



STORMWATER MANAGEMENT PLAN (SWMP)

Hanson, MA

September 2022



Stormwater Management Plan (SWMP) Revision History
MS4 Materials that supplement the 2019 SWMP Document

Revision #	Date	Comments
0	6/2019	SWMP Published for Town Comment
1	9/2020	O&M Plan, IDDE Plan, SWPPPs, and Facility Inventory are included as Appendix K
2	6/2021	Year 3 Updates
3	10/2022	Year 4 Updates New Attachments: SWPPP Inspections, Retrofit Analysis, Green Infrastructure Memorandum, Impervious Surface Memorandum, Nutrient Source Identification Report

“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

TABLE OF CONTENTS

LIST OF TABLES	III
LIST OF FIGURES	IV
LIST OF APPENDICIES	V
SECTION 1 BACKGROUND	1
SECTION 1.1 STORMWATER REGULATION	1
SECTION 1.2 PERMIT PROGRAM BACKGROUND	1
SECTION 1.3 STORMWATER MANAGEMENT PLAN (SWMP)	1
SECTION 1.4 TOWN SPECIFIC MS4 BACKGROUND.....	2
SECTION 2 SWMP COMPONENTS	3
SECTION 2.1 PARTIES INVOLVED IN IMPLEMENTATION	3
SECTION 2.2 DOCUMENTATION REGARDING ENDANGERED SPECIES.....	3
SECTION 2.3 DOCUMENTATION REGARDING HISTORIC PROPERTIES	4
SECTION 2.4 DOCUMENTATION REGARDING DISCHARGES	4
SECTION 2.5 SANITARY SEWER OVERFLOW (SSO) INVENTORY	4
SECTION 2.6 IDDE PROGRAM AND BYLAWS	5
SECTION 2.7 SEDIMENT AND EROSION CONTROL PROCEDURES.....	5
SECTION 2.8 PUBLIC DRINKING WATER SUPPLY SOURCES PROTECTION	5
SECTION 2.9 ACTIVITIES TO MONITOR DISCHARGES	5
SECTION 2.10 ANNUAL PROGRAM EVALUATION	5
SECTION 3 MINIMUM CONTROL MEASURES	6
SECTION 3.1 PUBLIC EDUCATION AND OUTREACH	6
<i>Section 3.1.1 Background</i>	6
<i>Section 3.1.2 Best Management Practices</i>	6
SECTION 3.2 PUBLIC INVOLVEMENT AND PARTICIPATION	7
<i>Section 3.2.1 Background</i>	7
<i>Section 3.2.2 Best Management Practices</i>	7
SECTION 3.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PROGRAM	8
<i>Section 3.3.1 Background</i>	8

Section 3.3.2	<i>Best Management Practices</i>	9
SECTION 3.4	CONSTRUCTION SITE STORMWATER RUNOFF CONTROL	10
Section 3.4.1	<i>Background</i>	10
Section 3.4.2	<i>Best Management Practices</i>	10
SECTION 3.5	POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT	11
Section 3.5.1	<i>Background</i>	11
Section 3.5.2	<i>Best Management Practices</i>	11
SECTION 3.6	GOOD HOUSEKEEPING AND POLLUTION PREVENTION FOR TOWN OWNED PROPERTIES	12
Section 3.6.1	<i>Background</i>	12
Section 3.6.2	<i>Best Management Practices</i>	13
SECTION 4	WATER QUALITY BASED REQUIREMENTS	15
SECTION 4.1	BACKGROUND	15
SECTION 4.2	ADDITIONAL IMPAIRMENT REQUIREMENTS	16
Section 4.2.1	<i>Public Education and Outreach</i>	16
Section 4.2.2	<i>Stormwater Management in New Development and Redevelopment</i>	17
Section 4.2.3	<i>Good Housekeeping and Pollution Prevention</i>	17
Section 4.2.4	<i>Illicit Discharge</i>	18
Section 4.2.5	<i>Additional Requirements</i>	18

LIST OF TABLES

Table 2-1: List of Parties Responsible for SWMP Implementation	3
Table 3-1: Impaired Waters, TMDLs and Impairments	8

LIST OF FIGURES

- Figure 1 - System Locus
- Figure 2 - MS4 Urbanized Areas
- Figure 3 - Stormwater System Map
- Figure 4 - Town Watersheds

LIST OF APPENDICIES

APPENDIX A - MA MS4 Hyperlinks and References

APPENDIX B - Notice of Intent

APPENDIX C - Permit Schedule

APPENDIX D - Endangered Species and Critical Habitats Protection Documents

APPENDIX E - MA MS4 General Permit Appendix D - Historic Properties Documents

APPENDIX F - New or Increased Discharges Tracking Log

APPENDIX G - SSO Inventory

APPENDIX H - Current Stormwater Bylaws

APPENDIX I - Annual Reports

APPENDIX J - Minimum Control Measures BMPs

APPENDIX K - Operations and Maintenance (O&M) Plan

APPENDIX L - Illicit Discharge Detection and Elimination (IDDE) Plan

APPENDIX M - Stormwater Pollution Prevention Plans (SWPPPs)

APPENDIX N - Municipal Facility Audit Report

APPENDIX O - Year 4 MCM-5 Memos

APPENDIX P - Nutrient Source Identification Report

APPENDIX Q - Annual Stormwater BMP Inspection Reports

SECTION 1 BACKGROUND

SECTION 1.1 STORMWATER REGULATION

The Stormwater Phase II Final Rule was promulgated in 1999 and was the next step after the 1987 Phase I Rule in an effort by the Environmental Protection Agency (EPA) to preserve, protect, and improve the Nation's water resources from polluted stormwater runoff. The Phase II Rule expands the Phase I program by requiring additional programs and practices to control polluted stormwater runoff from small Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas and construction sites, through the use of National Pollution Discharge Elimination System (NPDES) permits. 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 U.S. Census-designated Urbanized Area are required to seek NPDES permit coverage for those stormwater discharges.

SECTION 1.2 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" (e.g., cities and towns) and "non-traditional" (e.g., 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 small MS4 General Permit, which became effective on July 1, 2018.

SECTION 1.3 STORMWATER MANAGEMENT PLAN (SWMP)

The SWMP describes and details the activities and measures that will be implemented to meet the terms and conditions of the 2016 MS4 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. Additionally, MS4 reports (Operations and Maintenance Plan, Illicit Discharge Detection and Elimination Plan, etc.), annual reports, and inspection reports should be attached to the SWMP as appendices. Thus, the SWMP should act as a living document that records the permittee's planned and completed progress toward meeting the MS4 Permit requirements.

The main elements, or minimum control measures (MCMs) 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. The hyperlinks provided in Appendix A offer additional information and supporting documents related to the MS4 Permit and the aforementioned minimum control measures.

SECTION 1.4 TOWN SPECIFIC MS4 BACKGROUND

The Town must give special consideration to and meet eligibility requirements for their discharges to be able to apply for coverage under the General Permit. Eligibility will be determined based on three categories: Endangered Species Act, National Historic Preservation Act, and Water Quality Impaired Waters. The Town must establish that discharges from its storm drain system do not adversely impact endangered species, critical habitats, and historic properties in order to be covered by the General Permit. Furthermore, the Town must identify all receiving waters that have been classified as Water Quality Impaired Waters by the Massachusetts Department of Environmental Protection. The Town of Hanson and its surrounding water bodies are shown on Figure 1: System Locus. The Notice of Intent (NOI) for coverage under the Small MS4 General Permit was submitted to EPA and MassDEP on September 25, 2018. A copy of the NOI is provided in Appendix B.

