



# STORMWATER MANAGEMENT PLAN (SWMP)

Town of Eastham

September 2021

**ENVIRONMENTAL**  
 **PARTNERS**

— An Apex Company —

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# 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 1.1 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 1.2 STORMWATER MANAGEMENT PLAN (SWMP)

The SWMP describes and details the permittee's plans and activities that will be implemented to meet the terms and conditions of the 2016 MS4 Permit. The document should be updated and/or modified during the MS4 Permit term as the permittee's activities are modified, changed, or updated to meet MS4 Permit conditions. Additionally, MS4 reports (Operation 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 1.3 TOWN SPECIFIC MS4 BACKGROUND

The Town staff must give special consideration to and meet eligibility requirements for their discharges to be able to apply for coverage under the MS4 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 Eastham's storm drain system do not adversely impact endangered species, critical habitats, and historic properties in order to be covered by the MS4 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 (MassDEP). The Town of Eastham 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 24, 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 Eastham are currently a responsibility of the Town Administrator, Jacqueline Beebe. The Town has not yet created or staffed a dedicated stormwater management position or stormwater committee. However the current departments involved in stormwater management are listed in Table 1, below.

**Table 1: List of Parties Responsible for SWMP Implementation**

<b>Name</b>	<b>Title</b>	<b>Department</b>
Jacqueline Beebe	Town Administrator	Town of Eastham
Jane Crowley	Health Agent	Board of Health
Silvio Genao, PE	Superintendent	Department of Public Works
Adam Bohannon	Chief of Police	Police Department
Charles Katuska	Conservation Agent	Conservation Department
Jane Crowley	Director of Health and Environment	Water Management Committee
Paul Lagg	Town Planner	Planning Department
Mike O'Connor	Senior NR Officer	Natural Resources Department
Jane Crowley	Director of Health and Environment	Pond and Lake Stewards (PALS)

## 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 Eastham's eligibility determination of Criterion B with regard to federal Endangered and Threatened Species and Critical Habitat Protection. Criterion B states that, "under section 7 of the ESA [Endangered Species Act], the consultation resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by USFWS [U.S. Fish and Wildlife Service] on a finding that the stormwater discharges and MA MS4 General Permit Appendix C Page 3 of 7 discharge related activities are 'not likely to adversely affect' listed species or critical habitat (informal consultation)." 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, Planning, and Consultation System (IPaC System) environmental review process. Using the IPaC System environmental review process, four endangered species have been identified within Eastham's boundaries: the Northern Long-Eared Bat, the Piping Plover, the Red Knot, and the Roseate Tern. None of these species have critical habitats designated within the Town, and the MS4 Permit will not adversely affect any of the listed species within the MS4 area.

## SECTION 2.3 DOCUMENTATION REGARDING HISTORIC PROPERTIES

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

Historic site considerations will be evaluated further as part of the design/permitting of new/retrofit structural best management practices (BMPs) proposed for implementation as part of MS4 Permit compliance. Regarding the National Historic Preservation Act, under 36 CFR 800, this permittee is an existing permittee authorized by the previous MS4 Permit, and is not undertaking any activity involving subsurface land disturbance less than one 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 MS4 Permit. 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.

## 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.

An inventory of all known locations where SSOs have discharged to the MS4 will be maintained by the Town 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. The IDDE program is detailed in Minimum Control Measures Section 3.3. 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 Minimum Control Measures Sections 3.4 and 3.5. 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 will identify any discharges within public drinking water supply source areas and give priority to outfall inspections and screening required of the Minimum Control Measures in Section 3.3.

## 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 an effort to reduce pollutants and comply with part 2.3 of the MS4 Permit, the Town focuses on the 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 BMP goal(s) 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 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, 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 will continue that program and make the necessary adjustments to meet the additional requirements of the 2016 MS4 Permit.

The program must include 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

Eastham Town staff have developed brochures and made efforts to educate the public on stormwater issues. The Town has distributed information in the permit application materials for septic maintenance contractors, and distributed new outreach materials to residents within wetland protection areas. The Town also distributes pet waste control information to pet owners upon registration. The town has also maintained a stormwater website to distribute outreach messages via the Code Red Emergency Response Line. Separate information is distributed to industrial groups based on zoning and property use. The Town of Eastham is considering creating a Town resident notification system for stormwater alerts, such as severe weather or flooding. Beach signage noting

contact information and testing data related to pet waste and invasive is regularly inspected for condition and maintained to provide public awareness of stormwater issues.

## Section 3.1.2 Best Management Practices

I. Distribution of a minimum of two (2) educational messages over the MS4 Permit term to the required audiences within the MS4 Permit term, as listed below.

