐	☐
Make annual reports and SWMP available to the public	Ongoing	☑	☐	☐	☐	☐	☐
MCM 3: Illicit Discharge Detection and Elimination	**Deadline**	**FY19 Permit Year 1**	**FY20 Permit Year 2**	**FY21 Permit Year 3**	**FY22 Permit Year 4**	**FY23 Permit Year 5**	**FY24 Permit Year 6**
Adopt bylaw prohibiting illicit discharges and authorizing investigation, repair, and enforcement	June 30, 2021			☐			
Identify all known SSOs that occurred in the last five years	June 30, 2022 and update annually thereafter	✓			☐	☐	☐
Notify EPA / MassDEP of SSO orally within 24 hrs and in writing within 5 days	Ongoing	☑	☐	☐	☐	☐	☐
Notify responsible party immediately upon identification of illicit discharge or illegal connection	Ongoing	☑	☐	☐	☐	☐	☐
Eliminate known illicits or set expeditious schedule in 60 days	Ongoing	☑	☐	☐	☐	☐	☐

Town of Winchendon
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MCM 3: Illicit Discharge Detection and Elimination (cont.)	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	FY24 Permit Year 6
Outfall / interconnection inventory and ranking	June 30, 2022 and update annually thereafter				☐	☐	☐
Written IDDE Program document, including statement of responsibilities and written outfall screening and sampling procedure	June 30, 2022				☐		
Written catchment investigation procedure	Dec. 30, 2022					☐	
Annually train IDDE staff	Annually by June 30 beginning in Permit Year 4	☑	☐	☐	☐	☐	☐
Complete dry weather outfall and interconnection screening	June 30, 2024						☐
Investigation of problem catchments must begin, including wet weather screening	June 30, 2023					☐	☐
Finish "Phase I" system mapping requirements - outfalls and receiving waters - open channel conveyances - interconnections with other MS4s - municipally-owned treatment structures - initial catchment delineations	June 30, 2023					☐	
Update system map with available "Phase II" information (see permit for detailed list)	June 30, 2031, Update annually after Phase I mapping is completed						☐

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MCM 4: Construction Site Erosion & Sedimentation	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	FY24 Permit Year 6
Bylaw for sediment, erosion, debris, litter and sanitary waste	June 30, 2021			☐			
Written procedure for site plan review/ inspection/ enforcement	June 30, 2021			☐			
MCM 5: New Development and Redevelopment	**Deadline**	**FY19 Permit Year 1**	**FY20 Permit Year 2**	**FY21 Permit Year 3**	**FY22 Permit Year 4**	**FY23 Permit Year 5**	**FY24 Permit Year 6**
MCM 5 Requirement: Establish a post-construction stormwater bylaw and include a requirement that new development and redevelopment BMPs be optimized for nitrogen and phosphorus removal (see permit for detailed list) **Impaired Waters/TMDL Requirement**: Require stormwater management systems designed on commercial and industrial land use area draining to the Millers River to incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill	**MCM 5 Deadline**: June 30, 2021 **Impaired Waters/TMDL Requirement:** June 30, 2022			☐			
Report evaluating street design, parking guidelines and related rules	June 30, 2024 and update annually thereafter						☐

Town of Winchendon
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MCM 5: New Development and Redevelopment (cont.)	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	FY24 Permit Year 6
Report evaluating allowing green roofs, infiltration, rain harvesting	June 30, 2024						☐
Identify/rank five or more existing permittee-owned sites that could be retrofitted with structural BMPs **Impaired Waters/TMDL Requirement:** Include consideration of BMPs to reduce nitrogen and phosphorus discharges	June 30, 2024 and update annually thereafter						☐
MCM 6: Good Housekeeping	**Deadline**	**FY19 Permit Year 1**	**FY20 Permit Year 2**	**FY21 Permit Year 3**	**FY22 Permit Year 4**	**FY23 Permit Year 5**	**FY24 Permit Year 6**
Inventory permittee-owned parks/open space, buildings/facilities and vehicles/equipment	June 30, 2022 and update annually thereafter				☐	☐	☐
Initial catch basin optimization plan	June 30, 2021			☐			
Written O&M procedures for parks, buildings, facilities, vehicles and equipment, and infrastructure operations and maintenance (e.g. catch basins, sweeping, and winter road maintenance) **Impaired Waters/TMDL Requirement:** Include requirements for use of slow-release fertilizers and proper management of grass cuttings and leaf litter	June 30, 2022 and update annually thereafter				☐	☐	☐

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MCM 6: Good Housekeeping (cont.)	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	FY24 Permit Year 6
Clean catch basins per plan	Annually by June 30 beginning in Permit Year 3			☐	☐	☐	☐
Impaired Waters/TMDL Requirement: Sweep streets two times per year, once in the spring and once in the fall. For rural streets with no curbs or catch basins, the Town must sweep at least once per year or develop a targeted inspection and sweeping plan for those streets, per Section 2.3.7.a.iii.3 of the permit.	Annually by June 30 beginning in Permit Year 3			☐	☐	☐	☐
Inspect all municipally owned mapped stormwater treatment structures (excluding catch basins)	Annually by June 30 beginning in Permit Year 3			☐	☐	☐	☐
Implement winter road maintenance program	Annually by June 30 beginning in Permit Year 3			☐	☐	☐	☐
Develop and implement a written SWPPP for permittee-owned or operated facilities	Develop by June 30, 2022 and implement continuously thereafter				☐	☐	☐
Cover or enclose salt piles	June 30, 2022 and implement continuously thereafter				☐	☐	☐

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Long Island Sound Nitrogen TMDL	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	FY24 Permit Year 6
Complete a Nitrogen Source Identification Report	June 30, 2024						☐
Evaluate all properties identified in the Retrofit Feasibility Assessment and the Nitrogen Source Identification Report that are within the Long Island Sound catchment area, for structural BMP installation. Provide a list of planned structural BMPs and a plan and schedule for implementation in the Permit Year 7 Annual Report.	June 30, 2025						
Track existing or installed structural BMPs in the urbanized area and document the BMP type, total area treated, design storage volume and estimated nitrogen removed by mass.	Sept. 28, 2021 and annually thereafter			☐	☐	☐	☐
Plan and install a minimum of one structural BMP as a demonstration project within the drainage area of the Long Island Sound or its tributaries. The demonstration project shall target a catchment with high nitrogen load potential.	June 30, 2026						

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Millers River Phosphorus Impairment	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	FY24 Permit Year 6
Complete a Phosphorus Source Identification Report	June 30, 2024						☐
Evaluate all properties identified in the Retrofit Feasibility Assessment and the Phosphorus Source Identification Report that are within the Millers River catchment area, for structural BMP installation. Provide a list of planned structural BMPs and a plan and schedule for implementation in the Permit Year 7 Annual Report.	June 30, 2025						
Track existing or installed structural BMPs in the urbanized area and document the BMP type, total area treated, design storage volume and estimated phosphorus removed by mass.	September 28, 2021 and annually thereafter			☐	☐	☐	☐
Plan and install a minimum of one structural BMP as a demonstration project within the drainage area of the Millers River or its tributaries. The demonstration project shall target a catchment with high phosphorus load potential.	June 30, 2026						

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Millers Basin Lakes Phosphorus TMDL	Deadline	FY19 Permit Year 1	FY20 Permit Year 2	FY21 Permit Year 3	FY22 Permit Year 4	FY23 Permit Year 5	FY24 Permit Year 6
Complete Lake Phosphorus Control Plan (LPCP) Legal Analysis	June 30, 2022				☐		
Complete LPCP funding source assessment	June 30, 2023					☐	
Define LPCP area and scope	June 30, 2024						☐
Calculate baseline phosphorus, allowable phosphorus load, and phosphorus reduction requirements	June 30, 2024						☐
Complete all remaining elements of the written LPCP plan (see permit for detailed list)	June 30, 2025						
Millers River and Otter River Bacteria Impairments	**Deadline**	**FY19 Permit Year 1**	**FY20 Permit Year 2**	**FY21 Permit Year 3**	**FY22 Permit Year 4**	**FY23 Permit Year 5**	**FY24 Permit Year 6**
Distribute information on proper septic system maintenance to owners of septic systems within any catchment that discharges to the Millers River or Otter River	June 30, 2021			☐			
Distribute materials to dog owners on proper pet waste management during issuance or renewal of dog licenses	June 30, 2021			☐			
Millers River Turbidity Impairment	**Deadline**	**FY19 Permit Year 1**	**FY20 Permit Year 2**	**FY21 Permit Year 3**	**FY22 Permit Year 4**	**FY23 Permit Year 5**	**FY24 Permit Year 6**
These requirements have been addressed in other sections of this 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.

Checklist of Key Documentation

Documentation of BMP progress should be kept in Appendix H. The following checklist includes the required documentation for MCMs 1-6, Impaired Waters and TMDLs.

MCM 1 – Public Education and Outreach

- ☐ All educational materials provided to target audiences;
- ☐ Distribution lists for target audiences;
- ☐ Dates of distribution of educational materials; and
- ☐ Note educational goals and opinion on effectiveness based on results tracked; modify education and outreach program if necessary.

MCM 2 – Public Involvement and Participation

- ☐ Dates of public meetings when a stormwater management-related topic is discussed; and
- ☐ Dates of public participation activities and quantification of participation (such as number of volunteers/participants, number of bags collected, etc.).

MCM 3 – Illicit Discharge Detection and Elimination (IDDE) Program

- ☐ Log of phone calls and complaints received regarding suspected illicit connections and other storm drain issues, including dates and actions taken;
- ☐ SSO inventory (updated annually), including the number of SSOs, illicit discharges, and illicit connections identified and/or removed and the volume of sewage removed;
- ☐ Drainage system map;
- ☐ Data collected during dry and wet weather outfall/interconnection investigations, including the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening results, and results of all analyses (summarize on an annual basis and for the entire permit term);
- ☐ Number and percent of total outfall catchments served by the MS4 evaluated using the catchment investigation procedure;
- ☐ Presence or absence of System Vulnerability Factors for each catchment;
- ☐ Data collected during key junction manhole investigations;
- ☐ Inspection and maintenance records; and
- ☐ Frequency and type of employee training, including employees trained, training topic, date/time, and materials presented.

MCM 4 – Construction Site Stormwater Runoff Control

- ☐ Number of site reviews, inspections, and enforcement actions; and
- ☐ Modifications to Winchendon's ordinances, regulations, policies, and/or procedures as necessary.

MCM 5 – Post Construction Stormwater Management in New Development and Redevelopment

- ☐ Measures the Town has taken to ensure adequate long-term operation and maintenance of stormwater BMPs and to require submission of as-built plans;
- ☐ Modifications to Winchendon's ordinances, regulations, policies, and/or procedures as necessary;
- ☐ Status of street and parking lot guidelines assessment. including any planned or completed changes to local regulations and guidelines
- ☐ Status of green infrastructure assessment, including findings and progress towards making green infrastructure allowable; and
- ☐ Retrofit inventory, including all sites that have been modified or retrofitted. Sites should include Town-owned sites identified in the inventory as well as non-municipal property modified or retrofitted to mitigate impervious area.

MCM 6 – Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- ☐ Inventory of municipal facilities and equipment;
- ☐ Plan for optimizing catch basin cleaning and metrics about the number of catch basins, quantity cleaned and inspected, and total volume of material removed from all catch basins;
- ☐ Miles of streets cleaned and the volume of material removed; and
- ☐ All records associated with SWPPP quarterly site inspections, maintenance activities, and training.

Impaired Waters and TMDLs

Bacteria or Pathogens Impairment *– Millers River, Otter Brook*

- ☐ All educational materials provided to target audiences;
- ☐ Distribution lists for target audiences;
- ☐ Dates of distribution of educational materials; and
- ☐ Records from IDDE Program implementation.

Solids Impairment *– Otter River*

- ☐ Modifications to Winchendon's bylaws, regulations, policies, and/or procedures as necessary;
- ☐ Miles of streets cleaned, the volume of material removed, and the street sweeping schedule; and
- ☐ Prioritize catch basin inspection and maintenance to ensure no sump is more than 50 percent full; track metrics about the number of catch basins, quantity cleaned and inspected, and total volume of material removed from all catch basins.

Impaired Waters and TMDLs, continued

Lake and Pond Phosphorus TMDL *– Millers Basin Lakes: Lake Denison, Stoddard Pond, Whitney Pond, and Whites Mill Pond*

- ☐ Progress report on the planning and implementation of the Lake Phosphorus Control Plan;

Beginning in the **Year 7 Annual Report**, the Town shall include:

- ☐ All non-structural control measures implemented and the corresponding phosphorus reduction in mass/year;
- ☐ The location, corresponding phosphorus reduction and date of last completed maintenance for all structural controls implemented during the reporting year and all previous years;
- ☐ Phosphorus load increase due to development over the previous reporting period and to date; and
- ☐ Estimated yearly phosphorus export rate (calculated following the procedure in Appendix H Part II.2.d).

Phosphorus Impairment *– Millers River*

- ☐ All educational materials provided to target audiences;
- ☐ Distribution lists for target audiences;
- ☐ Dates of distribution of educational materials;
- ☐ Modifications to Winchendon's bylaws, regulations, policies, and/or procedures as necessary;
- ☐ Plan for proper management of grass cuttings and leaf litter;
- ☐ Miles of streets cleaned and the volume of material removed – increase sweeping to twice per year in the Millers River watershed;
- ☐ All screening and monitoring results targeting the Millers River or its tributaries;
- ☐ Track existing or installed structural BMPs in the urbanized area and document the BMP type, total area treated, design storage volume and estimated phosphorus removed by mass;

Beginning in the **Year 7 Annual Report**, the Town shall include:

- ☐ List of planned structural BMPs and a schedule for implementation.

Impaired Waters and TMDLs, continued

Long Island Sound Nitrogen TMDL

- ☐ All educational materials provided to target audiences;
- ☐ Distribution lists for target audiences;
- ☐ Dates of distribution of educational materials;
- ☐ Modifications to Winchendon's bylaws, regulations, policies, and/or procedures as necessary;
- ☐ Plan for proper management of grass cuttings and leaf litter;
- ☐ Requirements for use of slow-release fertilizers on Town-owned properties currently using fertilizer;
- ☐ Miles of streets cleaned and the volume of material removed – increase sweeping to twice per year in the Long Island Sound watershed;
- ☐ Track existing or installed structural BMPs in the urbanized area and document the BMP type, total area treated, design storage volume and estimated nitrogen removed by mass;
- ☐ All screening and monitoring results targeting the Long Island Sound or its tributaries;

Beginning in the **Year 7 Annual Report**, the Town shall include:

- ☐ List of planned structural BMPs and a schedule for implementation.

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)

Not applicable

☐ Publicly available at the website below

Not applicable

"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

Signature _____ Date

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 A.

Small MS4 Authorization

The NOI was submitted on Sep 28, 2018

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

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

Authorization to Discharge was granted on Apr 5, 2019

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

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

Stormwater Management Program Team

SWMP Team Coordinator

Name	Albert Gallant	Title	DPW Director
Department	Department of Public Works		
Phone Number	978-297-0170	Email	agallant@townofwinchendon.com
Responsibilities	Manage the Town of Winchendon's Stormwater Management Program and compliance with the MS4 Permit, and oversee the DPW's Stormwater Operations, including public education and outreach, the IDDE program and Good Housekeeping Program.		

SWMP Team

Name	Tracy Murphy	Title	Director of Planning and Development
Department	Department of Planning & Development		
Phone Number	978-297-5414	Email	tmurphy@townofwinchendon.com
Responsibilities	Assist the DPW in public education and outreach to developers and in mapping the storm sewer system, work with the Conservation Commission, Building Department and Zoning Board to develop construction and post-construction bylaws and site inspection policies and procedures, and assess street and parking lot guidelines and regulations for green infrastructure.		

Name	David Koonce	Title	Conservation Agent
Department	Conservation Commission		
Phone Number	978-297-5402	Email	dkoonce@townofwinchendon.com
Responsibilities	Assist the DPW in public education and outreach to developers, and work with the Planning Department, Building Department, and Zoning Board to develop construction and post-construction bylaws and site inspection policies and procedures.		

Name	James Abare, R.S.	Title	Health Agent
Department	Board of Health		
Phone Number	978-297-3537	Email	jabare@townofwinchendon.com

Responsibilities	Assist the DPW in developing and enforcing the IDDE Bylaw.

Name	Geoff Newton	Title	Building Commissioner
Department	Building Department		
Phone Number	978-297-5401	Email	gnewton@townofwinchendon.com
Responsibilities	Work with the Conservation Commission, Planning Department and Zoning Board to develop construction bylaws and site inspection policies and procedures.		