SECTION 2 SWMP COMPONENTS

SECTION 2.1 PARTIES INVOLVED IN IMPLEMENTATION

Stormwater programs in the Town of Hanson are currently a responsibility of the Highway Director, Jamison Shave. The Town has not yet created or staffed a dedicated stormwater management position or stormwater committee. The current staff involved in stormwater management are listed in the table below.

Table 2-1: List of Parties Responsible for SWMP Implementation

Name	Title	Department
Jamison E. Shave	Director	Highway Department
Jerry Davis	Superintendent	Water Department
Gilbert Amado	Health Agent	Board of Health
Antonio M DeFrias, PLS	Town Planner	Planning Department
Phil Clemons	Chair	Conservation Commission
Frank Schellenger	Conservation Agent	Conservation Commission
Kerry Glass	Building Inspector	Building Department
Laura FitzGerald-Kemmett	Chair	Board of Selectman
Lisa Green	Town Administrator	Town Administrator

SECTION 2.2 DOCUMENTATION REGARDING ENDANGERED SPECIES

In order to comply with part 1.9.1 of the NPDES Permit, the Town has attached documentation in Appendix D supporting Hanson’s eligibility determination of Criterion C with regard to federal Endangered and Threatened Species and Critical Habitat Protection. Criterion C states that, “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.” In this case, USFWS provided a letter in place of a concurrence letter for informal consultation. The attachments in Appendix D include the aforementioned letter, as well as the results of the Information for Planning and Consultation (IPaC) environmental review process. Using the IPaC environmental review process, one endangered species has been identified within Hanson’s boundaries: the Northern Long-Eared Bat. This species does not have critical habitats designated within the Town, and the MS4 Permit will not adversely affect the listed species within the MS4 area.

SECTION 2.3 DOCUMENTATION REGARDING HISTORIC PROPERTIES

The Town has attached documentation in Appendix E supporting their eligibility determination regarding Historic Properties, in compliance with part 1.9.2 of the Permit. This document, Appendix D of the Massachusetts General MS4 Permit, includes information supporting Hanson's determination as Criterion A, stating that the discharges do not have the potential to cause effects on historic properties.

Historic site considerations will be evaluated further as part of the design/permitting of new/retrofit BMPs proposed for implementation as part of MS4 compliance. Regarding the National Historic Preservation Act, under 36 CFR 800, this facility is an existing facility authorized by the previous Permit, and is not undertaking any activity involving subsurface land disturbance less than 1 acre. This MS4 Permit will have "no potential to cause effects," in accordance with 36 CFR 800.3(a)(1).

SECTION 2.4 DOCUMENTATION REGARDING DISCHARGES

Attached in Appendix F is the documentation for tracking any new or increased discharges granted by MassDEP in compliance with part 2.1.2 of the Permit. At this time, the Town of Hanson has no new and/or increased discharges. The Town will document any new and/or increased discharges on the form provided in Appendix F and include project specific information regarding best management practices implemented for those discharges. A sample discharges form is provided in Appendix F.

SECTION 2.5 SANITARY SEWER OVERFLOW (SSO) INVENTORY

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. The verbal notification should be followed up with a written report following MassDEP's Sanitary Sewer Overflow (SSO)/Bypass notification form within five calendar days of the time you become aware of the overflow, bypass, or backup.

The Town of Hanson does not have a sanitary sewer system and instead relies entirely on individual septic systems. Should this change, the Town will maintain an inventory of all known locations where SSOs have discharged to the MS4, if any are found. This inventory shall include SSOs resulting from inadequate conveyance capacities, or where interconnectivity of the storm and sanitary sewer infrastructure allows for connection of flow between the systems. A SSO inventory form is provided in Appendix G and is updated annually. The inventory includes the following information:

1. Location (approximate street crossing/address and receiving water, if any);
2. A clear statement of whether the discharge entered a surface water directly or entered the MS4;
3. Date(s) and time(s) of each known SSO occurrence (i.e., beginning and end of any known discharge);
4. Estimated volume(s) of the occurrence;
5. Description of the occurrence indicating known or suspected cause(s);

6. Mitigation and corrective measures completed with dates implemented; and
7. Mitigation and corrective measures planned with implementation schedules.

SECTION 2.6 IDDE PROGRAM AND BYLAWS

The Town's IDDE plan was developed during the first year of the new MS4 Permit (June 2019). The IDDE program is detailed in section 3.3 of Minimum Control Measures. The Town's current Stormwater Management and Erosion Control and Illicit Discharge Bylaw is provided in Appendix H.

SECTION 2.7 SEDIMENT AND EROSION CONTROL PROCEDURES

Written procedures for the Town's site inspections and enforcement of sediment and erosion control procedures in accordance with part 2.3.5 of the MS4 Permit, Construction Site Stormwater Runoff Control, are detailed in the Sections 3.4 and 3.5, Minimum Control Measures. This information includes the party responsible for site inspections and implementation of procedures.

SECTION 2.8 PUBLIC DRINKING WATER SUPPLY SOURCES PROTECTION

The Town has developed practices in effort to avoid or minimize impacts to surface public drinking water supply sources. These efforts are detailed in Minimum Control Measures section 3.6, Good Housekeeping and Pollution Prevention. The Town plans to prioritize the enforcement of the existing stormwater pollution prevention plans.

SECTION 2.9 ACTIVITIES TO MONITOR DISCHARGES

The Town identified discharges within public drinking water supply source areas and gave priority to outfall inspections and screening required of the Minimum Control Measures in section 3.0.

SECTION 2.10 ANNUAL PROGRAM EVALUATION

To comply with part 4.1 of the MS4 Permit, the Town annually self-evaluates compliance with the terms and conditions of the MS4 Permit and submits each self-evaluation as part of the Fiscal Year annual report. The NPDES Phase II Small MS4 General Permit Annual Reports for Fiscal Year 2018 through the most recent Fiscal Year are attached in Appendix I.

SECTION 3 MINIMUM CONTROL MEASURES

In effort to reduce pollutants and comply with part 2.3 of the MS4 Permit, the Town focuses on the following six minimum control measures detailed in this section. These sections describe the Town's practices to comply with each control measure, the responsible person(s) or party of each practice, and the goal(s) for each BMP of each control measure. The BMPs for each of the six minimum control measures are outlined in the forms provided in Appendix J.

SECTION 3.1 PUBLIC EDUCATION AND OUTREACH

The Town implemented 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, MS4 Permit part 2.3.2, is to increase knowledge and change behavior of the public so that the pollutants in stormwater are reduced.

The Town implemented a public education program as required by the 2003 permit and continued that program with the necessary adjustments to meet the additional requirements of the 2016 MS4 Permit.

The program includes the education of the following four audiences: (1) residents, (2) businesses, institutions (churches, hospitals), and commercial facilities, (3) developers (construction), and (4) industrial facilities.