- A. Residents
  - 1. Publish outreach materials; distribute new resident packets to residents within Wetland Protection Areas.
  - 2. Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards residents.
- B. Businesses, Institutions, and Commercial Facilities
  - 1. Include stormwater information in permit materials.
  - 2. Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards businesses, institutions, and commercial facilities.
- C. Developers (Construction)
  - 1. Include stormwater information in permit materials. Review and update application forms to meet the new requirements.
  - 2. Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards developers.
- D. Industrial Facilities
  - 1. Distribute stormwater information to industrial groups based on zoning and property use.
  - 2. Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards industrial facilities.

## SECTION 3.2 PUBLIC INVOLVEMENT AND PARTICIPATION

The objective of the public involvement and participation control measure, MS4 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 must also be given the chance every year to review the Stormwater Management Plan and its implementation. Hard copies of the Stormwater Management Plan were placed at Town Hall and Public Library entrances, in addition to a digital copy on the Town's website, for review. The public was encouraged to submit comments to the DPW's email address.

### Section 3.2.1 Background

The Town of Eastham hosts a "Drug Take Back Day" and offers drop off for unwanted medical waste to support public participation for stormwater management. The Town also hosts public meetings on wastewater planning for public review. In coordination with the Cape Code Commission 208 project, the Town is working towards implantation of Regional Wastewater Planning efforts to conduct advanced characterization. The Town also holds shoreline and waterbody cleanup events to



support public involvement in water sampling, aquatic vegetation surveys and coastal/pond remediation.

Eastham is part of the Cape Cod Stormwater Collaborative. The Cape Cod Stormwater Collaborative worked together with Think Blue Massachusetts to promote the “Fowl Water” Campaign, which educated residents on how motor oil, pet waste, and trash become stormwater pollution.

### Section 3.2.2 Best Management Practices

- I. Public Review
  - A. Stormwater Management Plan Review (SWMP)
    - 1. Make SWMP available at least annually for public review.
- II. Public Participation
  - A. Use Stormwater Website to publish SWMP and annual reports. Website should contain a space for electronically soliciting public comments.
    - 1. Make physical copy available at Eastham Town Hall.

## 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 developed to fix any prevalent issues in the Town’s storm sewer system. The Town has 4 outfall structures that discharge to water bodies within the Town of Marshfield’s MS4 area. The MS4 area is displayed in Figure 2: MS4 Urbanized Areas, and the Town’s inventory of outfalls structures is shown in Figure 4: Stormwater System Map. Below, Table 2 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 2: Impaired Waters, Impairments, and TMDLs**

Impaired Waters	Category	Impairments	Associated TMDLs
Rock Harbor Creek (MA96-16)	4a	<ul style="list-style-type: none"> <li>• Fecal Coliform</li> </ul>	36772
Boat Meadow River (MA96-15)	5	<ul style="list-style-type: none"> <li>• Fecal Coliform</li> <li>• Estuarine Bioassessments</li> </ul>	36772
Great Pond (MA96115)	5	<ul style="list-style-type: none"> <li>• Chlorophyll-a</li> <li>• Dissolved Oxygen</li> <li>• Phosphorus (Total)</li> </ul>	
Moll Pond (MA96355)	5	<ul style="list-style-type: none"> <li>• Harmful Algal Blooms</li> </ul>	
Town Cove (MA96-68)	5	<ul style="list-style-type: none"> <li>• Estuarine Bioassessments</li> </ul>	36772

Category 4a Waters – impaired water bodies with a completed Total Maximum Daily Load (TMDL).

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

## Section 3.3.1 Background

The Eastham IDDE bylaws have been developed to include a procedure for non-stormwater discharges and to mitigate illegal dumping. The Town has continued to refine and enhance source point/waterways mapping in a comprehensive GIS system. The Natural Resource Department and Board of Health continue to identify stormwater discharges and remedy situations that arise. This process includes dry weather flow screening and monitoring of marine area. The Town also documents complaints involving oil and hazardous waste, and reports to the Fire Department and MassDEP. The Town's hazardous waste collection days are scheduled twice per year, and are conducted in coordination with Orleans to allow residents additional opportunity to dispose of household hazardous waste.

The Town has hired a consultant to conduct outfall inspections and sampling, This work is detailed in the Town's IDDE Plan, attached as Appendix L.