Name	Alison Manugian	Title	Planning Agent
Department	Zoning Board/Planning Department		
Phone Number	978-297-5410	Email	amanugian@townofwinchendon.com
Responsibilities	Work with the Conservation Commission, Planning Department and Building Department to develop construction bylaws and site inspection policies and procedures.		

Name	James Murphy	Title	Director of Facilities
Department	School Department		
Phone Number	978-297-0031	Email	jmurphy@winchendononk12.org
Responsibilities	Assist the DPW in developing an inventory and O&M procedures for school facilities.		

Add SWMP Member

Receiving Waters

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

OR

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

Table of Receiving Waters included in 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
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		☐	☐	☐	☐	☐	☐	☐	☐	☐	
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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 C and National Historic Preservation Act Certification attached in Appendix D.

- ☐ Publicly available at the website listed below

Under what criterion did permittee determine eligibility for ESA?

☐ Criterion A ☐ Criterion B ☒ Criterion C

Under what criterion did permittee determine eligibility for Historic Properties?

☒ Criterion A ☐ Criterion B ☐ Criterion C

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

Not applicable.

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

Not applicable.

MCM 1
Public Education and Outreach
Permit Part 2.3.2

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

Examples and Templates:
EPA's Stormwater Education Toolbox
MassDEP's Stormwater Outreach Materials

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

BMP: Multi-media Public Education and Outreach

BMP Number (Optional) **1A**

Document Name and/or Web Address: To be included in Appendix H when complete.

Description:

Education and outreach on stormwater management using multi media methods, including web and printed materials. Distribute seasonal messages to residents related to impaired waterbodies in the spring, summer and fall. 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 Section 173 of the Town of Winchendon Bylaws. Annual fall messages will encourage proper disposal of leaf litter. The Town will also provide information to owners of septic systems about proper maintenance in any catchment that discharges to a waterbody impaired for bacteria or pathogens (i.e., Millers River Segment MA35-01, Otter River). This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

Targeted Audience: Residents

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Distribute a minimum of one educational message over the permit term to residents on stormwater management topics of significance in Winchendon. Beginning in Permit Year 3, supplement this message with three educational messages per year in the spring, summer and fall as outlined in Appendices F and H of the General Permit. The Town may also wish to measure results in more specific ways like the percent of residents reached or changes in behaviors impacting stormwater management.

Message Date(s): 2019 (PY2), 2020 (PY3), 2021 (PY4), 2022 (PY5)

BMP: Multi-media Public Education and Outreach

BMP Number (Optional) **1B**

Document Name and/or Web Address: To be included in Appendix H when complete.

Description:

Education and outreach on stormwater management using multi media methods, including web and printed materials. Distribute seasonal messages to businesses, institutions and commercial facilities related to impaired waterbodies in the spring, summer and fall. 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 Section 173 of the Town of Winchendon Bylaws. Annual fall messages will encourage proper disposal of leaf litter. The Town will also provide information to owners of septic systems about proper maintenance in any catchment that discharges to a waterbody impaired for bacteria or pathogens (i.e., Millers River Segment MA35-01, Otter River). 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

Measurable Goal(s):

Distribute a minimum of one educational message over the permit term to businesses, institutions and commercial facilities on stormwater management topics of significance in Winchendon. Beginning in Permit Year 3, supplement this message with three educational messages per year in the spring, summer and fall as outlined in Appendices F and H of the General Permit. The Town may also wish to measure results in more specific ways like the percent of businesses, institutions and commercial facilities reached or changes in behaviors impacting stormwater management.

Message Date(s): 2019 (PY2), 2020 (PY3), 2021 (PY4), 2022 (PY5)

BMP: Multi-media Public Education and Outreach

BMP Number (Optional) **1C**

Document Name and/or Web Address: To be included in Appendix H when complete.

Description:

Education and outreach to developers on stormwater management using multi media methods, including web and printed materials.

Targeted Audience: Developers (construction)

Responsible Department/Parties: Planning Department/Conservation Commission

Measurable Goal(s):

Distribute a minimum of one (1) educational message over the permit term to developers. The Town may also wish to measure results in more specific ways like the percent of developers reached or changes in behaviors impacting stormwater management.

Message Date(s): 2019 (PY2)

BMP: Multi-media Public Education Outreach

BMP Number (Optional) **1D**

Document Name and/or Web Address: To be included in Appendix H when complete.

Description:

Education and outreach to industrial facilities on stormwater management using multi media methods, including web and printed materials.

Targeted Audience: Industrial facilities

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Distribute a minimum of one (1) educational message over the permit term to industrial facilities. The Town may also wish to measure results in more specific ways like the percent of industrial facilities reached or changes in behaviors impacting stormwater management.

Message Date(s): 2020 (PY3)

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):

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) **2A**

Location of Plan and/or Web Address: Available at the Department of Public Works and online at: https://www.townofwinchendon.com/public-works

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

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

BMP: Public Participation in Stormwater Management Program Development

BMP Number (Optional) **2B**

Description:

Provide opportunities for public involvement and participation in Winchendon's stormwater program.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

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

BMP: N/A

BMP Number (Optional)

Document Name and/or Web Address:

Description:

N/A

Responsible Department/Parties:

Measurable Goal(s):

Add BMP

MCM 3
Illicit Discharge Detection and Elimination (IDDE) Program

Permit Part 2.3.4

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

Examples and Templates:
IDDE Program Template and SOPs

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

BMP: IDDE Legal Authority

BMP Number (Optional) **3A** **Completed** (by year 3) ☐

Ordinances Link or Reference: To be updated when IDDE Bylaw is complete

Department Responsible for Enforcement: To be updated when IDDE Bylaw is complete

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BMP: Sanitary Sewer Overflow (SSO) Inventory

BMP Number (Optional) **3B** **Completed** (by year 4) ☐

Document Name and/or Web Address: SSO Inventory is included in Appendix E.

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: Department of Public Works

Measurable Goal(s):

Develop SSO inventory by June 30, 2022. Track number of SSOs identified and removed annually thereafter 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.

The MassDEP contacts are:	The EPA contacts are:
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	EPA New England (617) 918-1510 5 Post Office Square Boston, MA 02109

BMP: Map of Storm Sewer System

BMP Number (Optional) **3C**

Phase I Completed (by year 5) ☐

Phase II Completed (by year 13) ☐

Document Location and/or Web Address: Location to be updated when mapping is complete.

Description:

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

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

Measurable Goal(s):

By June 30, 2023, complete Phase I mapping: 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, 2031, complete Phase II mapping: map 100% of outfall spatial locations; pipes, manholes; catch basins; refined catchment delineations; and municipal sanitary sewer system.

BMP: IDDE Program

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

Written Document Completed (by year 4) ☐

Document Name and/or Web Address: To be updated when IDDE Program is complete.

Description:

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

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

By June 30, 2022, develop written IDDE program and complete outfall/interconnection and initial ranking. Update the written IDDE program annually thereafter, and update the inventory and ranking as necessary. By June 30, 2022, complete the outfall and interconnection inventory and initial ranking. By June 30, 2024, complete dry weather outfall screening and sampling for all outfalls. By June 30, 2031, complete 100% of all catchment investigations. Track number of illicit discharges identified and volume removed. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

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

To be updated when outfall/interconnection inventory, ranking and dry weather inspections are complete.

BMP: Employee Training

BMP Number (Optional) **3F**

Description:

Train employees on IDDE implementation.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Training will occur annually beginning in Permit Year 4. 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) **4A** **Completed** (by year 3) ☐

Ordinances Link or Reference: To be updated when Construction Bylaw is complete.

Department Responsible for Enforcement: To be updated when Construction Bylaw is complete.

BMP: Site Plan Review Procedures

BMP Number (Optional) **4B** **Written procedures completed** (by year 3) ☐

Document Name and/or Web Address: To be updated when site plan review procedures are complete.

Description:

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

Responsible Department/Parties: Planning Department/Conservation Commission/Building Inspector/Zoning

Measurable Goal(s):

Review current procedures and, if necessary, modify by June 30, 2021.

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

BMP Number (Optional) **4B** **Completed** (by year 3) ☐

Document Name and/or Web Address: To be updated when site inspection and enforcement procedures are complete.

Description:

Develop and implement written procedures for site inspections and enforcement procedures per Part 2.3.5 of the General Permit.

Responsible Department/Parties: Planning Department/Conservation Commission/Building Inspector/Zoning

Measurable Goal(s):

Review current procedures and, if necessary, modify by June 30, 2021.

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 5
Post Construction Stormwater Management in New Development and Redevelopment

Permit Part 2.3.6

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

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

BMP: Post-Construction Ordinance

BMP Number (Optional) **5A** **Completed** (by year 3) ☐

Town Ordinances Link or Reference: To be updated when Post Construction Bylaw is Complete. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

Department Responsible for Enforcement: To be updated when Post Construction Bylaw is Complete.

BMP: Street Design and Parking Lot Guidelines Report

BMP Number (Optional) **5B** **Completed** (by year 6) ☐

Document Name and/or Web Address: To be updated when Street Design and Parking Lot Guidelines Report is complete.

Description:

By June 30, 2024, develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if change to design standards for streets and parking lots can be modified to support low impact design options.

Responsible Department/Parties: Department of Planning and Development

Measurable Goal(s):

Complete report no later than six (6) years of permit effective date.

BMP: Green Infrastructure Report

BMP Number (Optional) **5C** **Completed** (by year 6) ☐

Document Name and/or Web Address: To be updated when Green Infrastructure Report is complete.

Description:

By June 30, 2024, develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist.

Responsible Department/Parties: Department of Planning and Development

Measurable Goal(s):

Complete report no later than six (6) years of permit effective date.

BMP: List of Municipal Retrofit Opportunities

BMP Number (Optional) **5D** **Completed** (by year 6) ☐

Document Name and/or Web Address: To be updated when Retrofit Feasibility Assessment is complete.

Description:

By June 30, 2024, conduct detailed inventory of Town-owned properties and rank for retrofit potential. At a minimum, the Town shall consider municipal properties with significant impervious cover that could be modified or retrofitted to reduce the frequency, volume or pollutant loads of stormwater discharges. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Complete report no later than six (6) years of permit effective date, beginning in Permit Year 7 keep a running list of at least five (5) retrofit sites.

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 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 Pollutoin Prevention Plans can be found here: https://www.epa.gov/npdes-permits/stormwater-tools-new-england#gh

PERMITTEE OWNED FACILITIES

BMP: Parks and Open Spaces Operations and Maintenance Procedures

BMP Number (Optional) **6A** **Written Document Completed** (by year 4) ☐

Document Name and/or Web Address: Update when Operations & Maintenance Procedures are complete.

Description:

By June 30, 2022, inventory and create O&M procedures for all Town-owned parks and open spaces within the urbanized area. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Complete inventory and written Operations & Maintenance procedures for Town-owned parks and open spaces within the urbanized area and implement Operations and Maintenance Program.

Properties List (Optional)**:**

BMP: Buildings and Facilities Operations and Maintenance Procedures

BMP Number (Optional) **6A** **Written Document Completed** (by year 4) ☐

Document Name and/or Web Address: Update when Operations & Maintenance Procedures are complete.

Description:

By June 30, 2022, inventory and create O&M procedures for all Town-owned buildings and facilities (including their storm drains) within the urbanized area.

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

Measurable Goal(s):

Complete inventory and written Operations & Maintenance procedures for Town-owned buildings and facilities within the urbanized area and implement Operations and Maintenance Program.

Properties List (Optional)**:**

BMP: Vehicles and Equipment Operations and Maintenance Procedures

BMP Number (Optional) **6A** **Written Document Completed** (by year 4) ☐

Document Name and/or Web Address: Update when Operations & Maintenance Procedures are complete.

Description:

By June 30, 2022, inventory and create O&M procedures for all Town-owned vehicles and equipment stored within the urbanized area.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Complete inventory and written Operations & Maintenance procedures for Town-owned vehicles and equipment stored within the urbanized area and implement Operations and Maintenance Program.

Properties List (Optional)**:**

INFRASTRUCTURE

BMP: Infrastructure Operations and Maintenance Procedures

BMP Number (Optional) **6B** **Written Procedure Completed** (by year 4) ☐

Document Name and/or Web Address: Update when Operations & Maintenance Procedures are complete.

Description:

By June 30, 2022, establish and implement a program for repair and rehabilitation of MS4 infrastructure within the urbanized area. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Establish and implement repair and rehabilitation program.

BMP: Catch Basin Cleaning Program

BMP Number (Optional) **6D-1** **Written Procedure Completed** (by year 4) ☐

Document Name and/or Web Address: To be updated when Catch Basin Cleaning Program is complete.

Description:

By June 30, 2022, implement procedures developed under BMP 6B to optimize catch basin cleaning within the urbanized area. This BMP will be coordinated with requirements for TMDLs and Water Quality Limited Waters.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Track frequency and material quantity of catch basin cleaning. Document plan for optimizing catch basin cleaning in Permit Year 4 Annual Report.

BMP: Street Sweeping Program

BMP Number (Optional) **6D-2** **Written Procedure Completed** (by year 4) ☐

Document Name and/or Web Address: To be updated when Street Sweeping Program is complete.

Description:

By June 30, 2022, implement procedures for street and parking lot sweeping developed under BMP 6B. Per the requirements for TMDLs and Water Quality Limited Waters, Winchendon will conduct street and parking lot sweeping within the urbanized area (See Appendix A) twice per year at a minimum, once in the spring and once in the fall. For rural streets with no curbs or catch basins, the Town must sweep at least once per year or develop a targeted inspection and sweeping plan for those streets, per Section 2.3.7.a.iii.3 of the permit.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Annually track number of miles cleaned or the volume or mass of material removed beginning in Permit Year 4.

BMP: Winter Road Maintenance Program

BMP Number (Optional) **6D-3** **Written Procedure Completed** (by year 4) ☐

Document Name and/or Web Address: To be updated when Winter Road Maintenance Program is complete.

Description:

By June 30, 2022, implement procedures for use and storage of deicing materials developed under BMP 6B.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Evaluate at least one salt/chloride alternative for use in the municipality. Implement program for winter road maintenance throughout permit term beginning in Permit Year 4.

BMP: Stormwater Treatment Structures Inspection and Maintenance Procedures

BMP Number (Optional) **6D-4** **Completed** (by year 4) ☐

Document Name and/or Web Address: To be updated Storm Treatment Structure Inspection and Maintenance Procedures are complete.

Description:

By June 30, 2022, implement procedures to inspect and maintain Town-owned structural stormwater BMPs within the urbanized area. Inspect stormwater treatment structures annually by June 30, beginning in Year 4.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Develop an inventory of Town-owned structural stormwater BMPs in the urbanized area within five years of permit effective date. Annually report on inspection and maintenance conducted.

BMP: SWPPP

BMP Number (Optional) **6C** **Completed** (by year 4) ☐

Document Name and/or Web Address: To be updated when SWPPP is complete.

Description:

By June 30, 2022, develop and implement a SWPPP and SWPPP BMPs at the DPW facility.

Responsible Department/Parties: Department of Public Works

Measurable Goal(s):

Develop and implement SWPPP for DPW facility.

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 or include a copy in Appendix H when complete.

Year 2 Annual Report

Document Name and/or Web Address:

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

Year 3 Annual Report

Document Name and/or Web Address:

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

Year 4 Annual Report

Document Name and/or Web Address:

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

Year 5 Annual Report

Document Name and/or Web Address:

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

Year X Annual Report

Document Name and/or Web Address:

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

Add a Year

TMDLs and Water Quality Limited Waters

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

Impairment(s)

☒ Bacteria/Pathogens ☐ Chloride ☐ Nitrogen ☒ Phosphorus

☒ Solids/oil/grease (hydrocarbons)/metals

TMDL(s)

In State:

☐ Assabet River Phosphorus ☐ Bacteria and Pathogen ☐ Cape Cod Nitrogen

☐ Charles River Watershed Phosphorus ☒ Lake and Pond Phosphorus

Out of State:

☐ Bacteria and Pathogen ☐ Metals ☒ Nitrogen ☐ Phosphorus

Clear Impairments and TMDLs

Bacteria/Pathogens

Combination of Impaired Waters Requirements and TMDL Requirements as Applicable

Applicable Receiving Waterbody(ies)	TMDL Name (if applicable)	Add/Delete Row
Millers River (MA35-01)		+ -
Otter River (MA35-08)		+ -

Annual Requirements Beginning Year 3

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 Winchendon will implement the IDDE program described in BMPs 3A-3F. Additionally, catchments draining to any of the waterbodies listed above, which are impaired for bacteria or pathogens, 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 Winchendon will supplement the residential public education program described in BMP 1A with an annual message about the proper management of pet waste, including noting Section 173 of the Town of Winchendon 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 Winchendon will supplement the residential public education program described in BMP 1A by disseminating educational material to dog owners at the time of issuance or renewal of dog licenses. This is an ongoing requirement.