Section 3.1.1 Background

The Town of Hanson has completed BMPs such as flyers, new resident information packets, stormwater alerts through the Water Smart program, pet waste control information distribution, and educational boards/signs in public open spaces to share information and increase awareness of stormwater issues. Though these BMPs are already completed, the Town continues to make the materials available to local residents and businesses.

Section 3.1.2 Best Management Practices

- I. Distribution of a minimum of 2 educational messages over the permit term to the required audiences within the permit term (5 years), as listed below. Messaging is in progress.
 - a. Residents
 - i. Publish outreach materials; distribute new resident packets to residents within Wetland Protection Areas.
 - ii. Distribute pet waste control information to residents when they (re)apply for a pet license.
 - iii. Continue storm drain stenciling program.
 - b. Businesses, Institutions, and Commercial Facilities
 - i. Include stormwater information in permit materials.
 - ii. Make information available on stormwater website and at Town Hall.

- iii. Distribute information to septic maintenance contractors.
- c. Developers (Construction)
 - i. Include stormwater information in permit materials; review and update application forms to meet the new requirements.
 - ii. Make information available on stormwater website and at Town Hall.
 - iii. Distribute information to developers based on zoning and property use.
- d. Industrial Facilities
 - i. Distribute stormwater information to industrial groups based on zoning and property use.
 - ii. Make information available on stormwater website and at Town Hall.

SECTION 3.2 PUBLIC INVOLVEMENT AND PARTICIPATION

The objective of the public involvement and participation control measure, permit part 2.3.3., is for the Town to provide the public with opportunities to engage in activities that promote good stormwater practices. The public has also been given the chance to review the Stormwater Management Plan (SWMP) and to provide comments on its implementation.

Section 3.2.1 Background

Copies of the Town's existing Stormwater Management Plan were made available for public review at the Town Library. The Town also engages the public by holding annual Green Up Clean Up volunteer waterway clean-up days and household hazardous waste drop-off days. The Highway Department also works with the North & South Rivers Watershed Association (NSRWA) to create handouts focusing on green initiatives. Hanson is a member of the Indian Head River Trail Coalition (IHRTC), which hosts annual trail clean-up events.

Section 3.2.2 Best Management Practices

- I. Public Review
 - a. Allow annual review of stormwater management plan and posting of stormwater management plan on website.
- II. Public Participation
 - a. Allow public to comment on stormwater management plan annually.
 - b. Continue annual community cleanup events with NSRWA and IHRTC.
 - c. Continue to sponsor hazardous waste collections two times per year.

SECTION 3.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PROGRAM

The Town has implemented an IDDE program, per MS4 Permit part 2.3.4, in order to find and eliminate non-stormwater discharge sources. Procedures have been implemented to fix any prevalent issues in the Town’s storm sewer system. There are 49 outfall structures that discharge to the Town of Hanson’s MS4 area. These outfall structures are displayed on Figure 2: MS4 Urbanized Areas, and the Town’s inventory of outfall structures are shown in Figure 3: Stormwater System Map. Below, Table 3-1 lists the Town’s impaired waters, the impairments per water body, and any associated final Total Maximum Daily Load (TMDL) report numbers. Impairments will be discussed further in Section 4.

Table 3-1: Impaired Waters, TMDLs and Impairments

Water Body Name	Segment ID	Category	Impairment(s)	Associated Approved TMDL
Oldham Pond	MA94114	5	<ul style="list-style-type: none"> Harmful Algal Blooms 	
Factory Pond	MA94175	5	<ul style="list-style-type: none"> Mercury in Fish Tissue 	
Indian Head Pond	MA94071	5	<ul style="list-style-type: none"> Harmful Algal Blooms 	
Indian Head River	MA94-04	5	<ul style="list-style-type: none"> Mercury in Fish Tissue Escherichia Coli (E. Coli) 	
Wampatuck Pond	MA94168	5	<ul style="list-style-type: none"> Chlorophyll-a Dissolved Oxygen Supersaturation Harmful Algal Blooms Phosphorus (Total) Transparency/Clarity 	
Monponsett Pond, West Basin	MA62119	5	<ul style="list-style-type: none"> Chlorophyll-a Harmful Algal Blooms Phosphorus (Total) Transparency/Clarity 	
White Oak Reservoir	MA62157	5	<ul style="list-style-type: none"> Phosphorus (Total) Nutrient/Eutrophication Biological Indicators 	
Shumatuscacant River	MA62-33	5	<ul style="list-style-type: none"> Dissolved Oxygen Fecal Coliform Sedimentation/Siltation 	40308

Category 5 Waters – impaired water bodies that require a TMDL.

“Approved TMDLs” are those that have been approved by USEPA as of the date of issuance of the Massachusetts 2018/2020 List of Integrated Waters (February 2022).

Section 3.3.1 Background

The Town has developed and implemented an IDDE program. The IDDE program is outlined in the IDDE Plan, last updated in September 2022 and attached in Appendix L. The Town continues to comply with local bylaws, state, and federal requirements. The Town has verified drainage

connectivity mapping and continues to update outfall and catchment information and screening results.

Section 3.3.2 Best Management Practices

- I. Legal Authority
 - a. The IDDE program shall include adequate legal authority to prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions. Adequate legal authority consists of a currently effective ordinance, by-law, or other regulatory mechanism. This ordinance, by-law, or other regulatory mechanism was a requirement of the MS4-2003 permit and is currently effective.
- II. SSO Inventory
 - a. Develop SSO Inventory Database within 1 year of effective permit date that logs historical SSOs that have occurred in the last 5 years, as discussed in further detail in section 2.5.
 - i. Coordinate with Highway Department for tracking of any future septic problems or SSOs. The SSO inventory is up to date.
- III. Storm Sewer System Map
 - a. Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit. Phase I and II mapping are in progress.
 - i. Make an electronic and physical copy of the map available to the public via the stormwater website and Hanson Town Hall.
 - ii. Map/verify 10% of system per year during permit years 1-10.
 1. Phase I will be focused on during Years 1 and 2, while Phase II will be focused on during Years 3 thru 10.
 - iii. Integrate system map updates with planned sewer expansion projects.
- IV. Written IDDE Program Development
 - a. Develop and complete written IDDE program within 1 year of effective permit date. The IDDE program and attachments are written and updated as needed. The document is available at the Hanson Town Hall.
- V. Implement IDDE Program
 - a. Implement catchment investigations according to program and permit conditions within 18 months of the effective date of the Permit. Catchment investigations procedures have been written and included in the Town's IDDE Plan.
 - i. Continue to enforce bylaw.
 - ii. Draft and implement stormwater management regulations.
 - iii. Coordinate water quality monitoring with dry weather screening
 1. New monitoring system should include surveying for illicit discharge detection.
- VI. Employee Training
 - a. Coordinate annual stormwater training and incorporate with training required in Section 6.2.IV.B. Regular annual training has been provided to the Town.

- VII. Dry Weather Screening
 - a. Conduct screening in accordance with outfall screening procedure and permit conditions. Screenings are complete.
- VIII. Conduct Wet Weather Screening
 - a. Conduct screening in accordance with outfall screening procedure and permit conditions, and as determined by dry weather screening results.
- IX. Conduct ongoing screening as necessary, and upon completion of the IDDE program.