## 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, bylaw, or other regulatory mechanism. For permittees authorized by the 2003 MS4 Permit, the ordinance, bylaw, or other regulatory mechanism was a requirement of the 2003 MS4 Permit and was required to be effective by May 1, 2008. For new permittees the ordinance, bylaw, or other regulatory mechanism shall be in place within three years of the MS4 Permit effective date.
- II. SSO Inventory
  - A. Develop SSO Inventory Database within one year of effective MS4 Permit date that logs historical SSOs that have occurred in the last five years, as discussed in further detail in Section 2.5.
    1. Coordinate with Sewer Department for tracking of any future SSOs.
- III. Storm Sewer System Map
  - A. Update map within two years of effective date of the MS4 Permit and complete full system map 10 years after effective date of MS4 Permit.
    1. Make an electronic and physical copy of the map available to the public via the stormwater website and Marshfield Town Hall.
    2. Map/verify 10% of system per year during MS4 Permit years one to 10.
      - a) Phase I will be focused on during Years one and two, while Phase II will be focused on during Years three through 10.
    3. Integrate system map updates with planned sewer expansion projects.
- IV. Written IDDE Program Development
  - A. Develop and complete written IDDE program within one year of effective MS4 Permit date. The IDDE program and permit attachments will be available at Marshfield Town Hall.

- V. Implement IDDE Program
  - A. Implement catchment investigations according to program and MS4 Permit conditions within 18 months of the effective date of the MS4 Permit.
    - 1. Continue to enforce bylaw.
    - 2. Draft and implement stormwater management regulations.
    - 3. Coordinate water quality monitoring with dry weather screening.
      - a) 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.
- VII. Dry Weather Screening
  - A. Conduct screening in accordance with outfall screening procedure and MS4 Permit conditions.
    - 1. Screen 25% of outfalls per year during MS4 Permit years two to five.
- VIII. Conduct Wet Weather Screening
  - A. Conduct screening in accordance with outfall screening procedure and MS4 Permit conditions, and as determined by dry weather screening results.
- IX. Ongoing Screening
  - A. 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 permittee's MS4, as stated in part 2.3.5 of the MS4 Permit.

### Section 3.4.1 Background

The local bylaws for construction site stormwater runoff control were adopted on May 18, 2020 and updated on June 7, 2021. The Conservation Commission requires homeowners to practice sand nourishment to increase the quality of sand. The Town has completed the final plans for the Route 6 drainage, and have designed a BMP for nitrogen reduction to Salt Pond. The Town plans to continue pursuing funding to complete this project. The Board of Health and Planning Department have worked for the Town to adopt nitrogen loading limitation regulations, and are now working to implement and enforce these regulations.

### 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 one year of effective date of the MS4 Permit.
    - 1. Recommend standards and practices for town inspection procedures. Seek input from relevant town groups (e.g. Building, Health, Conservation, etc.).

2. 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 one year of the effective date of the MS4 Permit.
      1. Include site plan review workflow chart with permit applications.
      2. Review current Town procedure regarding when a Construction General Permit (CGP) is needed.
        - a) CGP required for disturbance of one 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 one year of the effective date of the MS4 Permit.
      1. Set limit of one acre before project requires inspection by Town official.
        - a) Coordinate limits and requirements with fill/extraction permits.
      2. Update all Town forms with erosion and sediment control checklist.
  - 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 one year of the effective date of the MS4 Permit.
      1. Incorporate into Town's general conditions for building permit and/or site plan review.
      2. Review and modify Town bylaw to meet new requirements.

## 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 MS4 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

Current bylaws for post-construction requirements have been developed and implemented as part of the wetland control bylaw and local subdivision rules and regulations. The Town will review the bylaw for adoption at Town Meeting, and will enforce the use of hay bales and/or silt fence until the construction area is stabilized.

### Section 3.5.2 Best Management Practices

- I. Post-Construction Ordinance
  - I. The permittee shall develop or modify, as appropriate, an ordinance or other regulatory mechanism within two years of the effective date of the MS4 Permit.
- II. As-Built Plans For On-Site Stormwater Control

- I. Require submission of electronic data for as-built drawings (e.g. PDF, AutoCAD, GIS) within two years of completed construction.
  - 1. Operation and Maintenance (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
  - I. Conduct detailed inventory of MS4-owned properties and rank for retrofit potential within four years of MS4 Permit effective date.
    - 1. Inventory Town parcels for existing stormwater BMPs and identify opportunities for green infrastructure and low impact development retrofits.
      - a) Include schools, parks, recreation facilities, police/fire/EMS, libraries, public works, and town administrative offices.
- IV. Allow Green Infrastructure
  - I. Within four years of MS4 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.
    - 1. Review bylaws and applications in order to incorporate green infrastructure and low impact development language as needed.
    - 2. Educate the public on green infrastructure through existing BMP retrofits/demonstration projects.
- V. Street Design and Parking Lot Guidelines
  - I. Within four years of MS4 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
    - 1. 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.
  - I. Within two years of MS4 Permit effective date, adopt, amend, or modify regulation mechanisms to meet MS4 Permit requirements.
    - 1. Review rules and regulations and modify as needed. Include evaluation of subdivision/redevelopment requirements for long-term operations and management of private BMPs.
      - a) Work to establish cash (instead of bond) surety with developers to create binding obligation to keep stormwater runoff onsite.
    - 2. Continue to implement Post-Construction Site Runoff Control Bylaw.