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

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

The Town of Winchendon will supplement the residential public education program described in BMP 1A by providing information to owners of septic systems about proper maintenance in any catchment that discharges to a waterbody impaired for bacteria or pathogens (i.e., Millers River and Otter River).

Nitrogen

Combination of Impaired Waters Requirements and TMDL Requirements as Applicable

Applicable Receiving Waterbody(ies)	TMDL Name (if applicable)	Add/Delete Row
Millers River (MA35-01, MA35-02, MA35-20)	Long Island Sound Nitrogen TMDL	+ -

Annual Requirements Beginning Year 3

Public Education and Outreach

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

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

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

The Town of Winchendon will supplement its residential and commercial/institutional public education programs described in BMPs 1A and 1B with an annual spring message encouraging the proper disposal of grass clippings and the use of slow-release 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 Winchendon will supplement its residential and commercial/institutional public education programs described in BMPs 1A and 1B with an annual summer message encouraging the proper management of pet waste and noting Section 173 of the Town of Winchendon 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 Winchendon will supplement its residential and commercial/institutional public education programs described in BMPs 1A and 1B with an annual fall message encouraging the proper disposal of leaf litter.

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

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

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

BEGIN IN PERMIT YEAR 4 (Note: EPA Template provides incorrect deadline). As part of the Operations & Maintenance procedures for Town-owned parks and open spaces established as part of BMP 6A, the Town of Winchendon will establish requirements for use of slow release fertilizer on Town-owned property currently using fertilizer and encourage reduction of fertilizer use.

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 4 (Note: EPA Template provides incorrect deadline). As part of the Town's Operations & Maintenance procedures for Town-owned properties established as part of BMP 6A, the Town of Winchendon 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.

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:

BEGIN IN PERMIT YEAR 4 (Note: EPA Template provides incorrect deadline). As part of the Town's Operation & Maintenance procedures for street and parking lot sweeping established as part of BMP 6D-2, the Town of Winchendon will increase street and parking lot sweeping to a minimum of two occurrences per year, once in the spring and once in the fall. For rural streets with no curbs or catch basins, the Town must sweep at least once per year or develop a targeted inspection and sweeping plan for those streets, per Section 2.3.7.a.iii.3 of the permit.

Nitrogen Reduction Tracking BMP

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

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

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

Requirements Due by Year 4

Stormwater Management in New Development and Redevelopment

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

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

The Post-Construction Bylaw, developed under BMP 5A, and any associated regulations shall require new development and redevelopment stormwater management BMPs to be optimized for nitrogen removal.

Requirements Due by Year 6

Complete a Nitrogen Source Identification Report

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

The Town of Winchendon shall complete the Nitrogen Source Identification Report by June 30, 2024, which will include the following components:

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

The Nitrogen Source Identification Report will be included in Appendix I when complete.

Stormwater Management in New Development and Redevelopment

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

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

The Retrofit Feasibility Assessment described in BMP 5D will include consideration of BMPs to reduce nitrogen discharges.

Requirements Due by Year 7

Potential Structural BMPs

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

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

The Town of Winchendon will evaluate properties identified in the Retrofit Feasibility Assessment and the Nitrogen Source Identification report that are within the drainage area of the Long Island Sound or its tributaries, for structural BMP installation. The evaluation will be included in Appendix I 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 Winchendon will provide a list of planned structural BMPs and a plan and schedule for implementation. The document will be included in Appendix I when complete.

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
Otter River (MA35-08) - Turbidity		+ -

Annual Requirements Beginning Year 3

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

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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:

BEGIN IN PERMIT YEAR 4 (Note: EPA Template provides incorrect deadline). For target areas with potential for high pollutant loads, the Town of Winchendon 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 BMP 6D-2, 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:

BEGIN IN PERMIT YEAR 4 (Note: EPA Template provides incorrect deadline). As described in BMP 6D-1, the Town of Winchendon 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 4

Stormwater Management in New Development and Redevelopment

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

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

By June 30, 2022, the Town of Winchendon will require stormwater management systems designed on commercial and industrial land draining to the Otter River (segment MA35-08) to incorporate

designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or other unexpected event. The Town will also encourage commercial and industrial property owners with stormwater management systems designed to infiltrate to provide the level of pollutant removal equal to or greater than the level of pollutant removal provided through the use of biofiltration of the same volume of runoff to be infiltrated, prior to infiltration. This requirement will be coordinated with the requirements of BMP 5A.

Phosphorus

Combination of Impaired Waters Requirements and TMDL Requirements as Applicable

Applicable Receiving Waterbody(ies)	TMDL Name (if applicable)	Add/Delete Row
Millers River (MA35-01)		+ -

Annual Requirements Beginning Year 3

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 Winchendon will supplement its residential and commercial/institutional public education programs described in BMPs 1A and 1B 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 Winchendon will supplement its residential and commercial/institutional public education programs described in BMPs 1A and 1B with an annual summer message encouraging the proper management of pet waste and noting Section 173 of the Town of Winchendon 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 Winchendon will supplement its residential and commercial/institutional public education programs described in BMPs 1A and 1B with an annual fall message encouraging the proper disposal of leaf litter.

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

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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:

BEGIN IN PERMIT YEAR 4 (Note: EPA Template provides incorrect deadline). As part of the Town's Operation & Maintenance procedures for street and parking lot sweeping established as part of BMP 6D-2, Winchendon will increase street and parking lot sweeping to a minimum of two occurrences per year, once in the spring and once in the fall. For rural streets with no curbs or catch basins, the Town must sweep at least once per year or develop a targeted inspection and sweeping plan for those streets, per Section 2.3.7.a.iii.3 of the permit.

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 4 (Note: EPA Template provides incorrect deadline). As part of the Town's Operations & Maintenance procedures for Town-owned properties established as part of BMP 6A, the Town of Winchendon 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 6 (Note: EPA Template provides incorrect deadline, this requirement is included under the Requirements for Permit Year 6). The Retrofit Feasibility Assessment described in BMP 5D 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.

Requirements Due by Year 4

Stormwater Management in New Development and Redevelopment

The requirement for adoption/amendment of the permittee's ordinance or other regulatory mechanism shall include a requirement that new development and redevelopment stormwater management BMPs be optimized for 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 BMP 5A, the Post-Construction Bylaw and Regulations shall be modified to require that new development and redevelopment stormwater management BMPs be optimized for phosphorus removal.

Requirements Due by Year 6

Complete a Phosphorus Source Identification Report

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

The Town of Winchendon shall complete the Phosphorus Source Identification Report by June 30, 2024, which will include the following components:

- Calculation of total MS4 area draining to Millers River
- All screening and monitoring results targeting the Millers River
- Impervious area and DCIA for the Millers River catchment area
- Identification, delineation and prioritization of potential catchments with high phosphorus loading
- Identification of potential retrofit opportunities or opportunities for the installation of structural BMPs during redevelopment, including the removal of impervious area

The Phosphorus Source Identification Report will be included in Appendix I when complete.

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 Feasibility Assessment described in BMP 5D will include consideration of BMPs to reduce phosphorus discharges.

Requirements Due by Year 7

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 Winchendon will evaluate properties identified in the Retrofit Feasibility Assessment and the Phosphorus Source Identification report that are within the drainage area of the Millers River or its tributaries, for structural BMP installation. The evaluation will be included in Appendix I 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 Winchendon will provide a list of planned structural BMPs and a plan and schedule for implementation. The document will be included in Appendix I when complete.

Lake and Pond Phosphorus TMDL

Complete Phase 1 of the Lake Phosphorus Control Plan by year 7.

Applicable Receiving Waterbody(ies)	PCP Complete	Document Location	Add/Delete Row
Lake Denison, Stoddard Pond, Whitney Pond, Whites Mill Pond	☐	Appendix I (when complete)	+ -

Appendix A

Town Specific MS4 Background

Winchendon is located in Worcester County, approximately 35 miles northwest of the City of Worcester, and borders the Massachusetts/New Hampshire state line. There are approximately 0.8 square miles of open water within its 44.1 square mile footprint. According to the 2010 United States Census, Winchendon is home to approximately 10,300 residents in more than 3,800 households. The Town of Winchendon is a new permittee that was not regulated under the 2003 Small MS4 General Permit. Downtown Winchendon and neighborhoods along Route 202 are within the Urbanized Area, as seen in Figure 2, and therefore, regulated by EPA under the 2016 MS4 program.

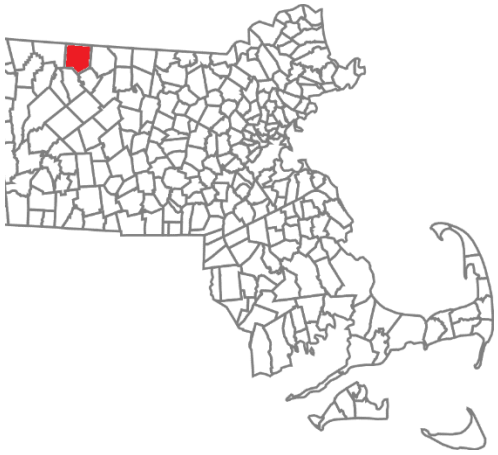

Figure 1 Location of Winchendon, Massachusetts

The Town of Winchendon is located entirely within the Millers River Watershed, which eventually discharges to the Connecticut River. Protecting the quality of Winchendon'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 Winchendon's waterbodies, including bacterial contamination and nutrient pollution.

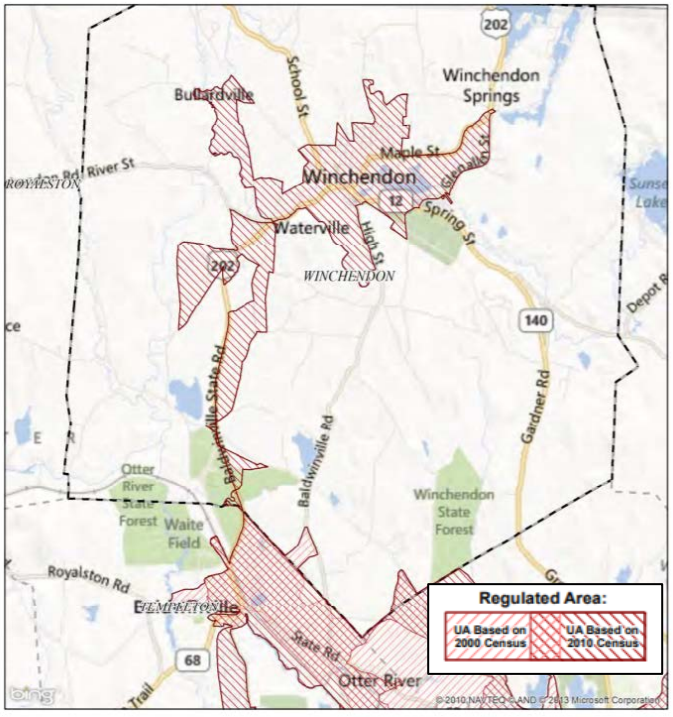

Figure 2 Urbanized Area in Winchendon, MA

Although Winchendon is a new permittee, the Town has taken action towards protecting its water resources and reducing pollution in stormwater runoff. In 2009, the Town worked with the Millers River Watershed Council to develop Low Impact Development (LID) Regulations that require all new development and redevelopment projects disturbing more than 20,000 square feet within Winchendon to develop an LID Management Plan, Operations & Maintenance Plan and Erosion Sediment Control Plan, and to apply for a permit from the Town.

Appendix B

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

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

Part I: General Conditions

General Information

Name of Municipality or Organization: Town of Winchendon State: MA

EPA NPDES Permit Number (if applicable):

Primary MS4 Program Manager Contact Information

Name: Albert Gallant Title: DPW Director

Street Address Line 1: 109 Front Street

Street Address Line 2:

City: Winchendon State: MA Zip Code: 01475

Email: agallant@townofwinchendon.com Phone Number: (978) 297-0170

Fax Number:

Other Information

Stormwater Management Program (SWMP) Location (web address or physical location, if already completed): Once complete, SWMP will be available at Department of Public Works at 109 Front Street and online: https://www.townofwinchendon.com/public-works

Eligibility Determination

Endangered Species Act (ESA) Determination Complete? Yes

Eligibility Criteria (check all that apply): ☐ A ☐ B ☒ C

National Historic Preservation Act (NHPA) Determination Complete? Yes

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

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
Millers River (MA35-01)	Unknown*	☐	☐	☐	☐	☐	☒	☐	☐	☐	Ambient Bioassays -- Chronic Aquatic Toxicity, Fecal Coliform, PCB in Fish Tissue
Millers River (MA35-02)	Unknown*	☐	☐	☐	☐	☐	☐	☐	☐	☐	PCB in Fish Tissue
Millers River (MA35-20)	Unknown*	☐	☐	☐	☐	☐	☐	☐	☐	☐	
North Branch Millers River (MA35-21)	Unknown*	☐	☐	☐	☐	☐	☐	☐	☐	☐	Mercury in Fish Tissue
Otter River (MA35-08)	Unknown*	☐	☐	☐	☐	☐	☐	☒	☐	☐	Total Dissolved Solids, Aquatic Macroinvertebrate Bioassessments, Fecal Coliform, Fishes Bioassessments, Nutrient/Eutrophication Biological Indicators, PCB in Fish Tissue, Taste and Odor
Whitney Pond (MA35101)	Unknown*	☐	☐	☐	☐	☐	☐	☐	☐	☐	Mercury in Fish Tissue
Whites Mill Pond (MA35099)	Unknown*	☐	☐	☐	☐	☐	☐	☐	☐	☐	Mercury in Fish Tissue
Lake Denison (MA35017)	Unknown*	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Tannery Pond	Unknown*	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Beamen Pond	Unknown*	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Beamen Brook	Unknown*	☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
*See note 3 in Part IV		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
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Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary

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

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

MCM 1: Public Education and Outreach

BMP ID	BMP Media/Category	BMP Description	Targeted Audience	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
1A	Multi-media methods (including web and print materials at public buildings)	Education and outreach on stormwater management topics of significance in Winchendon (including proper pet waste management, proper use of pesticides and fertilizers). Educational topics will include but are not limited to those in Part 2.3.2.d.i	Residents	Department of Public Works	Distribute a minimum of one (1) educational message	2019 (PY2)
1B	Multi-media methods (including web and print materials at public buildings)	Education and outreach on stormwater management topics of significance in Winchendon (including proper lawn maintenance, parking lot sweeping). Educational topics will include but are not limited to those in Part 2.3.2.d.ii	Businesses, Institutions, and Commercial Facilities	Department of Public Works	Distribute a minimum of one (1) educational message	2020 (PY3)

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

BMP ID	BMP Media/Category	BMP Description	Targeted Audience	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
1C	Multi-media methods (including web and permit application attachment)	Education and outreach on stormwater management topics of significance in Winchendon (including proper erosion and sedimentation control, permit requirements, design standards). Educational topics will include but are not limited to those in Part 2.3.2.d.iii	Developers (Construction)	Planning/ Conservation	Distribute a minimum of one (1) educational message	2019 (PY2)
1D	Multi-media methods (including web)	Education and outreach on stormwater management topics of significance in Winchendon (including pollution prevention, illicit discharges, Multi-Sector General Permit). Educational topics will include but are not limited to those in Part 2.3.2.d.iv	Industrial Facilities	Department of Public Works	Distribute a minimum of one (1) educational message	2020 (PY3)

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

Part III: Stormwater Management Program Summary

MCM 2: Public Involvement and Participation

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
2A	Public Review	SWMP Review (Plan and reports available on web and at public meetings)	Department of Public Works	Annually provide the public with an opportunity to participate in the review and implementation of the SWMP	2018 (PY1)
2B	Public Participation	Provide opportunities for public involvement and participation in Winchendon's stormwater program (including clean up events). Specific activities, schedule, and lead departments are included in the SWMP.	Department of Public Works	Ongoing opportunities available to the public	2018 (PY1)