SECTION 3.4 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

The Town must implement a program focused on controlling stormwater runoff from construction sites. The program shall minimize or eliminate erosion on site and maintain the site so that the sediment is not transported in stormwater or allowed to discharge to a water of the U.S. through the Town's MS4, as stated in part 2.3.5 of the Permit.

Section 3.4.1 Background

The Town of Hanson has adopted construction site stormwater runoff measures and have continued to enforce local, state, and federal bylaws. Erosion and sedimentation control and drainage submittal requirements for site inspections were determined to be adequate.

Section 3.4.2 Best Management Practices

- I. Site Inspection and Enforcement of Erosion and Sediment Control (ESC) Measures.
 - a. Complete written procedures of site inspections and enforcement procedures within 1 year of effective date of the Permit. These have been prepared.
 - i. Recommend standards and practices for town inspection procedures. Seek input from relevant town groups (e.g. Building, Health, Conservation, etc.)
 - ii. Develop inspection form that includes ESC measures and integrate them with existing Town forms.
- II. Site Plan Review
 - a. Complete written procedures of site plan review and begin implementation within 1 year of the effective date of the Permit. These have been prepared.
 - i. Include site plan review workflow chart with permit applications.
 - ii. Review current Town procedure regarding when a Construction General Permit (CGP) is needed.
 - 1. CGP required for disturbance of 1 acre or greater
- III. Erosion and Sediment Control Ordinance
 - a. Adoption of requirements for construction operators to implement a sediment and erosion control program within 1 year of the effective date of the Permit.
 - i. Set limit of 1 acre before project requires inspection by Town official.
 - 1. Coordinate limits and requirements with fill/extraction permits.
 - b. Update all Town forms with erosion and sediment control checklist.
 - c. Continue to implement Soil and Erosion Control bylaw.

- d. Continue to monitor all construction activities within the Town of Hanson for erosion and sediment control issues.
- IV. Waste Control
 - a. Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes within 1 year of the effective date of the Permit.
 - i. Incorporate into Town’s general conditions for building permit and/or site plan review.
 - ii. Review and modify Town bylaw to meet new requirements.
- V. Pre-Construction/Coordination Meetings
 - a. Continue GIS mapping and develop protocol for submitting as-builts electronically.

SECTION 3.5 POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

The objective of an effective post construction stormwater management program, part 2.3.6 of the Permit, 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.

Section 3.5.1 Background

The Town of Hanson has reviewed and modified existing bylaws and regulations on postconstruction stormwater runoff to ensure they meet US EPA requirements and MassDEP Stormwater Management Policy Standard 3. This bylaw was then distributed to local town boards and commissions for input and final revisions. Once construction projects are complete, the Town takes ownership of the drainage infrastructure in the new developments and the Highway Department is responsible for the maintenance and operation of stormwater controls. These inspection practices were also enforced under the Town’s Post Construction Site Runoff Control bylaw.

Section 3.5.2 Best Management Practices

- I. Post-Construction Ordinance
 - a. The Town shall develop or modify, as appropriate, an ordinance or other regulatory mechanism within 2 years of the effective date of the permit. Completed.
- II. As-Built Plans For On-Site Stormwater Control
 - a. Require submission of electronic data for as-built drawings (e.g. PDF, AutoCAD, GIS) within 2 years of completed construction. Completed.
 - i. O&M certification should include contact and contract information for contractors that perform O&M on the private BMPs.
- III. Inventory and Priority Ranking of MS4-Owned Properties That May Be Retrofitted with BMPs

- a. Conduct detailed inventory of MS4 owned properties and rank for retrofit potential within 4 years of permit effective date. The assessment is complete and included in Appendix O.
 - i. Inventory Town parcels for existing stormwater BMPs and identify opportunities for GI/LID retrofits.
 - 1. Include schools, parks, recreation facilities, police/fire/EMS, libraries, public works, and town administrative offices.
- IV. Allow Green Infrastructure
 - a. Within 4 years of permit effective date, develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist. The assessment is complete and included in Appendix O.
 - i. Review bylaws and applications in order to incorporate green infrastructure and low impact development language as needed.
 - ii. Educate the public on green infrastructure through existing BMP retrofits/demonstration projects.
- V. Street Design and Parking Lot Guidelines
 - a. Within 4 years of permit effective date, 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. The assessment is complete and included in Appendix O.
 - i. Publish street design and parking lot guidelines on stormwater website.
- VI. Ensure any stormwater controls or management practices for new development and redevelopment will prevent or minimize impacts to water quality.
 - a. Within 2 years of permit effective date, adopt, amend, or modify regulation mechanisms to meet permit requirements.
 - i. Review rules and regulations and modify as needed. Include evaluation of subdivision/redevelopment requirements to keep stormwater runoff onsite and for long-term operations and management of private BMPs.
 - ii. Continue to implement Post-Construction Site Runoff Control Bylaw.

SECTION 3.6 GOOD HOUSEKEEPING AND POLLUTION PREVENTION FOR TOWN OWNED PROPERTIES

An Operations and Maintenance (O&M) program must be implemented by the Town for Town-owned operations. The program shall focus on preventing or reducing pollutant runoff and protecting water quality from Town operations.

Section 3.6.1 Background

The Town of Hanson has developed and implemented an O&M Plan, which is attached as Appendix K. In addition, the Town has developed Stormwater Pollution Prevention Plans (SWPPPs) for the

highway garage and transfer station. The Town also Hanson conducts bi-annual street sweeping and continuous catch basin cleaning.

The Town is a member of the South Shore Recycling Cooperative (SSRC). The SSRC hosts an annual household hazardous waste (HHW) event for partner communities. Residents also have access to HHW events in other South Shore Recycling Cooperative communities.

The Town completes annual inspections of its inventory of stormwater best management practices (BMPs). In addition, the Town completed an inventory and stormwater audit of all Town-owned facilities, the audit report is attached as Appendix N. The Highway Department is responsible for pollution prevention BMPs.

Section 3.6.2 Best Management Practices

- I. Create written O&M procedures for parks and open spaces, buildings and facilities, and vehicles and equipment within 2 years of permit effective date. Completed and attached as Appendix K.
 - a. Develop standards of practice for O&M of each public facility and combine in Town O&M Manual.
- II. Inventory all Town-owned parks and open spaces, buildings, and facilities (including their storm drains), and vehicles and equipment within 2 years of the permit effective date. Completed.
 - a. Develop a capital improvement plan that deals with flooding prevention measures and water quality improvements.
 - i. Coordinate implementation with Section 5.2.II of the Permit.
- III. Establish and implement program for repair and rehabilitation of MS4 infrastructure within 2 years of the permit effective date. Completed.
 - a. Inspect assets and assess condition to develop program
 - b. Review annual budget to set aside funding.
- IV. Establish and implement SWPPP for maintenance garages, transfer stations and other waste-handling facilities. Completed and attached as Appendix M.
 - a. Develop plan within 2 years of permit effective date.
 - b. Schedule annual employee training.
 - i. Look into workshop and speaking opportunities and seek formal training for all departments
 - c. Develop an asset management system to process complaints, permits, inspections, and maintenance.
 - d. Continue to implement improved recycling standards and requirements.
 - i. Advertise rigid plastic and antifreeze recycling to public. Enforce new standards for private haulers.
- V. Catch Basin Cleaning (implementation is ongoing annually)
 - a. Develop and implement a catch basin cleaning schedule with a goal of ensuring no catch basin is more than 50% full.