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

Part III: Stormwater Management Program Summary

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
3A	IDDE Bylaw	Develop local bylaw and regulations, if necessary, to contain new MS4 provisions per section 2.3.4	Board of Health/ Department of Public Works	Complete within three (3) years of effective date of permit.	2020 (PY3)
3B	SSO Inventory	Develop SSO inventory in accordance of permit conditions	Department of Public Works	Complete within four (4) years of effective date of permit. Track # of SSOs identified and removed annually	2020 (PY3)
3C	Storm sewer system map	Create map and update during IDDE program implementation	Department of Public Works/ Planning Department	Update map within five (5) years of effective date of permit and complete full system map 13 years after effective date of permit	2020 (PY3)
3D	Written IDDE program	Create written IDDE program	Department of Public Works	Complete within four (4) years of the effective date of permit and update as required	2020 (PY3)
3E-1	Assessment and Priority Ranking of Outfalls & Interconnections	Outfall/Interconnection Inventory and Initial Ranking as part of BMP 3D	Department of Public Works	Complete within four (4) years of the effective date of permit and update as necessary	2020 (PY3)
3E-2	Assessment and Priority Ranking of Outfalls & Interconnections	Dry Weather Outfall Screening & Sampling in accordance with IDDE Plan and permit conditions	Department of Public Works	Complete six (6) years after effective date of permit. Track # of illicit discharges identified & volume removed. Summarize screening/sampling results.	2020 (PY3)

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

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
3E-3	Assessment and Priority Ranking of Outfalls & Interconnections	Catchment Investigations according to IDDE Program and permit conditions	Department of Public Works	Complete 13 years after effective date of permit. Track # and percentage of MS4 catchments evaluated. Track # of illicit discharges identified & volume removed. Summarize screening/sampling results.	2021 (PY4)
3F	Employee Training	Train employees on IDDE implementation	Department of Public Works	Train annually. Track employees trained, training topic, date/time, and materials presented.	2020 (PY3)

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

Part III: Stormwater Management Program Summary

MCM 4: Construction Site Stormwater Runoff Control

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
4A	Construction Bylaw and Regulations	Develop local bylaw and/or regulations, if necessary, to contain MS4 provisions per Part 2.3.5.	Planning/ Conservation/ Building Inspector/ Zoning Department	Complete within three (3) years of effective date of permit.	2020 (PY3)
4B	Construction Policy and Procedures	Develop and implement written procedures for site inspections and enforcement procedures per Part 2.3.5.	Planning/ Conservation/ Building Inspector/ Zoning Department	Review current procedures and modify if necessary within three (3) years of permit effective date	2020 (PY3)

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

Part III: Stormwater Management Program Summary

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

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Measurable Goal	Beginning Year of BMP Implementation
5A	Post-Construction Bylaw and Regulations	Develop local bylaw and/or regulations to contain new MS4 provisions per Part 2.3.6.a.	Planning Department/ Conservation	Complete within three (3) years of effective date of permit.	2020 (PY3)
5B	Assess street and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.	Planning Department	Complete report no later than six (6) years of permit effective date	2022 (PY5)
5C	Assess allowing green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	Planning Department	Complete report no later than six (6) years of permit effective date	2022 (PY5)
5D	Retrofit Feasibility Assessment	Conduct detailed inventory of Town-owned properties and rank for retrofit potential	Department of Public Works	Complete report no later than six (6) years of permit effective date. Beginning in Permit Year 5, keep running list of at least five (5) retrofit sites	2022 (PY5)

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

Part III: Stormwater Management Program Summary

MCM 6: Municipal Good Housekeeping and Pollution Prevention

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Additional Description/Measurable Goal	Beginning Year of BMP Implementation
6A	Operation & Maintenance Program	Inventory and create O&M procedures for all permittee-owned parks and open spaces, buildings and facilities (including their storm drains), and vehicles and equipment	Department of Public Works/ School Department	Complete four (4) years after permit effective date, implement in following years	2021 (PY4)
6B	Operation & Maintenance Program	Establish and implement program for repair and rehabilitation of MS4 infrastructure	Department of Public Works	Complete four (4) years after permit effective date, implement in following years	2021 (PY4)
6C	Stormwater Pollution Prevention Plans (SWPPP)	Develop and implement a SWPPP for DPW facility	Department of Public Works	Complete SWPPPs within four (4) years of permit effective date, implement in following years	2021 (PY4)
6D-1	Operation & Maintenance Program	Implement procedures to optimize catch basin cleaning developed under BMP 6B	Department of Public Works	Track frequency and material quantity of catch basin cleaning in town. In PY4 Annual Report and in SWMP, document plan for optimizing catch basin cleaning and implement plan.	2018 (PY1)
6D-2	Operation & Maintenance Program	Implement procedures for street and parking lot sweeping developed under BMP 6A	Department of Public Works	Annually track number of miles cleaned or the volume or mass of material removed. Implement plan starting PY4.	2018 (PY1)
6D-3	Operation & Maintenance Program	Implement procedures for use and storage of deicing materials developed under BMP 6A	Department of Public Works	Improve program for winter road maintenance by implementing plan in PY4.	2018 (PY1)

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

BMP ID	BMP Category	BMP Description	Responsible Department/ Parties	Additional Description/Measurable Goal	Beginning Year of BMP Implementation
6D-4	Operation & Maintenance Program	Implement procedures to inspect and maintain Town-owned structural stormwater BMPs	Department of Public Works	Develop an inventory of Town-owned BMPs within five (5) years of permit effective date. Report on inspection and maintenance conducted annually.	2018 (PY1)

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

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Total Maximum Daily Load (TMDL) Requirements

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

Applicable TMDL	Action Description	Responsible Department/Parties (enter your own text to override the drop down menu)
Millers Basin Lakes (Phosphorus)	Adhere to requirements in part A.II of Appendix F	Engineering
Long Island Sound TMDL (Nitrogen)	Adhere to requirements in part B.I of Appendix F	Engineering

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.**

Pollutant	Waterbody ID(s)	Action Description	Responsible Department/Parties (enter your own text to override the drop down menu)
Phosphorus	Millers River (MA35-01)	Adhere to requirements in part II of Appendix H	Engineering
Fecal Coliform	Millers River (MA35-01)	Adhere to requirements in part III of Appendix H	Engineering
Fecal Coliform	Otter River (MA35-08)	Adhere to requirements in part III of Appendix H	Engineering
Turbidity	Otter River (MA35-08)	Adhere to requirements in part V of Appendix H	Engineering

Part IV: Notes and additional information

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

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

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

3. Since Winchendon is a new permittee under the 2016 Small MS4 General Permit, the number of outfalls is currently unknown. The attached map shows the status of the Town's current drainage system mapping. The receiving waters in Part II are based on a review of available information (i.e., EPA's 2014 Integrated List of Waters, USGS mapping, Winchendon's regulated area map, etc.) and include potential receiving waters within and adjacent to the Town's urbanized area that may or may not receive stormwater discharges from the MS4. The receiving waters will be modified to reflect actual MS4 discharges as mapping is improved throughout the permit term. Changes to the outfall inventory, receiving waters, and drainage mapping will be formalized in Annual Reports to EPA.

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

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:	Keith R. Hickey	Title:	Town Manager
Signature:		Date:	9-27-18

[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

TOWN OF WINCHENDON
STORMWATER

Legend

- Drain Manhole
- Catch Basins
- Drain Pipes
- 2010 Urbanized Areas
- Tax Parcels
- Town Boundary

1 inch = 600 feet

0 250 500 1,000 1,500 2,000 Feet

Tighe&Bond
Consulting Engineers
Environmental Specialists

December, 2015

W-2087

G:\GIS\MA\WinchendonMA\avproj\stormwater.mxd

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

VIA EMAIL

April 5, 2019

Keith R. Hickey
Town Manager

And;

Albert Gallant
DPW Director
109 Front Street
Winchendon, MA. 01475
agallant@townofwinchendon.com

Re: National Pollutant Discharge Elimination System Permit ID #: MAR041244, Town of Winchendon

Dear Albert Gallant:

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

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

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

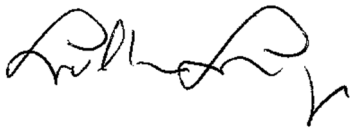
Information about the permit and available resources can be found on our website: https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit. Should you have

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

Sincerely,

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

and;



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

Appendix C

Endangered Species Act Eligibility Criteria Documentation

Endangered Species Act Eligibility Certification

TO: Town of Winchendon Stormwater Management Program Files

FROM: Tighe & Bond

COPY: Al Gallant, DPW Director
Keith R. Hickey, Town Manager

DATE: April 18, 2019

Tighe & Bond has completed the National Endangered Species Eligibility Determination screening process in accordance with Part 1.9.1 and Appendix C of U.S. EPA's National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts (see Attachment A of this memorandum), effective July 1, 2018, and determined that the **Town of Winchendon** meets **Criterion C**, where it was determined that the stormwater discharges and discharge related activities will have "no affect" on listed species or critical habitat.

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

Tighe & Bond went to the USFWS Information for Planning and Consultation (IPaC) website[1] and created an IPaC Trust Resources Report and an Official Species List from the USFWS New England Ecological Services Field Office, included in Attachment B to this memorandum. The Official Species List lists the following species that may occur or could potentially be affected by activities in the Town:

- Northern Long-eared Bat.

This report documents that there are **no critical habitats in Winchendon**.

Tighe & Bond then went to the USFWS New England Field Office website for Endangered Species Reviews/Consultations[2] and selected the Massachusetts state list[3] to review which Towns have federally-listed species. A copy of the list of Federally Listed Endangered and Threatened Species in Massachusetts is included in Attachment C to this memorandum. Based on review of this list, the Northern Long-eared Bat is listed statewide, and no additional species were identified in Winchendon.

Tighe & Bond then reviewed Step 1 Part B of the USFWS endangered species consultation, and visited the Massachusetts Natural Heritage and Endangered Species Program (NHESP) species information and conservation website about the Northern Long-eared Bat[4]. The NHESP website included a map showing the known locations of the Northern Long-eared Bat within Massachusetts. Attachment C includes a map showing there are **no roost trees or hibernating locations within or adjacent to Winchendon**.

[1] http://ecos.fws.gov/ipac/
[2] https://www.fws.gov/newengland/EndangeredSpec-Consultation_Project_Review.htm
[3] https://www.fws.gov/newengland/pdfs/MA%20species%20by%20town.pdf
[4] http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/rare-mammals/northern-long-eared-bat.html

Based on the results of the NHESP website review, Tighe & Bond determined there is no potential habitat for any listed species within the action area and therefore **no further coordination is required with the USFWS**. Attachment E provides the USFWS "no species present" letter that states that "no species are known to occur in the project area."

As described in the supplemental guidance document "Stormwater Management Notice of Intent (NOI) Frequently Asked Questions"[5] if it determined that the municipality in review only contains the Northern Long-eared Bat and it is agreed that discharges will have no effect on the species, the municipality is not required to contact USFWS. However, as described in Step 3, Question 3 below, the Town of Winchendon will consult with USFWS as needed during the permit term on any future BMPs.

Step 1 – Determine if you can meet USFWS Criterion A

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

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

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

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

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

   No, the Town of Winchendon's action area does not contains any of the above-referenced species.

2) Did your assessment of the discharge and discharge related activities indicate that the discharge or discharge related activities "may affect" or are "not likely to adversely affect" listed species or critical habitat?

   No, based on EPA guidance for the listed species, Tighe & Bond has determined that the Town's discharges and discharge related activities will have "no affect" on listed species or critical habitat (see discussion above).

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

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

1) Does your action area contain one or more of the following species: Northern Long-eared Bat, Sandplain gerardia, Small whorled Pogonia and/or American burying beetle and does not contain any following species: Dwarf wedgemussel, Northeastern bulrush, Piping

[5] https://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/sw-mgmt-noi-faqs-ma-nh.pdf

Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern beach tiger beetle?

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

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

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

3) Do you agree that if, during the course of the permit term, you plan to install a structural BMP not identified in the NOI that you will conduct an endangered species screening for the proposed site and contact the USFWS if you determine that the new activity "may affect" or is "not likely to adversely affect" listed species or critical habitat under the jurisdiction of the USFWS."

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

Tighe & Bond's review of all questions under Step 3 resulted in "Yes" and thereby we determined the Town of Winchendon's action area meets the endangered species' eligibility requirements included in **Criterion C**.

\\tighebond.com\data\Data\Projects\W\W1157 Winchendon\050 NPDES Small MS4 GP NOI\NOI\Supplemental Docs\ESA Cert\ESA Cert.docx

Attachment A

Excerpts from EPA's NPDES General Permits for Stormwater Discharges from Small MS4s in Massachusetts

Appendix C – Endangered Species Guidance

APPENDIX C
ENDANGERED SPECIES GUIDANCE

A. Background

In order to meet its obligations under the Clean Water Act and the Endangered Species Act (ESA), and to promote the goals of those Acts, the Environmental Protection Agency (EPA) is seeking to ensure the activities regulated by this general permit do not adversely affect endangered and threatened species or critical habitat. Applicants applying for permit coverage must assess the impacts of their stormwater discharges and discharge-related activities on federally listed endangered and threatened species ("listed species") and designated critical habitat ("critical habitat") to ensure that those goals are met. Prior to obtaining general permit coverage, applicants must meet the ESA eligibility provisions of this permit by following the steps in this Appendix[1].

Applicants also have an independent ESA obligation to ensure that their activities do not result in any prohibited "take" of listed species[12]. The term "Take" is used in the ESA to include harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering. "Harass" is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Many of the measures required in this general permit and in these instructions to protect species may also assist in ensuring that the applicant's activities do not result in a prohibited take of species in violation of section 9 of the ESA. If the applicant has plans or activities in an area where endangered and threatened species are located, they may wish to ensure that they are protected from potential take liability under ESA section 9 by obtaining an ESA section 10 permit or by requesting formal consultation under ESA section 7. Applicants that are unsure whether to pursue a section 10 permit or a section 7 consultation for takings protection should confer with the appropriate United States Fish and Wildlife Service (USFWS) office or the National Marine Fisheries Service (NMFS), (jointly the Services).

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

[1] EPA strongly encourages applicants to begin this process at the earliest possible stage to ensure the notification requirements for general permit coverage are complete upon Notice of Intent (NOI) submission.
[2] Section 9 of the ESA prohibits any person from "taking" a listed species (e.g. harassing or harming it) unless: (1) the taking is authorized through an "incidental take statement" as part of completion of formal consultation according to ESA section 7; (2) where an incidental take permit is obtained under ESA section 10 (which requires the development of a habitat conversion plan; or (3) where otherwise authorized or exempted under the ESA. This prohibition applies to all entities including private individuals, businesses, and governments.