- b. Document catch basins inspected and cleaned, including total mass removed and proper disposal.
 - c. Ensure that all catch basins are cleaned annually and develop reporting and record keeping procedures for cleaning and for repair of damaged catch basins.
- VI. Street Sweeping Program (implementation is ongoing annually)
 - a. Sweep streets (rural and uncurbed exceptions apply) a minimum of once a year in the spring.
 - b. Each annual report shall include number of miles cleaned and volume or mass of material removed. Continue to implement street sweeping program.
- VII. Road Salt Use Optimization Program (implementation is ongoing annually)
 - a. Develop and implement winter road maintenance procedures including use and storage of salt and sand.
 - b. Minimize the use of salts
 - i. Calibrate spreaders to reduce salt use.
 - c. Ensure snow is not disposed into waters.
 - d. Continue working on salt reduction strategies.

SECTION 4 WATER QUALITY BASED REQUIREMENTS

In compliance with the Clean Water Act (CWA), each state must administer a program to monitor and assess the quality of its surface and groundwater. Section 305(b) process of the CWA entails assessing each use for rivers, lakes, and coastal waters, and causes and sources of impairment are identified wherever possible. Section 303(d) of the CWA along with the regulations at 40 CFR 130.7 requires states to identify those water bodies that are not expected to meet surface water quality standards (SWQS) after the implementation of technology based controls, and prioritize them for the development of Total Maximum Daily Loads (TMDLs). A TMDL establishes the maximum amount of a pollutant that may be introduced into a water body and still ensure attainment and maintenance of water quality standards. The 303(d) List of Impaired Waters (303(d) List) lists each water body in one of the following five categories:

- Category 1. Unimpaired and not threatened for all designated uses;
- Category 2. Unimpaired for some uses and not assessed for others;
- Category 3. Insufficient information to make assessments for any uses;
- Category 4. Impaired or threatened for one or more uses, but not requiring the calculation of a TMDL; or
- Category 5. Impaired or threatened for one or more uses and requiring a TMDL.

Waters listed in Category 5 constitute the 303(d) List and are to be reviewed and approved by the EPA. Table 3-1: Impaired Waters, TMDLs and Impairments details the Town's Category 5 and 4 water bodies. An overall map of the Town of Hanson's stormwater system is attached as Figure 3: Stormwater System Map.

SECTION 4.1 BACKGROUND

These best management practices aim to improve and mitigate stormwater water quality impairments. This program will focus on impaired waters requiring a TMDL (category 5) in the South Coastal and Taunton River Watersheds located in Hanson, shown on Figure 4: Town Watersheds.

The majority of the Town outfalls are located within the South Coastal Watershed. The South Coastal Watershed has a watershed-wide EPA approved TMDL requirement for pathogens. This impairment requires Hanson to follow the below requirements to mitigate pathogen discharges to the MS4. The Town should prioritize sampling their outfalls within the South Coastal Watershed for bacteria and pathogens.

Within the South Coastal Watershed portion of Town, there are five (5) water bodies listed as a category 5 water requiring a TMDL. These water bodies include 1) Factory Pond (MA94175), 2) Wampatuck Pond (MA94168), 3) Indian Head Pond (MA94071), 4) Indian Head River (MA94-04), and 5) Oldham Pond (MA94114). Wampatuck Pond is subject to phosphorus requirements in addition to the watershed wide pathogen TMDL requirements for the South Coastal Watershed.

The southwestern corner of Town is within the Taunton River Watershed. The Taunton River Watershed has a watershed-wide EPA approved TMDL requirement for pathogens. This requires Hanson to follow the requirements listed below in section 4.2.1 for bacteria and pathogens for all outfalls discharging to the Taunton River Watershed. Within the Taunton River Watershed portion of Town, there are three (3) water bodies listed as a category 5 water requiring a TMDL. These water bodies are White Oak Reservoir (MA62157), Shumatuscacant River (Segment MA62-33), and Monponsett Pond (MA62119). Monponsett Pond and White Oak Reservoir have a phosphorus impairment and therefore are subject to Ms4 Permit requirements for phosphorus. Segment MA62-33 of the Shumatuscacant River has a TMDL for fecal coliform, and is subject to the MS4 Permit Appendix F requirements for bacteria and pathogen. The Town should prioritize sampling outfalls to these water bodies for their respective impairments, also listed in Table 3-1.

Note that between the 2016 and 2018/2020 update to the Integrated List of Waters, Indian Head River (MA94-04) was listed as no longer having a total phosphorus impairment, and White Oak Reservoir (MA62157) was listed with a newly identified total phosphorus impairment.

The Hanson Highway Department is the primary party responsible for the BMPs to meet these TMDL requirements. The additional best management practices required to address impaired waters, TMDLs and other impairments are discussed in the following sections.

SECTION 4.2 ADDITIONAL IMPAIRMENT REQUIREMENTS

Section 4.2.1 Public Education and Outreach

A. Bacteria or Pathogens

1. Distribute an annual message that encourages the proper management of pet waste, including noting any existing ordinances where appropriate.
2. Disseminate educational materials to dog owners at the time of issuance or renewal of dog license, or other appropriate time.
3. Provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria or pathogens.

B. Phosphorus

1. Distribute an annual message in the spring (March/April) timeframe that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release and phosphorus-free fertilizers.
2. Distribute an annual message in the summer (June/July) timeframe encouraging the proper management of pet waste, including noting any existing ordinances where appropriate.
3. Distribute an annual message in the fall (August/September/October) timeframe encouraging the proper disposal of leaf litter.
4. Deliver an annual message on each of these topics, unless the Town determines that one or more of these issues is not a significant contributor of phosphorus to discharges from the MS4.

C. Nitrogen

1. Distribute an annual message in the spring (April/May) timeframe that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release and phosphorus-free fertilizers.
2. Distribute an annual message in the summer (June/July) timeframe encouraging the proper management of pet waste, including noting any existing ordinances where appropriate.
3. Distribute an annual message in the fall (August/September/October) timeframe encouraging the proper disposal of leaf litter.
4. Deliver an annual message on each of these topics, unless the Town determines that one of more of these issues is not a significant contributor of nitrogen to discharges from the MS4.

Section 4.2.2 Stormwater Management in New Development and Redevelopment

A. Phosphorus

1. Include a requirement that new development and redevelopment stormwater management BMPs be optimized for phosphorus removal.
2. Retrofit inventory and priority ranking under 2.3.6.1.b shall include consideration of BMPs that infiltrate stormwater where feasible. Completed.

B. Nitrogen

1. Include a requirement that new development and redevelopment stormwater management BMPs be optimized for nitrogen removal.
2. Retrofit inventory and priority ranking under 2.3.6.1.b shall include consideration of BMPs that infiltrate stormwater where feasible. Completed.

Section 4.2.3 Good Housekeeping and Pollution Prevention

A. Phosphorus

1. Establish procedures to properly manage grass cuttings and leaf litter on Town property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces. Completed.
2. Increase street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii. near impaired waters to a minimum of two times per year, once in the spring (following winter activities such as sanding) and at least once in the fall (September 1 - December 1; following leaf fall). Completed.

B. Nitrogen

1. Establish requirements for use of slow release fertilizers on permittee owned property currently using fertilizer, in addition to reducing and managing fertilizer use as provided in 2.3.7.1 Completed.
2. Establish procedures to properly manage grass cuttings and leaf litter on Town property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces. Completed.

3. Increase street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii. near impaired waters to a minimum of two times per year, once in the spring (following winter activities such as sanding) and at least once in the fall (September 1 - December 1; following leaf fall). Completed.

Section 4.2.4 Illicit Discharge

A. Bacteria or Pathogens

1. Implement the illicit discharge program required by the Permit. Catchments draining to any water body impaired for bacteria or pathogens shall be designated either Problem Catchments or HIGH priority in implementation of the IDDE program. Completed.

Section 4.2.5 Additional Requirements

A. Phosphorus

1. Complete a Phosphorus Source Identification Report within four years of the permit effective date. This report is completed, attached as Appendix P, and includes the following elements:
 - i. Calculation of total MS4 area draining to the water quality limited water segments or their tributaries, incorporating updated mapping of the MS4 and catchment delineations produced pursuant to part 2.3.4.6
 - ii. All screening and monitoring results pursuant to part 2.3.4.7.d, targeting the receiving water segment(s)
 - iii. Impervious area and DCIA for the target catchment
 - iv. Identification, delineation, and prioritization of potential catchments with high phosphorus loading
 - v. Identification of potential retrofit opportunities or opportunities for the installation of structural BMPs during redevelopment, including the removal of impervious areas
2. Submit the final Phosphorus Source Identification Report to EPA as a part of the year 4 annual report. The report is completed and was submitted to EPA.
3. Evaluate all Town-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 within five years of the permit effective date.
4. Provide a listing of planned structural BMPs and a plan and schedule for implementation in the year 5 annual report.
5. Install a minimum of one structural BMP as a demonstration project within the drainage area of the water quality limited water or its tributaries within six years of the permit effective date. The demonstration project shall be installed targeting a catchment with high phosphorus load potential.
6. Install the remainder of the structural BMPs in accordance with the plan and schedule provided in the year 5 annual report.

7. Track and estimate the phosphorous removal of any structural BMPs listed in Table 3 of Attachment 3 to Appendix F already existing or installed in the regulated area by the Town or its agents consistent with Attachment 1 to Appendix H. For each structural BMP document the BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP in each annual report.

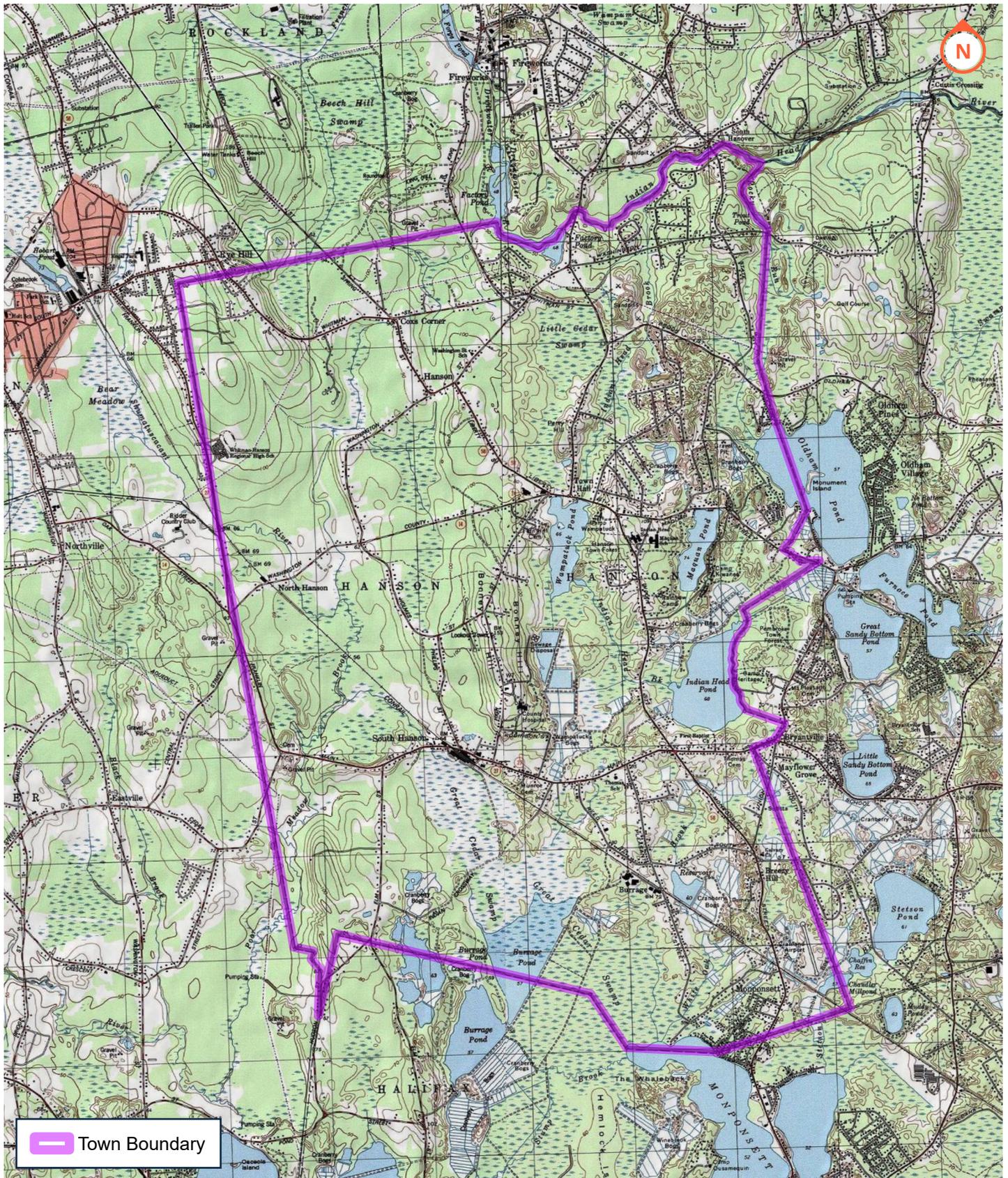
B. Nitrogen

1. Complete a Nitrogen Source Identification Report within four years of the permit effective date. This report is completed, attached as Appendix P, and includes the following elements:
 - i. Calculation of total MS4 area draining to the water quality limited water segments or their tributaries, incorporating updated mapping of the MS4 and catchment delineations produced pursuant to part 2.3.4.6
 - ii. All screening and monitoring results pursuant to part 2.3.4.7.d, targeting the receiving water segment(s)
 - iii. Impervious area and DCIA for the target catchment
 - iv. Identification, delineation, and prioritization of potential catchments with high nitrogen loading
 - v. Identification of potential retrofit opportunities or opportunities for the installation of structural BMPs during redevelopment, including the removal of impervious areas
2. Submit the final Nitrogen Source Identification Report to EPA as a part of the year 4 annual report. The report is completed and was submitted to EPA.
3. Evaluate all Town-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 within five years of the permit effective date.
4. Provide a listing of planned structural BMPs and a plan and schedule for implementation in the year 5 annual report.
5. Install a minimum of one structural BMP as a demonstration project within the drainage area of the water quality limited water or its tributaries within six years of the permit effective date. The demonstration project shall be installed targeting a catchment with high phosphorus load potential.
6. Install the remainder of the structural BMPs in accordance with the plan and schedule provided in the year 5 annual report.