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

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

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

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

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

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

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

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

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

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

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

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

Step 1 – Determine if you can meet USFWS Criterion A

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

USFWS Effects Determination Guidance:

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

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

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

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

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

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

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

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

Step 4 - Document Results of the Eligibility Determination

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

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

C. Submittal of Notice of Intent

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

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

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

E. Services Information

United States Fish and Wildlife Service Office

National websites for Endangered Species Information:
Endangered Species home page: http://endangered.fws.gov
ESA Section 7 Consultations: http://endangered.fws.gov/consultation/index.html
Information, Planning, and Conservation System (IPAC): http://ecos.fws.gov/ipac/

U.S. FWS – Region 5
Supervisor

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

Natural Heritage Network

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

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

U.S. Fish and Wildlife IPaC system instructions

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

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

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

a. Indicate the action area[1] for the MS4 by either:
    a. Drawing the boundary on the map or by uploading a shapefile.
    Select "Continue"

c. Click on the "SEE RESOURCE LIST" button and on the next screen you can export a trust resources list.This will provided a list of natural resources of concern, which will include an Endangered Species Act Species list. You may also request an official species list under "REGULATORY DOCUMENTS" Save copies and retain for your records

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

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

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

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

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

Attachment B

USFWS New England Field Office
Official Species List for the Town of Winchendon

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To:
Consultation Code: 05E1NE00-2019-SLI-1446
Event Code: 05E1NE00-2019-E-03482
Project Name: Winchendon NOI

April 18, 2019

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2019-SLI-1446

Event Code: 05E1NE00-2019-E-03482

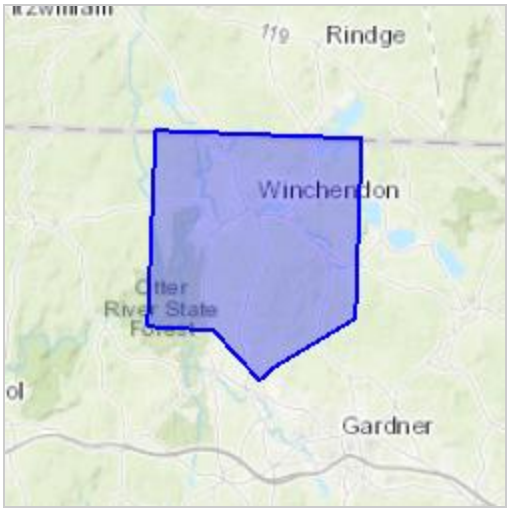
Project Name: Winchendon NOI

Project Type: Regulation Promulgation

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

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.65943730437019N72.04939524849136W



Counties: Worcester, MA | Cheshire, NH

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. 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.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Attachment C

Federally Listed Endangered and Threatened Species in Massachusetts

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

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

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

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

Updated 02/05/2016

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

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

[1]Migratory only, scattered along the coast in small numbers

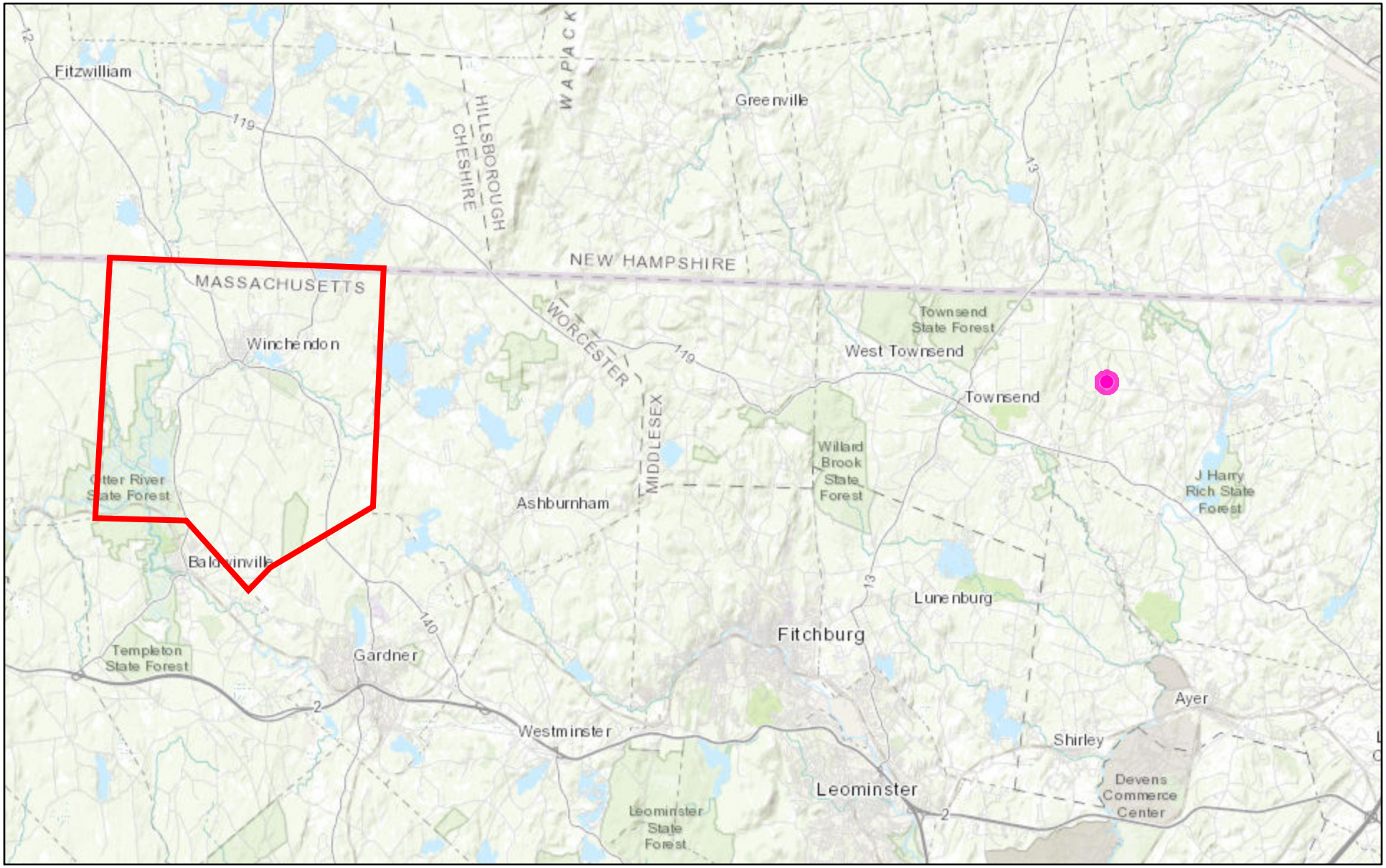
-Eastern cougar and gray wolf are considered extirpated in Massachusetts.
-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.
-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.

Updated 02/05/2016

Attachment D

NHESP Northern Long-eared Bat Hibernacula Map

Northern Long-Eared Bat Locations



September 14, 2018

Statewide NLEB Symbology

- Hibernaculum
- MA Northern Long-eared Bat Winter Hibernacula (with ¼ mile buffer)

1:288,895

0 1.75 3.5 7 mi

0 2.75 5.5 11 km

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

Attachment E

USFWS New England Field Office Review Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE

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

January 31, 2019

To Whom It May Concern:

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

http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm (accessed January 2019)

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

Thank you for your cooperation. Please contact David Simmons of this office at 603-227-6425 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

Appendix D

Historic Properties Eligibility Criteria Documentation

National Historic Preservation Act Eligibility Certification

TO: Town of Winchendon Stormwater Program Files

FROM: Tighe & Bond

COPY: Al Gallant, DPW Director
Keith R. Hickey, Town Manager

DATE: April 18, 2019

Tighe & Bond has completed the National Historic Preservation Act Eligibility Determination screening process in accordance with Part 1.9.2 and Appendix D of U.S. EPA's National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts (see Attachment A of this memorandum), effective July 1, 2018, and determined that the **Town of Winchendon** meets **Criterion A**, where the discharges do not have the potential to cause effects on historic properties.

Tighe & Bond followed the screening process included in Appendix D and has determined Winchendon is a new facility and therefore meets Criterion A (see Question 1 in Appendix D of the Permit) and is not, as part of developing and submitting the Notice of Intent for permit coverage, undertaking any activity involving subsurface land disturbance less than an acre.

Based on this screening process, the Town of Winchendon's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities will not have an effect on a property that is listed or eligible for listing on the National Register of Historic Properties (NRHP) and no further action is necessary at this time.

Attachment B to this memorandum includes a list of the National Register of Historic Places listings in Winchendon that is current as of April 4, 2019, and a list of federal- and state-listed historic areas, buildings, burial grounds, objects, and structures in Winchendon downloaded from the Massachusetts Cultural Resource Information System (MACRIS) that is current as of April 18, 2019.

If the Town undertakes construction on or around a property that is listed or eligible for listing, the Town will coordinate with the State Historic Preservation Officer (SHPO) (i.e. the Massachusetts Historical Commission) by submitting a Project Notification Form and associated documentation for the project. As applicable for each project, the Town will implement measures to avoid or minimize adverse impacts on places listed, or eligible for listing, on the NRHP, including any conditions imposed by the SHPO or THPO. If the Town fails to document and implement such measures, those discharges are ineligible for coverage under EPA's Small MS4 General Permit.

Attachment A

Excerpts from EPA's NPDES General Permits for Stormwater Discharges from Small MS4s in Massachusetts

Appendix D – Procedures Relating to Historic Properties Preservation

Appendix D
National Historic Preservation Act Guidance

Background

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

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

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

Activities with No Potential to Have an Effect on Historic Properties

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

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

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

Activities with Potential to Have an Effect on Historic Properties

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

Examples of Control Measures Which Involve Subsurface Disturbance

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

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

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

Certification

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

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

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

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

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

Screening Process

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

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

YES - The applicant should certify that fact in writing and file the statement with the EPA. This certification must be maintained as part of the records associated with the permit.
The applicant should certify eligibility for this permit using Criterion A on their Notice of Intent for permit coverage. The applicant does not need to contact the state Historic Commission. Based on that statement, EPA will document that the project has "no potential to cause effects" (36 CFR 800.3(a)(1)). There are no further obligations under the Section 106 regulations.

NO- Go to Question 2.

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

NO - The applicant should certify that fact in writing and file the statement with the EPA. This certification must be maintained as part of the records associated with the permit.
The applicant should certify eligibility for this permit using Criterion B on their Notice of Intent for permit coverage. The applicant does not need to contact the state Historic Commission. Based on that statement, EPA will document that the project has "no potential to cause effects" (36 CFR 800.3(a)(1)). There are no further obligations under the Section 106 regulations.

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

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

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

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

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

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

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

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

Attachment B

Excerpts from National Register Listings for Massachusetts

MACRIS List of Federal- and State-Listed Historic Areas, Buildings, Burial Grounds, Objects, and Structures in the Town of Winchendon

National Register of Historic Places Listed Properties as of 4/4/2019 (https://www.nps.gov/subjects/nationalregister/database-research.htm)

Ref#	Property Name	Status	State	County	City	Street & Number	Listed Date	Other Names
87002562	Murdock School	Listed	MASSACHUSETTS	Worcester	Winchendon	Murdock Ave.	1/28/1988	Old Murdock High School
87000901	Old Centre Historic District	Listed	MASSACHUSETTS	Worcester	Winchendon	Roughly Old County and Baldwinsville Rds., Hale St., and Teel Rd.	9/18/1987	
92000056	Winchendon Village Historic District	Listed	MASSACHUSETTS	Worcester	Winchendon	Roughly, N side Central St. from Summer to Front Sts. and N side Front from Academy to Spring Sts.	9/1/1993	

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

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

Inv. No.	Property Name	Street	Town	Year
WIN.A	Old Centre Historic District		Winchendon	
WIN.B	Winchendon Town Center		Winchendon	
WIN.C	Upper Front - Lower West Streets Area		Winchendon	
WIN.D	School Street Area		Winchendon	
WIN.E	Lincoln Avenue - Pleasant Street Area		Winchendon	
WIN.F	Pearl, Mill and Spruce Streets Area		Winchendon	
WIN.G	Lower Central Street Area		Winchendon	
WIN.H	Chestnut and Walnut Streets Area		Winchendon	
WIN.I	Linden and Maple Streets Area		Winchendon	
WIN.J	Upper Central Street Area		Winchendon	
WIN.K	Franklin, Jackson and Juniper Streets Area		Winchendon	
WIN.L	Lincoln Avenue Extension Area		Winchendon	
WIN.M	Winter and East Streets Area		Winchendon	
WIN.N	Prospect and High Streets Area		Winchendon	
WIN.O	Spring - Ash Streets Area		Winchendon	
WIN.P	Spring Village		Winchendon	
WIN.Q	Glenallen		Winchendon	
WIN.R	Centerville		Winchendon	
WIN.S	Waterville		Winchendon	
WIN.T	Hydeville		Winchendon	
WIN.U	Bullardville		Winchendon	
WIN.V	Robbinsville - Harrisville		Winchendon	
WIN.W	Pequiog		Winchendon	
WIN.X	New Boston		Winchendon	
WIN.Y	Winchendon Center Historic District		Winchendon	
WIN.Z	Winchendon Village Historic District		Winchendon	
WIN.AA	Otter River State Forest - Beaman Pond Area		Winchendon	

Inv. No.	Property Name	Street	Town	Year
WIN.AB	Otter River Road Area		Winchendon	
WIN.67	Spear, Asahel O. House	16 Academy St	Winchendon	c 1896
WIN.358	Ward, Franklin W. House	26 Academy St	Winchendon	1872
WIN.359	Davis, P. S. House	44 Academy St	Winchendon	c 1850
WIN.337		700 Alger St	Winchendon	c 1880
WIN.336	Bruce, Josiah House	857 Alger St	Winchendon	c 1820
WIN.255	Marvin School	Ash St	Winchendon	1903
WIN.257	Stearns, Asa House	Ash St	Winchendon	c 1770
WIN.254	Mason and Parker Manufacturing Worker Housing	27-29 Ash St	Winchendon	1924
WIN.379	McCabe, Morton House	32 Ash St	Winchendon	1860
WIN.380	Dray, John House	62 Ash St	Winchendon	c 1830
WIN.256	Cleary, John House	88 Ash St	Winchendon	r 1850
WIN.258	Toy Town Tavern	178 Ash St	Winchendon	1786
WIN.259	Stearns House	202 Ash St	Winchendon	1780
WIN.397	Lufkin, Isaac House	Baldwinville Rd	Winchendon	c 1830
WIN.800	Boston Cemetery, New	Beaman Pond Rd	Winchendon	1791
WIN.366	Roby House	29 Beech St	Winchendon	c 1860
WIN.138	Withington, Amos House	37-39 Beech St	Winchendon	c 1840
WIN.139	Pollard, W. House	41 Beech St	Winchendon	c 1870
WIN.140	Lynch, James C. House	53 Beech St	Winchendon	c 1860
WIN.207		12-14 Belmont Ave	Winchendon	1928
WIN.208	Damon, Donald House	52 Belmont Ave	Winchendon	1909
WIN.209	Morlock, Edward House	62 Belmont Ave	Winchendon	1909
WIN.210	L'Etoile, Joseph House	66 Belmont Ave	Winchendon	1909
WIN.308	Sibley Store	5 Benjamin St	Winchendon	1882
WIN.309	Murdock, Elisha and Company Worker Housing	14 Benjamin St	Winchendon	c 1830
WIN.310		17-19 Benjamin St	Winchendon	c 1825
WIN.311	Rich, Milo House	49 Benjamin St	Winchendon	1875
WIN.312	Murdock, Elisha and Company Worker Housing	105 Benjamin St	Winchendon	c 1900
WIN.400	Brooks, John Allen House	Bosworth Rd	Winchendon	c 1810
WIN.401	Weston House	Bosworth Rd	Winchendon	c 1850
WIN.193	Brown, William and Sons Worker Housing	5-6 Brown Ave	Winchendon	1903
WIN.194	Brown, William and Sons Worker Housing	7-8 Brown Ave	Winchendon	1903
WIN.195	Brown, William and Sons Worker Housing	9-10 Brown Ave	Winchendon	1903
WIN.306	Woodcock and Sawyer Mills	1 Brown St	Winchendon	c 1860
WIN.323	Gordon, Exist House	111 Brown St	Winchendon	c 1896
WIN.374	Winchendon Baptist Church	Central St	Winchendon	1848

Inv. No.	Property Name	Street	Town	Year
WIN.399	Beaman Farm Barn	Central St	Winchendon	
WIN.409	WINQ Radio Station	3 Central St	Winchendon	c 1980
WIN.121	Joseph's Block	22-24 Central St	Winchendon	c 1880
WIN.122	Fairbanks, Sidney House	32 Central St	Winchendon	c 1853
WIN.413		40-44 Central St	Winchendon	r 1850
WIN.123	A & P Block	48-60 Central St	Winchendon	1927
WIN.414		62-68 Central St	Winchendon	c 1930
WIN.124	Greenwood's Block	73-77 Central St	Winchendon	r 1850
WIN.125	Artisan Block	78-86 Central St	Winchendon	1908
WIN.126	Merrill's Block	87-91 Central St	Winchendon	1906
WIN.363	Fairbanks, Calista House	103 Central St	Winchendon	c 1850
WIN.127	Winchendon Savings Bank	112-114 Central St	Winchendon	1929
WIN.128	Church of the Unity	126 Central St	Winchendon	1866
WIN.129	Clark, Wendell P. Memorial	155 Central St	Winchendon	1954
WIN.130	U. S. Post Office - Winchendon Main Branch	160 Central St	Winchendon	1941
WIN.131	Telephone Building	172 Central St	Winchendon	1930
WIN.132	Adams Block	184-188 Central St	Winchendon	1923
WIN.133	Rome Block	212-220 Central St	Winchendon	r 1903
WIN.158	Tucker, Seth House	321 Central St	Winchendon	c 1830
WIN.159	Bennett, Charles N. House	346 Central St	Winchendon	c 1892
WIN.160	Putney, Leon D. House	356 Central St	Winchendon	c 1850
WIN.161	Trussell, Olive House	366 Central St	Winchendon	r 1878
WIN.162	Taylor, George House	367 Central St	Winchendon	1901
WIN.163	Sargent, Daniel Harris House	383 Central St	Winchendon	c 1895
WIN.164	Ball, Frederick E. House	390 Central St	Winchendon	1890
WIN.165	Riley, Andrew House	413 Central St	Winchendon	1894
WIN.166	Brown, William House	420 Central St	Winchendon	c 1909
WIN.167	Parke, William C. House	425-427 Central St	Winchendon	c 1898
WIN.168	Boyce, Walter House	442 Central St	Winchendon	1914
WIN.169	Mann, Frank House	448 Central St	Winchendon	1916
WIN.170	Jones, James A. House	453 Central St	Winchendon	1902
WIN.171	Maynard, Louis House	464 Central St	Winchendon	1925
WIN.172	LaPlante, Stanislas House	474 Central St	Winchendon	1931
WIN.173	Sargent, Eaton D. House	518 Central St	Winchendon	1907
WIN.174	McCarthy, Eugene O. House	528 Central St	Winchendon	1908
WIN.175	Poland, Wheeler House	547 Central St	Winchendon	c 1886
WIN.176	Goodspeed, Isaac House	573 Central St	Winchendon	r 1840
WIN.134	Engine House	19 Chestnut St	Winchendon	r 1840

Inv. No.	Property Name	Street	Town	Year
WIN.364	Cutler, John C. House	23 Chestnut St	Winchendon	c 1844
WIN.365	Parker, Gilman B. House	26 Chestnut St	Winchendon	c 1830
WIN.135	Stearns, Gilbert F. House	27 Chestnut St	Winchendon	r 1845
WIN.136	Morrill, David L. House	32 Chestnut St	Winchendon	c 1840
WIN.137	Roddey, John - Walker, Hiram House	33 Chestnut St	Winchendon	r 1865
WIN.63	Evans, Oscar H. House	22-24 Court St	Winchendon	1892
WIN.64	Loud's Row	38-40 Court St	Winchendon	c 1870
WIN.65	Loud's Row	44-46 Court St	Winchendon	c 1870
WIN.66	Loud's Row	50-52 Court St	Winchendon	c 1870
WIN.393	Whitney, Hananiah House	Crosby Rd	Winchendon	c 1830
WIN.396	Herrick Farm	Doyle Ave	Winchendon	c 1860
WIN.197	Bump, Christopher C. House	11 East St	Winchendon	1893
WIN.198	Bump, Charles R. House	14 East St	Winchendon	1898
WIN.199	Parks, Albert E. House	40 East St	Winchendon	1899
WIN.154	Betterly, Orland House	116 Elm St	Winchendon	1868
WIN.155	Chandler, Marshall W. House	130 Elm St	Winchendon	1863
WIN.388	White Stables	Elmwood Rd	Winchendon	1924
WIN.331	Morlock, William E. House	23 Elmwood Rd	Winchendon	c 1899
WIN.332	Girouard, Stanislas House	51 Elmwood Rd	Winchendon	c 1899
WIN.390	Murdock Dairy Farm	62 Elmwood Rd	Winchendon	c 1830
WIN.389	Captain's Farm	106 Elmwood Rd	Winchendon	r 1765
WIN.297	Morlock, Peter A. House	382 Elmwood Rd	Winchendon	c 1885
WIN.251	Harriman, James House	50 Emerald St	Winchendon	c 1860
WIN.252	Harriman, Daniel House	58 Emerald St	Winchendon	c 1880
WIN.240	Winchendon Country Club	Fairbank St	Winchendon	c 1901
WIN.239	Whitney, William W. House	16 Fairbank St	Winchendon	1926
WIN.190	Morton E. Converse and Son, Inc.	Franklin St	Winchendon	c 1900
WIN.4	North Congregational Church	Front St	Winchendon	1844
WIN.904	World War II, Korean and Vietnam Memorial	Front St	Winchendon	1984
WIN.907	Toy Town Rocking Horse	Front St	Winchendon	1988
WIN.913	American Legion Park	Front St	Winchendon	1922
WIN.914	Winchendon World War I Monument	Front St	Winchendon	1922
WIN.915	World War I Monument Honor Roll	Front St	Winchendon	c 1922
WIN.916	American Legion Park Flagpole	Front St	Winchendon	c 1984
WIN.917	Civil War Cannon	Front St	Winchendon	c 1861
WIN.918	World War I Cannon	Front St	Winchendon	c 1914
WIN.1	Whitcomb, Mark House	4 Front St	Winchendon	c 1830
WIN.356	Pearsons, Bartholomew House	19 Front St	Winchendon	1760

Inv. No.	Property Name	Street	Town	Year
WIN.3	Mason and Parker Manufacturing Company	28 Front St	Winchendon	r 1878
WIN.2		30 Front St	Winchendon	r 1846
WIN.357	Bancroft House	39 Front St	Winchendon	c 1830
WIN.5	Pollard Block	68 Front St	Winchendon	c 1840
WIN.6	Bank Building	74 Front St	Winchendon	1866
WIN.410		86 Front St	Winchendon	r 1895
WIN.415	Cumberland Farms Food Stores	95 Front St	Winchendon	c 1935
WIN.7	Murdock, I. M. Building	98 Front St	Winchendon	1878
WIN.412	Old Travelor's Restaurant	102 Front St	Winchendon	c 1830
WIN.8	Winchendon Post Office Building	106 Front St	Winchendon	1858
WIN.9	Winchendon Town Hall	109 Front St	Winchendon	1850
WIN.10	Murdock Trustees Building	110 Front St	Winchendon	c 1850
WIN.11	Morse, Isaac House	135 Front St	Winchendon	1790
WIN.12	Whitney, Elisha House	151 Front St	Winchendon	r 1825
WIN.13	Whitney, Amasa Jr. - Whitney, Mary Murdock House	165 Front St	Winchendon	1791
WIN.14	Murdock, Ephraim - Beals, Charles House	179 Front St	Winchendon	1800
WIN.15	Godding, Dr. Alvah House	193 Front St	Winchendon	1841
WIN.17	Scott, Samuel M. House	216-218 Front St	Winchendon	1868
WIN.18		220-222 Front St	Winchendon	r 1896
WIN.19	Brooks, William A. House	254 Front St	Winchendon	r 1845
WIN.20	Poland, Wheeler House	260 Front St	Winchendon	r 1845
WIN.21	Poland, Stephen House	263-267 Front St	Winchendon	r 1845
WIN.22	Methodist Parsonage	269 Front St	Winchendon	c 1834
WIN.23	Tolman, Charles House	277 Front St	Winchendon	c 1830
WIN.24	Robbins, Joseph A. House	287 Front St	Winchendon	r 1845
WIN.25	Hyde, Job and Joel House	295-299 Front St	Winchendon	c 1830
WIN.26	Partridge, Henry F. House	300 Front St	Winchendon	c 1870
WIN.27	McDonald, James M. House	332 Front St	Winchendon	1891
WIN.28	Robbins, James H. House	333 Front St	Winchendon	c 1868
WIN.29	Townsend, James H. House	347 Front St	Winchendon	1872
WIN.30	Todd, Elisha House	348-350 Front St	Winchendon	1868
WIN.31	Cote, Eugene House	374 Front St	Winchendon	c 1901
WIN.32	Johnson, Michael House	380 Front St	Winchendon	c 1909
WIN.33	Brothers, Moses House	404 Front St	Winchendon	c 1905
WIN.329	Raymond House	115 Gardner Rd	Winchendon	r 1800
WIN.328	Woodbury Farm	156 Gardner Rd	Winchendon	c 1790
WIN.272	White School	134 Glenallan St	Winchendon	1886

Inv. No.	Property Name	Street	Town	Year
WIN.273	White, N. D. and Sons Worker Housing	140 Glenallan St	Winchendon	r 1850
WIN.274	Norcross, Silas Stow House	166 Glenallan St	Winchendon	r 1850
WIN.275	White, N. D. and Sons Worker Housing	173 Glenallan St	Winchendon	r 1850
WIN.276		176 Glenallan St	Winchendon	r 1878
WIN.277	White, N. D. and Sons Worker Housing	178-80 Glenallan St	Winchendon	r 1850
WIN.278	Spaulding, Seth B. House	181 Glenallan St	Winchendon	r 1850
WIN.279	Tolman Tavern	192 Glenallan St	Winchendon	c 1850
WIN.405		231 Glenallan St	Winchendon	
WIN.268	Glenallen Mill	Glenallen St	Winchendon	1886
WIN.381	Glenallen Mill - Weave Shed	Glenallen St	Winchendon	1909
WIN.801	Riverside Cemetery	Glenallen St	Winchendon	c 1858
WIN.802	Calvary Cemetery	Glenallen St	Winchendon	c 1871
WIN.261	White, N. D. and Sons Worker Housing	30-32 Glenallen St	Winchendon	c 1830
WIN.262	White, N. D. and Sons Worker Housing	34-36 Glenallen St	Winchendon	c 1830
WIN.263	White, N. D. and Sons Worker Housing	42 Glenallen St	Winchendon	c 1830
WIN.264	White, N. D. and Sons Worker Housing	44 Glenallen St	Winchendon	c 1830
WIN.265	White, N. D. and Sons Worker Housing	48 Glenallen St	Winchendon	c 1830
WIN.266	White, N. D. and Sons Worker Housing	50 Glenallen St	Winchendon	
WIN.267	White, N. D. and Sons Boarding House	52 Glenallen St	Winchendon	c 1831
WIN.269		65 Glenallen St	Winchendon	r 1890
WIN.270	Morlock, Charles H. House	71 Glenallen St	Winchendon	c 1900
WIN.271		126 Glenallen St	Winchendon	c 1830
WIN.280	McColley, John S. House	196 Glenallen St	Winchendon	r 1850
WIN.294	White, N. D. and Sons Worker Housing	201 Glenallen St	Winchendon	c 1830
WIN.281	Winchendon District School #4	221 Glenallen St	Winchendon	c 1858
WIN.282	Rock Cottage	224 Glenallen St	Winchendon	c 1869
WIN.283	Capron, C. B. House	226 Glenallen St	Winchendon	r 1851
WIN.383		229 Glenallen St	Winchendon	c 1900
WIN.97	Haven, Sumner House	48 Grove St	Winchendon	1894
WIN.98	Norcross, Charles H. House	53 Grove St	Winchendon	c 1864
WIN.99	Ketchum, Stephen C. House	54 Grove St	Winchendon	1868
WIN.362	Howard, J. D. House	67 Grove St	Winchendon	c 1852
WIN.100	McIntosh, Peter House	94 Grove St	Winchendon	c 1909
WIN.73	Carroll, Willard A. House	149 Grove St	Winchendon	1896
WIN.74	Wright, Benjamin House	155 Grove St	Winchendon	c 1892
WIN.322	District School	75 Hale St	Winchendon	c 1850
WIN.334		270 Hale St	Winchendon	c 1825
WIN.391	Brown, Benjamin House	298 Hale St	Winchendon	c 1830

Inv. No.	Property Name	Street	Town	Year
WIN.335		400 Hale St	Winchendon	c 1860
WIN.803	Centre Cemetery, Old	Hall Rd	Winchendon	c 1771
WIN.355	Adams, Joseph House	160 Hall Rd	Winchendon	1802
WIN.327	Taylor, James Farm	Harris Rd	Winchendon	c 1830
WIN.227	Mapleview	12 High St	Winchendon	c 1883
WIN.228	Parker, Homer House	17 High St	Winchendon	c 1910
WIN.229	Whitcomb, Calvin R. House	19 High St	Winchendon	1843
WIN.230		24 High St	Winchendon	1812
WIN.231	Maybery, Henry M. House	46 High St	Winchendon	c 1898
WIN.232	Cobb, Lither House	47 High St	Winchendon	c 1875
WIN.233	Gordan, William A. House	60 High St	Winchendon	1902
WIN.234	Whitney, Washington House	61 High St	Winchendon	c 1865
WIN.235	Hayward, Henry W. House	88 High St	Winchendon	1913
WIN.236	Murdock, Clark M. House	108 High St	Winchendon	1898
WIN.237	Wyman, Horace H. House	118 High St	Winchendon	c 1865
WIN.238	Russell, Ira House	123 High St	Winchendon	r 1876
WIN.403	Wilder, Gardner House	170 High St	Winchendon	c 1831
WIN.241	Adams, Col. Oliver House	177 High St	Winchendon	r 1840
WIN.242	Nichols, Levi Tavern	271 High St	Winchendon	c 1773
WIN.211	Buckminster, Joseph A. House	37 Highland St	Winchendon	c 1886
WIN.212	Simoneau, Napolean House	38 Highland St	Winchendon	1925
WIN.213	Knight, Hosea B. House	47 Highland St	Winchendon	c 1872
WIN.307	Murdock, Elisha and Company Worker Housing	40 Hill St	Winchendon	c 1850
WIN.398	Evans, Jonathon House	Hitchcock Rd	Winchendon	c 1830
WIN.38	Holman, Elnor House	25 Hyde Park St	Winchendon	1909
WIN.39	Wheeler, George E. House	29 Hyde Park St	Winchendon	c 1909
WIN.40	Cummings, Sylvester I. House	30 Hyde Park St	Winchendon	1911
WIN.185	O'Brien House	10 Jackson Ave	Winchendon	c 1902
WIN.186	Bernard, George House	14 Jackson Ave	Winchendon	1907
WIN.187	Breton, Ernest House	19 Jackson Ave	Winchendon	1906
WIN.188	Breton, Ernest House	21 Jackson Ave	Winchendon	1906
WIN.189	Caouette, Louis House	37-39 Jackson Ave	Winchendon	c 1908
WIN.181		53 Juniper St	Winchendon	c 1906
WIN.182	Conner, Daniel House	67 Juniper St	Winchendon	r 1840
WIN.183	Forrestall, Boswell E. House	77-79 Juniper St	Winchendon	1871
WIN.184		83 Juniper St	Winchendon	1907
WIN.191	Brown, William and Sons	Lincoln Ave	Winchendon	c 1901
WIN.76	Whitney, Ida F. House	23 Lincoln Ave	Winchendon	1927

Inv. No.	Property Name	Street	Town	Year
WIN.77	Whitney, William House	36 Lincoln Ave	Winchendon	1929
WIN.78	Methodist Church Parsonage	66 Lincoln Ave	Winchendon	r 1892
WIN.79	Raymond, Lyman House	69 Lincoln Ave	Winchendon	c 1861
WIN.80	Holland, Merrill House	75 Lincoln Ave	Winchendon	r 1875
WIN.81	Barnes, David H. House	84 Lincoln Ave	Winchendon	1880
WIN.82	Young, James P. House	85 Lincoln Ave	Winchendon	1923
WIN.83	Kimball, Anna - Beals, Frank L. House	94 Lincoln Ave	Winchendon	1885
WIN.84	Kimball, Anna House	113-115 Lincoln Ave	Winchendon	1897
WIN.85	Hayward House	123 Lincoln Ave	Winchendon	c 1887
WIN.114	White, Michael B. House	206-208 Lincoln Ave	Winchendon	c 1892
WIN.192	Alaska Freezer Company	283 Lincoln Ave	Winchendon	c 1902
WIN.375	Alaska Freezer Company	283 Lincoln Ave	Winchendon	c 1902
WIN.147	Clough, Willard House	13 Linden St	Winchendon	r 1876
WIN.148	Streeter, Frank E. House	29 Linden St	Winchendon	c 1890
WIN.149	Gay, Merrill D. House	36 Linden St	Winchendon	1898
WIN.150	White, Zadoc L. House	73 Linden St	Winchendon	c 1884
WIN.151	Baptist Parsonage	81 Linden St	Winchendon	1871
WIN.152	Russell, Edwin House	90 Linden St	Winchendon	1890
WIN.153	Dudley, Adiel H. House	105-107 Linden St	Winchendon	r 1874
WIN.417	Otter River State Forest - Visitor Contact Station	Main Rd	Winchendon	1938
WIN.922	Otter River State Forest - Beaman Pond	Main Rd	Winchendon	1934
WIN.923	Otter River State Forest - Beaman Pond Dam	Main Rd	Winchendon	1934
WIN.924	Otter River State Forest - Stonefaced Culvert	Main Rd	Winchendon	c 1934
WIN.313	Aldrich, Harrison House	25 Main St	Winchendon	c 1850
WIN.314	Hale, Orrin S. House	56 Main St	Winchendon	c 1885
WIN.315	Lawrence, Henry J. House	94 Main St	Winchendon	c 1875
WIN.317	Hitchcock, John H. House	103 Main St	Winchendon	c 1840
WIN.318	Allen, Celinda House	121 Main St	Winchendon	c 1885
WIN.319	Beals, Samuel House	169 Main St	Winchendon	c 1864
WIN.320		213 Main St	Winchendon	c 1900
WIN.321	Carter, Ellen House	214 Main St	Winchendon	c 1850
WIN.156	Loud, Edward House	91 Maple St	Winchendon	c 1840
WIN.157	Deland, William A. House	128 Maple St	Winchendon	1868
WIN.284	White, N. D. and Sons Worker Housing	357-359 Maple St	Winchendon	c 1898
WIN.285	White, N. D. and Sons Worker Housing	363-365 Maple St	Winchendon	c 1898
WIN.286	Gauthier, Joseph House	437 Maple St	Winchendon	c 1900
WIN.287	Ethier, Nazarre House	441 Maple St	Winchendon	r 1878
WIN.288	White, N. D. and Sons Worker Housing	456-458 Maple St	Winchendon	r 1910