Track and estimate the phosphorous removal of any structural BMPs listed in Table 3 of Attachment 3 to Appendix F already existing or installed in the regulated area by the Town or its agents consistent with Attachment 1 to Appendix H. For each structural BMP document 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 in each annual report.

At any time during the permit term, the Town may be relieved of additional requirements in Appendix H applicable to it when in compliance with the requirements in Appendix H.

FIGURE 1
System Locus

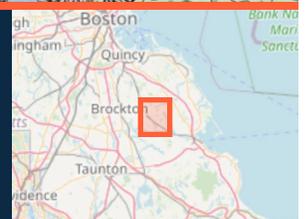


 Town Boundary

Figure 1
System Locus Map

Hanson, Massachusetts

10/21/2022



ENVIRONMENTAL PARTNERS

— An Apex Company —

FIGURE 2
MS4 Urbanized Areas

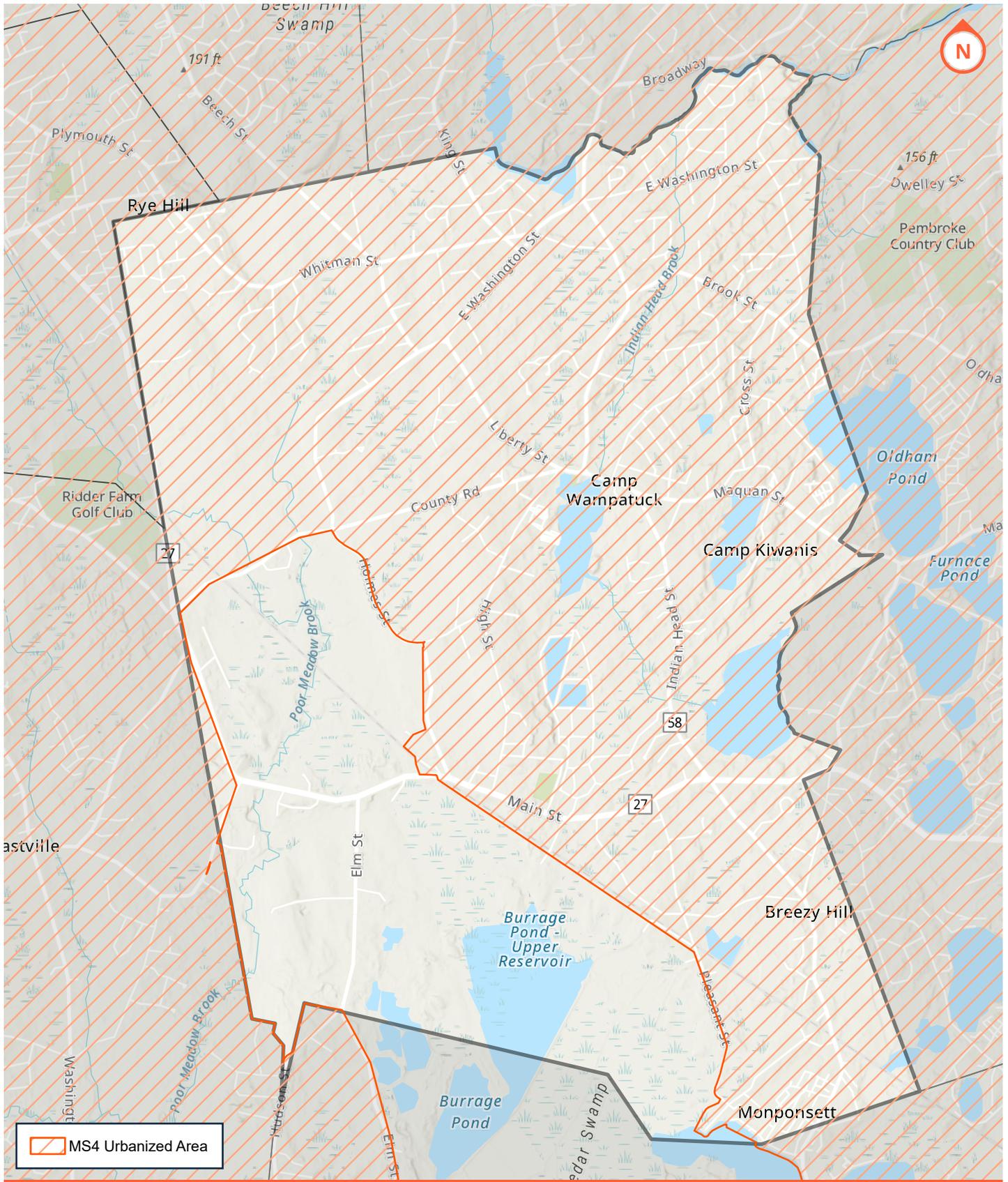


Figure 2
MS4 Urbanized Area Map

Hanson, Massachusetts

10/21/2022

ENVIRONMENTAL
SP PARTNERS

— An Apex Company —

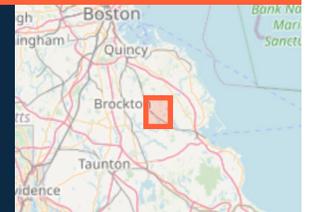


FIGURE 3
Town Watersheds

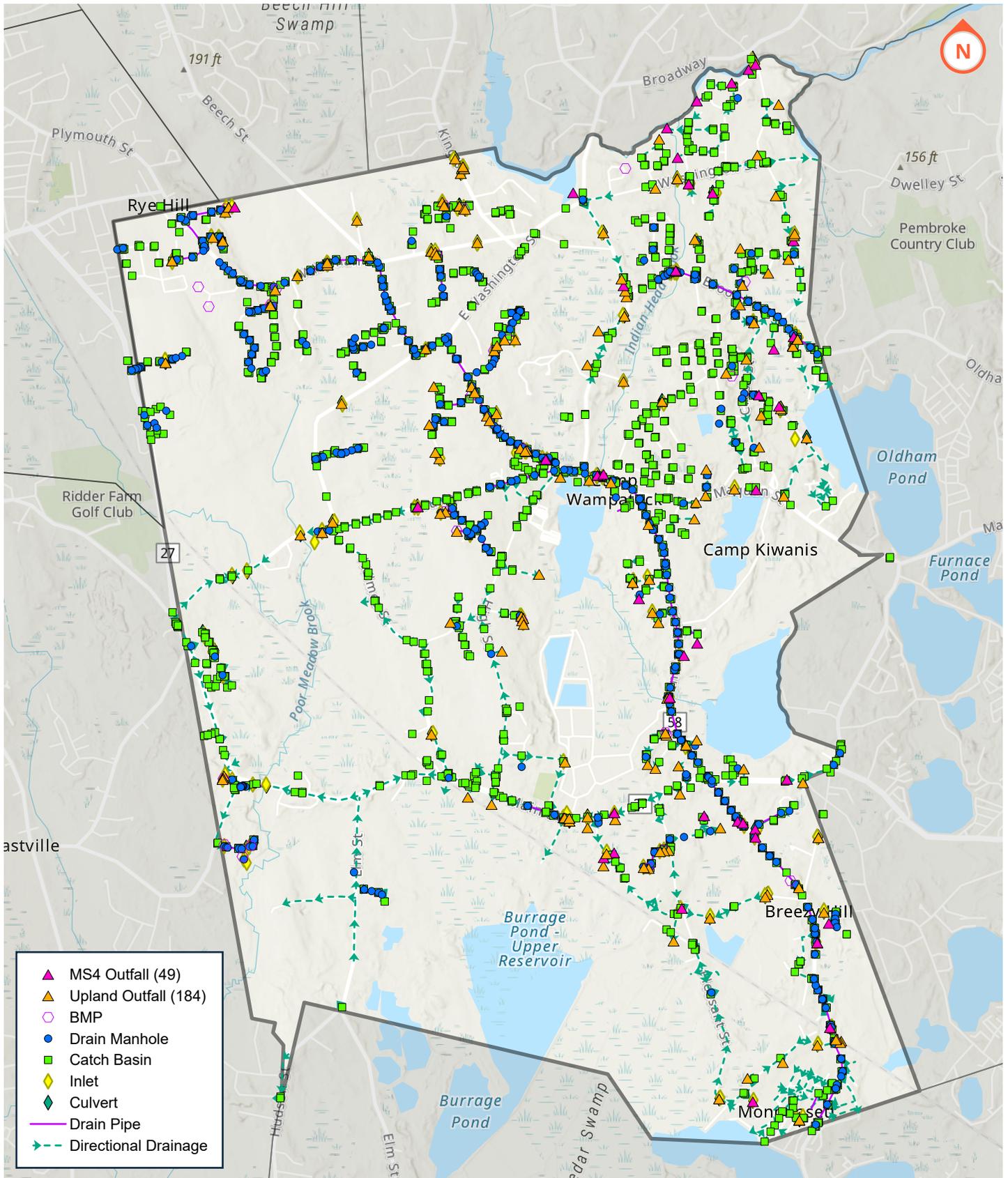


Figure 3
Stormwater System Map

Hanson, Massachusetts

10/21/2022

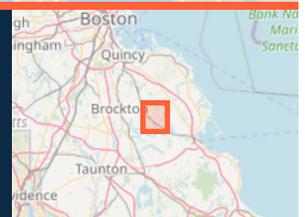


FIGURE 4
Stormwater System Map

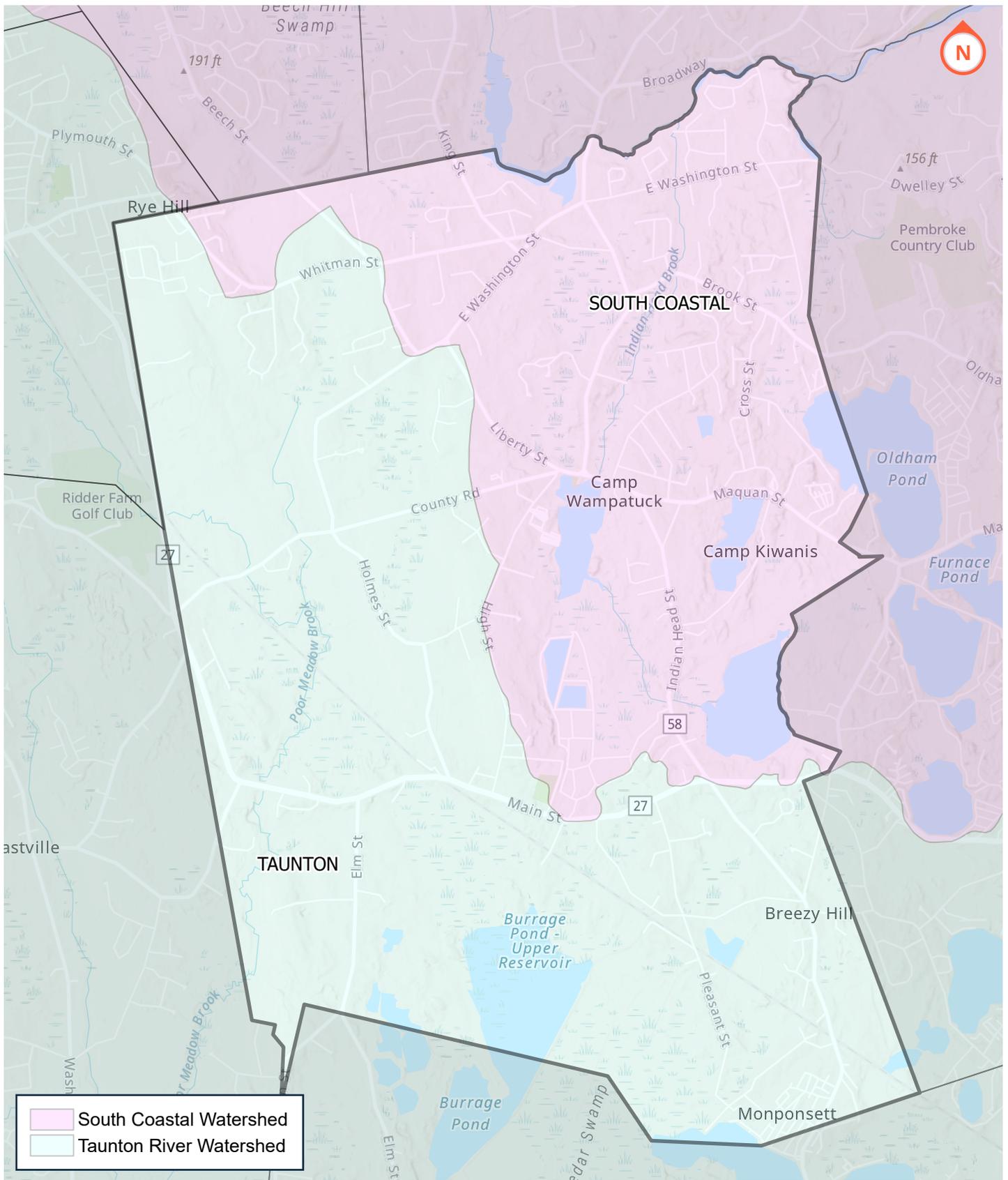
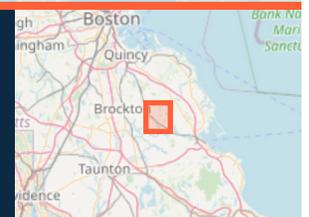


Figure 4
Town Watersheds Map
 Hanson, Massachusetts

10/21/2022



ENVIRONMENTAL
SP PARTNERS

— An Apex Company —