Inv. No.	Property Name	Street	Town	Year
WIN.34	Fletch, John G. House	3-5 Mason St	Winchendon	1898
WIN.35	Armstrong, Richard S. House	15 Mason St	Winchendon	1909
WIN.36	Beck, Joseph Henry House	30 Mason St	Winchendon	c 1913
WIN.37	Buttemore, James - Willson, Edgar F. House	69-71 Mason St	Winchendon	c 1903
WIN.106	Maynard, Solon House	29 Maynard St	Winchendon	c 1869
WIN.108	Raymond and Rice Chair Shop	Mechanic St	Winchendon	c 1886
WIN.107	Brown, Frederick M. House	10-12 Mechanic St	Winchendon	c 1888
WIN.289	White Mansion Stables	1A Mill Cir	Winchendon	r 1850
WIN.290	White, Allan Temple House	1-2 Mill Cir	Winchendon	c 1860
WIN.291	Horton, Joseph House	3-4 Mill Cir	Winchendon	c 1861
WIN.385		8 Mill Cir	Winchendon	c 1843
WIN.292	White, N. D. and Sons Worker Housing	14-17 Mill Cir	Winchendon	r 1870
WIN.293	Minister's Cottage	18-19 Mill Cir	Winchendon	c 1847
WIN.384		150-152 Mill Cir	Winchendon	c 1860
WIN.343		132 Mill Glenn Rd	Winchendon	c 1830
WIN.109	Dary, Omar House	75 Mill St	Winchendon	c 1896
WIN.110	Abare, Louis House	110 Mill St	Winchendon	1923
WIN.111	Ellis, Charles House	191-193 Mill St	Winchendon	1898
WIN.112	Wright, Joseph H. House	200 Mill St	Winchendon	1889
WIN.177	Schoerner, Ferdinand House	16 Monadnock Ave	Winchendon	1923
WIN.178	Brown, Henry House	22 Monadnock Ave	Winchendon	1923
WIN.179	Prance, Leon House	42 Monadnock Ave	Winchendon	1933
WIN.180		47 Monadnock Ave	Winchendon	1925
WIN.75	Woodcock, William L. House	33 Morse Ave	Winchendon	c 1892
WIN.70	Streeter, Amro W. School	Murdock Ave	Winchendon	1939
WIN.71	Old Murdock High School	Murdock Ave	Winchendon	1887
WIN.900	Winchendon Soldiers' Monument	Murdock Ave	Winchendon	1889
WIN.72	Danforth, Charles H. House	87 Murdock Ave	Winchendon	1893
WIN.196	Cutter, John C. House	40 North St	Winchendon	c 1896
WIN.214	Corbin, Lillian M. House	34 North Vine St	Winchendon	c 1902
WIN.69	Poland School	Oak St	Winchendon	1924
WIN.360	Converse, George W. House	15 Oak St	Winchendon	c 1850
WIN.68	Dole, George R. House	88 Oak St	Winchendon	c 1880
WIN.344	Parsonage, The	Old Centre	Winchendon	c 1780
WIN.345	Smith House	Old Centre	Winchendon	c 1870
WIN.346	Estey House	Old Centre	Winchendon	c 1830
WIN.347	Day, Richard House	Old Centre	Winchendon	1752
WIN.348	Cummings House	Old Centre	Winchendon	

Inv. No.	Property Name	Street	Town	Year
WIN.349	Reed, Moses House	Old Centre	Winchendon	c 1830
WIN.351	Rice House	Old Centre	Winchendon	c 1830
WIN.353	Henshaw, Daniel House	Old Centre	Winchendon	c 1809
WIN.354	Godding, Alvin House	Old Centre	Winchendon	c 1826
WIN.411	First Congregational Church	Old Centre	Winchendon	1850
WIN.908	Winchendon Town Common	Old Centre	Winchendon	c 1900
WIN.909	Training Ground, Old	Old Centre	Winchendon	
WIN.910	Meetinghouse Grounds	Old Centre	Winchendon	
WIN.911	Stone Wall	Old Centre	Winchendon	
WIN.339	Raymond House	14 Otter River Rd	Winchendon	c 1790
WIN.340	Brown House	24 Otter River Rd	Winchendon	c 1770
WIN.341	Greenwood, Levi House	42 Otter River Rd	Winchendon	c 1800
WIN.41	Odett, Zula I. and Leo E. House	115 Park St	Winchendon	1924
WIN.115	Brabston, Patrick House	1-3 Pearl St	Winchendon	r 1878
WIN.116	Pratt, Reuben House	7-9-11 Pearl St	Winchendon	r 1874
WIN.117	Hanks, Charles O. House	126-128 Pearl St	Winchendon	c 1929
WIN.118	Lawrence, Mabel A. House	193 Pearl St	Winchendon	1912
WIN.119	Friech, William R. House	201 Pearl St	Winchendon	c 1912
WIN.246	Buckley, Mark House	16 Pine St	Winchendon	c 1860
WIN.247	Ready, Michael House	28 Pine St	Winchendon	c 1863
WIN.86	Winchendon Fire Station	16 Pleasant St	Winchendon	1876
WIN.87	Beals Memorial Library	50 Pleasant St	Winchendon	1913
WIN.361	Nash, Marvin House	56 Pleasant St	Winchendon	c 1850
WIN.88	Stearns, Charles T. and Allen M. House	88 Pleasant St	Winchendon	c 1869
WIN.89	Corey, Clara and Waldo House	93 Pleasant St	Winchendon	r 1880
WIN.90	Stearns, Charles T. House	96 Pleasant St	Winchendon	c 1870
WIN.91	Loud, George Sumner House	103 Pleasant St	Winchendon	1862
WIN.92	Beals, George L. House	104 Pleasant St	Winchendon	c 1870
WIN.93	Whitney, Orange and Ida F. House	122 Pleasant St	Winchendon	1900
WIN.94	Whitney, Richard House	145 Pleasant St	Winchendon	c 1870
WIN.95	Smith, Samuel House	148 Pleasant St	Winchendon	c 1861
WIN.96	Stanley House	151 Pleasant St	Winchendon	c 1862
WIN.215	Raymond, Merrick House	16 Prospect St	Winchendon	r 1850
WIN.216	Parks, Eliphalet House	22 Prospect St	Winchendon	r 1850
WIN.217	Hoar, Omar House	28 Prospect St	Winchendon	r 1840
WIN.218	Ellis, Bethuel House	34-36 Prospect St	Winchendon	r 1842
WIN.404	Goodspeed, Adin S. House	39 Prospect St	Winchendon	c 1900
WIN.219	Butler, Ebenezer House	44-46 Prospect St	Winchendon	r 1842

Inv. No.	Property Name	Street	Town	Year
WIN.220	Piper, Daniel H. House	45 Prospect St	Winchendon	c 1883
WIN.221	Goodspeed, George N. and Harrison P. House	50-58 Prospect St	Winchendon	r 1860
WIN.222	Johanneson, Gustave House	60 Prospect St	Winchendon	r 1900
WIN.223	Fife, Arthur F. House	64 Prospect St	Winchendon	r 1900
WIN.224	Davis, Leon W. House	68 Prospect St	Winchendon	r 1900
WIN.225	Mellen, Clarence House	72 Prospect St	Winchendon	r 1900
WIN.226	Streeter, Alvin House	75 Prospect St	Winchendon	r 1879
WIN.105	Wye Knitting Mills	Railroad St	Winchendon	c 1870
WIN.304	Murdock, Elisha and Company Drying House	River St	Winchendon	r 1878
WIN.394	Poor, David House	River St	Winchendon	c 1810
WIN.906	Dow, Lorenzo Marker	River St	Winchendon	c 1950
WIN.16	Robbins, J. A. Mill	36 River St	Winchendon	c 1860
WIN.298	Taylor, William House	189 River St	Winchendon	c 1855
WIN.299		195 River St	Winchendon	c 1860
WIN.300	Woodcock, W.L. House	356 River St	Winchendon	c 1855
WIN.301	Murdock, Elisha and Company	363 River St	Winchendon	c 1870
WIN.302	Aldrich, S. C. House	424 River St	Winchendon	c 1870
WIN.303	Murdock, Elisha and Company Warehouse	426 River St	Winchendon	r 1878
WIN.305	Woodcock and Sawyer Worker Housing	563 River St	Winchendon	c 1830
WIN.416	Alger, Columbus C. House	Rt 202	Winchendon	c 1795
WIN.342	Russell, Frederick W. House	1 Russell Farm Rd	Winchendon	c 1830
WIN.46	Winchendon Academy	School Sq	Winchendon	1843
WIN.47		10-12 School Sq	Winchendon	1833
WIN.48		14-16 School Sq	Winchendon	1833
WIN.901	Watering Trough	School St	Winchendon	1875
WIN.902	Spirit of the American Doughboy Monument	School St	Winchendon	1934
WIN.49	Whitney, William W. House	5-7 School St	Winchendon	r 1850
WIN.50	Scott, Daniel M. and Salmon M. House	11 School St	Winchendon	r 1840
WIN.51	Winch, Aaron House	19 School St	Winchendon	r 1850
WIN.52	Richardson, Luther House	27 School St	Winchendon	c 1830
WIN.53	Winchendon Academy Dormitory	35 School St	Winchendon	c 1843
WIN.55	Carr, Henry F. House	65 School St	Winchendon	r 1845
WIN.56	Richardson, John N. House	81 School St	Winchendon	c 1877
WIN.57	Baldwin, James J. House	87-93 School St	Winchendon	c 1877
WIN.58	Drury, Frank E. House	112 School St	Winchendon	1903
WIN.59	Roebuck, Alfred L. House	132 School St	Winchendon	1921
WIN.60	Brown, Mary E. House	137 School St	Winchendon	c 1909
WIN.61	Bartlett, Martin L. House	144 School St	Winchendon	c 1892

Inv. No.	Property Name	Street	Town	Year
WIN.62	Whitcomb, Arthur W. House	151 School St	Winchendon	1888
WIN.113	French, Frederick D. House	197 School St	Winchendon	c 1903
WIN.120	Townsend, Guy House	269 School St	Winchendon	1917
WIN.333	Darling, John House	363 School St	Winchendon	r 1770
WIN.338		23 Sibley Rd	Winchendon	c 1820
WIN.376	Pump House, Old	Spring St	Winchendon	1896
WIN.912	Spring Street Bridge	Spring St	Winchendon	1937
WIN.920	Toy Town Plaza Entrance	Spring St	Winchendon	
WIN.921	Spring Street Bridge over Millers River	Spring St	Winchendon	1926
WIN.408		24 Spring St	Winchendon	r 1850
WIN.407		36 Spring St	Winchendon	r 1850
WIN.377		144 Spring St	Winchendon	c 1860
WIN.243	McCabe, Patrick House	151 Spring St	Winchendon	1867
WIN.244	Oliva, Louis House	160-162 Spring St	Winchendon	1926
WIN.245	Conner, Humphrey House	168 Spring St	Winchendon	c 1866
WIN.248	Sullivan, John J. House	179-181 Spring St	Winchendon	r 1892
WIN.378	Ready, Patrick House	189 Spring St	Winchendon	c 1860
WIN.249	McGrath, John House	190 Spring St	Winchendon	r 1874
WIN.250	Lees, Joseph House	202 Spring St	Winchendon	r 1840
WIN.253	Donahue, James House	211 Spring St	Winchendon	1867
WIN.101	Immaculate Heart of Mary Church	Spruce St	Winchendon	1909
WIN.102	Kimball, Addison House	83 Spruce St	Winchendon	c 1868
WIN.103	Flagg, Levi P. House	88 Spruce St	Winchendon	c 1862
WIN.104	Lafleur, Nelson House	130-132 Spruce St	Winchendon	1903
WIN.145	Whitney, Baxter D. and Son - Barn	25 Summer Dr	Winchendon	c 1830
WIN.146	Whitney, Baxter - White, Nelson Cotton Mill	25 Summer Dr	Winchendon	1854
WIN.370	Whitney, Baxter D. and Son - Machine Shop	25 Summer Dr	Winchendon	c 1830
WIN.371	Whitney, Baxter D. and Son - Storage Attic	25 Summer Dr	Winchendon	c 1830
WIN.372	Whitney, Baxter D. and Son - Erecting Shop	25 Summer Dr	Winchendon	c 1830
WIN.402	Whitney, Baxter D. and Son - Foundary	25 Summer Dr	Winchendon	c 1830
WIN.373	Woodbury, James House	110 Summer St	Winchendon	c 1850
WIN.350	Wilder, Oliver House	Teel Rd	Winchendon	1870
WIN.330	Tolman House	Tolman Rd	Winchendon	c 1816
WIN.395	Vose, Reuben House	Town Farm Rd	Winchendon	c 1830
WIN.905	Brown, Samuel Jr. Monument	Town Farm Rd	Winchendon	c 1833
WIN.367	Bryant, George House	13 Walnut St	Winchendon	c 1843
WIN.141	Lord, Ephraim W. House	20-22 Walnut St	Winchendon	c 1850
WIN.142	Shurtleff, R. M. House	21 Walnut St	Winchendon	c 1830

Inv. No.	Property Name	Street	Town	Year
WIN.143	Watson, Joseph S. House	25 Walnut St	Winchendon	c 1830
WIN.368	Hale, Luke House	26 Walnut St	Winchendon	1843
WIN.144	Brown, William - Mason, Henry House	32 Walnut St	Winchendon	c 1840
WIN.369	Merrill, Edwin Seymour House	33 Walnut St	Winchendon	1844
WIN.54	Brown, Seth House	6 West St	Winchendon	r 1842
WIN.42	Irwin, John T. House	126 West St	Winchendon	c 1892
WIN.43	Boutell, Albert House	157 West St	Winchendon	1927
WIN.44	Webber, Thaddeus House	159 West St	Winchendon	1924
WIN.45	Holman, William W. House	160 West St	Winchendon	c 1893
WIN.324	Taylor, Jacob House	422 West St	Winchendon	r 1840
WIN.325	Savin, Howard House	425 West St	Winchendon	r 1850
WIN.326	Robbins, Joseph House	431 West St	Winchendon	c 1830
WIN.316	Waterville School	Whitney St	Winchendon	r 1871
WIN.295	Nelson Mills Office	Winchendon Springs	Winchendon	r 1858
WIN.296	White, N. D. and Sons	Winchendon Springs	Winchendon	r 1856
WIN.382	Tolman, Stephen House	Windsor Rd	Winchendon	c 1830
WIN.200	Patria, Benjamin House	10 Winter Pl	Winchendon	c 1907
WIN.201	Roach, William F. - Carr, Roy House	11-13 Winter Pl	Winchendon	c 1908
WIN.202	Spooner, Elbridge A. House	14 Winter Pl	Winchendon	c 1909
WIN.203	Cashin, Edgar N. House	11 Winter St	Winchendon	c 1907
WIN.204	Youdan, Thomas House	17 Winter St	Winchendon	1909
WIN.205	McCaffrey, Patrick F. House	39 Winter St	Winchendon	1909
WIN.206	Willis, Wenworth House	51 Winter St	Winchendon	c 1911
WIN.260	Woodbury, Samuel D. House	Woodenbury Rd	Winchendon	1783

Appendix E

Sanitary Sewer Overflow Inventory

SSO Inventory (2014 – 2018)
Winchendon, MA

Below is a summary table of sanitary sewer overflows that have occurred in the Town of Winchendon from 2014 through 2018. Following the summary table are detailed descriptions of each SSO occurrence. These SSOs have been reported to MassDEP in accordance with state regulations. Note that a hardcopy version of this inventory may be retained by the Town and contain the most up-to-date documentation.

Date	Time	Location	Discharge to surface water or MS4	Estimated SSO Volume	Cause of SSO	Mitigation/Corrective Measures Completed
4/17/2017	7:30 AM – 8:15 AM	Spring Street at Hall Road	Yes – MS4 at Whitney Pond	150 gallons	Blockage	See detailed descriptions below
3/22/2017	9:35 AM – 10:33 AM	Summer Street at Spruce Street	Yes – MS4	1,800 gallons	Pipe Collapse	
2/29/2016	1:15 PM – 2:30 PM	Front Street-River Street Easement	Yes – Millers River/ Otto River	> 10,000 gallons but < 100,000	Blockage/ Rain Event	
2/25/2016	8:10 AM – 8:40 AM	Water Street	No	< 5,000 gallons	Blockage/ Rain Event	
3/17/2014	Unknown	River Street	Unknown	> 10,000 gallons but < 100,000	Blockage	

- No SSOs occurred in **2018**

- On **April 17, 2017** at approximately 7:30 AM, the Sewer Department was notified of sewage coming out of a manhole at the corner of Spring Street and Hall Road. After responding and investigating, a grease blockage in the sewer system was discovered. Sewer Department staff jetted the lines before and after the sewer back up to the lift station, cleared the blockage, and halted the overflow of sewage by 8:15 AM. The total volume of wastewater discharged to the catch basin at Whitney Pond was approximately 150 gallons. Following removal of the blockage, Town staff made sure all was in working order.

- On **March 22, 2017** at approximately 9:35 AM, the Sewer Department was notified of sewage coming out of an open trench from a water repair and being discharged to a catch basin at the corner of Summer Street and Spruce Street. After responding and investigating, a pipe collapse was discovered on Summer Street between Spruce Street and Oak Street. The sewage discharge was stopped by 10:33 AM. A pump truck was used to maintain the flow in an upstream manhole, while the pipe was repaired. The pump truck was then discontinued and the line was tested, and determined to be in working order. The total volume of wastewater discharged to the catch basin at Summer Street and Spruce Street was approximately 1,800 gallons. Town staff made sure that no solids were on the asphalt or in the storm water basin, and the impact area was cleaned.

- On **February 29, 2016** at approximately 1:15 PM, the Sewer Department was notified of sewage coming out of manhole in the easement between Front Street and River Street. After responding and investigating, a blockage was discovered between two manholes on Front and River Streets. Sewer department staff used sewer rods to clear the blockage and halt the overflow by 2:30 PM. The total volume of wastewater discharged to the Millers River/Otto River was estimated to be greater than 10,000 gallons but less than 100,000 gallons. The reason for the SSO was a buildup of roots, paper, and rags in the sewer line and heavy rain in the preceding days.

- On **February 25, 2016** at approximately 8:10 AM, the Sewer Department was notified of sewage coming out of a manhole on Water Street. After responding and investigating, a blockage was discovered between two manholes on Water Street. Sewer Department staff jetted the line and cleared the blockage, halting the overflow of sewage by 8:40 AM. The reason for the SSO was a buildup of paper and rags in the sewer line combined with an approximately 2-inch antecedent precipitation event the night before. The total volume of wastewater discharged to the ground surface (no receiving water was impacted) was approximately less than 5,000 gallons. Town staff removed material that was washed out and spread lime in the area for cleanup.

- On **March 17, 2014**, the Sewer Department was notified of sewage coming out of a manhole on Front Street at the River Street easement. After responding and investigating, Town staff discovered a pipe blockage. Sewer Department staff used sewer rods to clear the blockage and halt the overflow. Staff determined a buildup of grease and rags in the sewer line caused the sewage overflow.

Appendix F

Plan Amendment Log

STORMWATER MANAGEMENT PLAN

AMENDMENT LOG

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 G

Reference Documents

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

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

Potential pollutants likely associated with specific *municipal facilities*

Municipality Facility Activity	Potential Pollutants								
	Sediment	Nutrients	Trash	Metals	Bacteria	Oil & Grease	Organics	Pesticides	Oxygen Demanding Substances
Building and Grounds Maintenance and Repair	X	X	X	X	X	X	X	X	X
Parking/Storage Area Maintenance	X	X	X	X	X	X	X		X
Waste Handling and Disposal	X	X	X	X	X	X	X	X	X
Vehicle and Equipment Fueling			X	X		X	X		
Vehicle and Equipment Maintenance and Repair				X		X	X		
Vehicle and Equipment Washing and Steam Cleaning	X	X	X	X		X	X		
Outdoor Loading and Unloading of Materials	X	X	X	X		X	X	X	X
Outdoor Container Storage of Liquids		X		X		X	X	X	X
Outdoor Storage of Raw Materials	X	X	X			X	X	X	X
Outdoor Process Equipment	X		X	X		X	X		
Overwater Activities			X	X	X	X	X	X	X
Landscape Maintenance	X	X	X		X			X	X
Source: California Stormwater BMP Handbook (http://www.cabmphandbooks.com/)(slightly modified)									

Potential pollutants likely associated with *municipal activities*

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

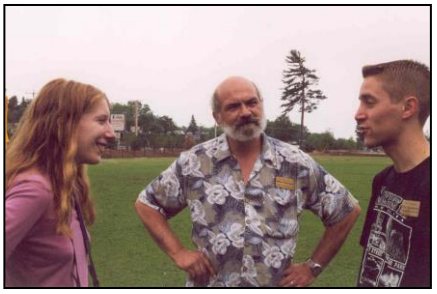
Tips for Organizing and Conducting Volunteer Clean-up Events

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

Step 1: Plan Your Clean-Up Event

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

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



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

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

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

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

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

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

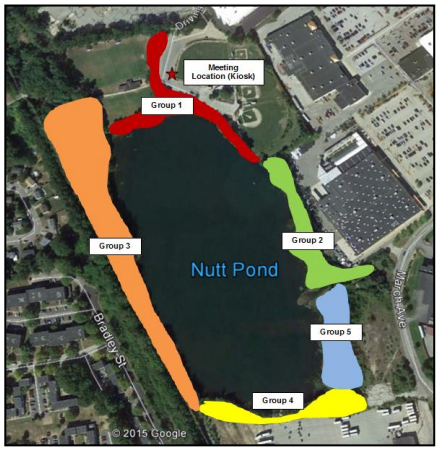
E. Determine the Most Appropriate Age(s) of Your Volunteers: Based upon the task(s) at hand, determine the most appropriate age(s) of your volunteers. Are you seeking adults only? Children? Both? Do you have tasks that all can partake in, or are the tasks age-specific?

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

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

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

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



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

Step 2: Schedule Your Clean-Up Event

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

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

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

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

Step 3: Determine and Obtain Necessary Supplies

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

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

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

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

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

The UPRP has one First-Aid kit for use.

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

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

Step 4: Determine Your Waste Disposal Options

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

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

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

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

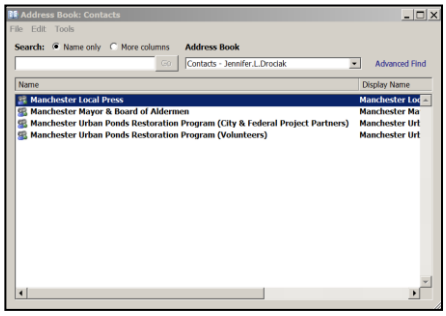
The UPRP has partnered with the Student Conservation Association, local high school ecology clubs, local boy-scout troops, trout-fishing clubs, geo-cashing groups, and others in the past. This has helped garner additional / new volunteers.

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

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

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

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



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

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

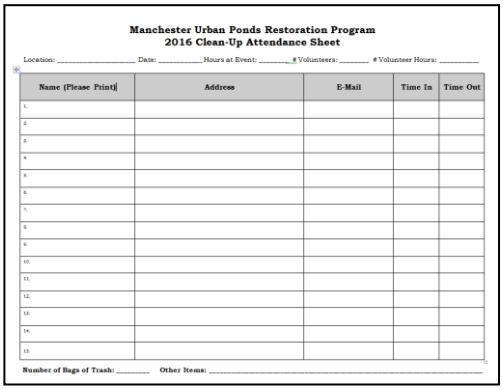
For Example: Seeking volunteers of all ages to assist in an annual trash clean-up at Black Brook and Blodget Park in Manchester on Saturday, April 23, 2016 from 9:00AM – 11:00AM. Volunteers will partner to clean the park and skirt the edges of the brook and wetland complex to remove accumulated trash.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

Step 6: Conduct Your Clean-Up Event

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

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

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



Manchester Urban Ponds Restoration Program
2016 Clean-Up Attendance Sheet

Location: _____ Date: _____ Hours at Event: _____ # Volunteers: _____ # Volunteer Hours: _____

	Name (Please Print)	Address	E-Mail	Time In	Time Out
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

Number of Bags of Trash: _____ Other Items: _____

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

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

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

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

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

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

Manchester Urban Ponds Restoration Program

Nutts Pond Facts

- **Namesake:** Named after a local circus performer, "Commodore" George Washington Nutt
- **Location:** Driving Park Road, off of South Willow Street in south Manchester
- **Type of Waterbody:** Natural Pond fed by Tannery Brook
- **Inlet/Outlet:** Tannery Brook, flowing into Nutts Pond to the south of Home Depot, and emptying into the Merrimack River near the Riverwalk in downtown Manchester
- **Watershed Area:** 635 acres
- **Waterbody Size:** 16.1 acres
- **Volume of Water:** 260,500 m³
- **Mean/Average Water Depth:** 13.12 feet
- **Maximum Water Depth:** 30.10 feet
- **Shoreline Length:** 3,116 feet
- **Elevation:** 237 feet
- **Uses:** Paddling, fishing
- **Public Boat Launch:** Gravel, trailer or car-top
- **Amenities:** Prescourt Park athletic fields
- **Local Legend:** "Commodore" Nutt the circus performer who toured with the P.T. Barnum Circus show with Tom Thumb

Manchester Urban Ponds Restoration Program

The History of Nutts Pond

"Commodore" Nutt

Manchester Urban Ponds Restoration Program

Nutts Pond Stormwater Best Management Practices (BMP) Summary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

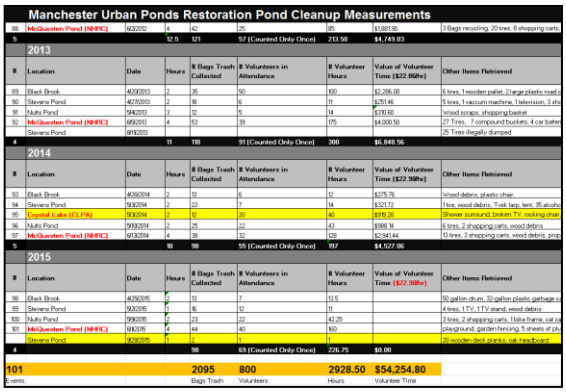
Above Right: Cake served to volunteers at the 100th official cleanup of the Manchester Urban Ponds Restoration Program .

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

Step 7: Follow Up After the Clean-Up Event

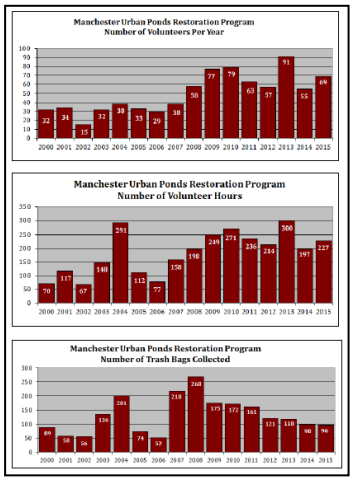
A. Update Your Electronic Records: Now is the time to transpose the information collected on the "Clean-Up Attendance Sheet" into an electronic record-retention system if you have access to one. Perhaps you have access to a database. If not, consider using a Microsoft Excel workbook / spreadsheet system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

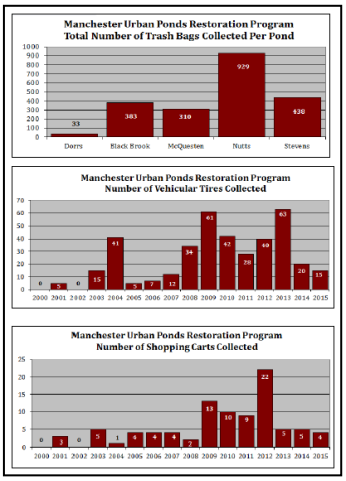
The UPRP has consistently used Microsoft Excel to track clean-up measurements. In the first worksheet of the workbook, we account for the number of our clean-up event, the location, date, hours spent at the event, numbers of bags of trash collected at the event, number of volunteers at the event, number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



Manchester Urban Ponds Restoration Pond Cleanup Measurements

#	Location	Date	Hours	# Bags Trash Collected	# Volunteers in Attendance	# Volunteer Hours	Value of Volunteer Time ($22.95/hr)	Other Items Retrieved
88	McQuesten Pond (NHFIC)	4/3/2012	4	42	25	85	$1,881.30	3 Bags recycling, 20 tires, 8 shopping carts
5			12.5	121	57 (Counted Only Once)	213.50	$4,749.93	
	2013							
89	Black Brook	4/29/2013	2	35	50	100	$2,295.00	6 tires, 1 wooden pallet, 2 large plastic road c
90	Stevens Pond	4/29/2013	2	16	6	11	$251.46	5 tires, 1 vacuum machine, 1 television, 2 sh
91	Nutts Pond	5/4/2013	3	12	5	14	$310.60	Wood scraps, shopping basket
92	McQuesten Pond (NHFIC)	6/5/2013	4	53	39	175	$4,000.50	27 Tires, 7 compound buckets, 4 car batter
	Stevens Pond	6/18/2013						25 Tires illegally dumped
4			11	118	91 (Counted Only Once)	300	$6,848.56	
	2014							
#	Location	Date	Hours	# Bags Trash Collected	# Volunteers in Attendance	# Volunteer Hours	Value of Volunteer Time ($22.95/hr)	Other Items Retrieved
93	Black Brook	4/26/2014	2	13	6	12	$275.76	Wood debris, plastic chair
94	Stevens Pond	5/3/2014	2	22	7	14	$321.72	1 tire, wood debris, Tivek tarp, tent, 35 alcohe
95	Crystal Lake (CL) PA)	5/3/2014	2	10	20	40	$919.20	Shower surround, broken TV, rocking chair
96	Nutts Pond	5/10/2014	2	25	22	43	$988.14	6 tires, 2 shopping carts, wood debris
97	McQuesten Pond (NHFIC)	6/13/2014	4	38	32	128	$2,941.44	13 tires, 3 shopping carts, wood debris, prop
5			10	108	55 (Counted Only Once)	197	$4,527.06	
	2015							
#	Location	Date	Hours	# Bags Trash Collected	# Volunteers in Attendance	# Volunteer Hours	Value of Volunteer Time ($22.95/hr)	Other Items Retrieved
98	Black Brook	4/25/2015	2	13	7	13.5		50 gallon drum, 32 gallon plastic garbage c
99	Stevens Pond	5/2/2015	2	16	12	11		4 tires, 1 TV, 1 TV stand, wood debris
100	Nutts Pond	5/9/2015	2	23	22	42.25		3 tires, 2 shopping carts, 1 bike frame, cat ca
101	McQuesten Pond (NHFIC)	6/1/2015	4	44	40	160		playground, garden fencing, 5 sheets of pla
	Stevens Pond	6/16/2015	1	1	1	1		10 wooden deck planks, oak headboard
4			10	98	69 (Counted Only Once)	226.75	$0.00	
101				2095	800	2928.50	$54,254.80	
Events				Bags Trash	Volunteers	Hours	Volunteer Time	





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

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

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

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

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

Jen Drociak lives in Manchester, NH and holds a Bachelor of Science degree in Environmental Conservation from the University of New Hampshire. She is employed with the New Hampshire Department of Environmental Services where she has worked as a program specialist for the Pollution Prevention Program, a restoration specialist for the NH Coastal Program where she established a monitoring program for pre- and post-restoration projects in NH's salt marshes, and as the Volunteer River Assessment Program Coordinator where she provided technical assistance to approximately 200 volunteers who collected water quality samples for surface water quality assessments on NH's rivers and streams. Jen has also worked for the Wastewater Engineering Bureau as a grants management specialist and is currently working for the Land Resources Management Bureau as a compliance specialist. Since 2000, Jen has also been involved with the Manchester Urban Ponds Restoration Program, and has served as acting coordinator since 2006 where she largely coordinates annual clean-up events and water quality monitoring.

Appendix H

Annual Reports and Reporting Requirements

Annual Reports

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

Permit Year 1

(May 1, 2018 – June 30, 2019)

Permit Year 2

(July 1, 2019 – June 30, 2020)

Permit Year 3

(July 1, 2020 – June 30, 2021)

Permit Year 4

(July 1, 2021 – June 30, 2022)

Permit Year 5

(July 1, 2022 – June 30, 2023)

Permit Year 6

(July 1, 2023 – June 30, 2024)

Appendix I

TMDL Reporting and Evaluations