## SECTION 3.6 GOOD HOUSEKEEPING AND POLLUTION PREVENTION FOR PERMITTEE-OWNED OPERATIONS

An operations and maintenance 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 Eastham has developed and implemented an O&M Plan, which is attached as Appendix K. In addition, the Town has completed stormwater pollution prevention plans (SWPPPs), which are attached as Appendix O and P. The Department of Public Works, Engineering Department, and Conservation Committee is responsible for pollution prevention BMPs.

In efforts to control stormwater pollution, the Town continues to monitor and correct stormwater issues in Town properties, and plans to continue doing so indefinitely. The DPW continues to clean all Town-owned catch basins

The Eastham Department of Public Works typically sweeps 80 miles of roadways within the Town, yielding 65 cubic yards of sediment. A sediment critical area was established with the tributary area of Bass Creek, requiring additional sweeping. Ditches are cleaned by mosquito control in the Bass Creek area as well

The Town completes annual inspections of its inventory of stormwater best management practices. Inspection reports from previous years' inspections are attached as Appendix M. In addition, the Town completed an inventory and stormwater audit of all Town-owned facilities in 2020; the audit report is attached as Appendix N.

### 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 two years of MS4 Permit effective date.
  - A. Develop standards of practice for O&M of each public facility and combine in Town O&M Manual.
- II. Inventory all permittee-owned parks and open spaces, buildings and facilities (including storm drains), and vehicles and equipment within two years of the MS4 Permit effective date.
  - A. Develop a capital improvement plan that deals with flooding prevention measures and water quality improvements.
    1. Coordinate implementation with part 5.2.II of the MS4 Permit.
- III. Establish and implement program for repair and rehabilitation of MS4 infrastructure within two years of the MS4 Permit effective date.
  - A. Inspect assets and assess condition to develop program.
  - B. Review annual budget to set aside funding.
- IV. Stormwater Pollution Prevention Plans For Maintenance Garages, Transfer Stations and Other Waste-Handling Facilities.

- A. Develop plans within two years of MS4 Permit effective date.
- B. Schedule annual employee training.
  - 1. 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.
  - 1. Advertise rigid plastic and antifreeze recycling to public. Enforce new standards for private haulers.
- V. Catch Basin Cleaning
  - A. Develop and maintain a cleaning schedule.
  - B. Develop electronic data collection system for tracking, inspection, and maintenance.
    - 1. Update catch basin cleaning services request for proposals (RFP) requirements to require electronic data collection that is compatible with the Town's GIS and asset management system.
- VI. Street Sweeping Program
  - A. Continue to implement street sweeping program.
- VII. Road Salt Use Optimization Program
  - A. Continue working on salt reduction strategies.
    - 1. Calibrate spreaders to reduce salt use.

## 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. 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 and category subsets:

- 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 4a) Impaired with a completed TMDL;
- Category 4b) Impaired with an impairment that is controlled by alternative pollution control requirements;
- Category 4c) 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 2: Impaired Waters, TMDLs and Impairments details the Town's Category 5 and 4 water bodies, which is also represented in Appendix B, the Notice of Intent. An overall map of the Town of Eastham's stormwater system is attached as Figure 4: Stormwater System Map.

### Section 4.1.1 Background

Best management practices aim to improve and mitigate stormwater water quality impairments. This program will focus on watersheds and impaired waters with a TMDL (Category 4a) and impaired waters that require a TMDL (Category 5), as shown on Figure 3: Town Watersheds.

All four (4) outfalls within the Town of Eastham are located within the Cape Cod Watershed. This watershed has an approved TMDL requirement for bacteria and pathogens. This impairment requires Eastham to follow the below requirements (see section 4.2.1) to mitigate pathogen discharges to the MS4. The Town should prioritize sampling outfalls within the Cape Cod Watershed for bacteria and pathogens.

Within the Town, there are four (4) waterbodies listed as a category 5 water requiring a TMDL. These include Boat Meadow River, Great Pond, Moll Pond, and Town Cove. Of these waterbodies, only Great Pond receives discharges from MS4 outfalls. As Great Pond is impaired due to phosphorus, the three (3) outfalls discharging to it must be sampled for phosphorus.

Though Rock Harbor Creek, Boat Meadow River, Moll Pond, and Town Cove do not receive discharges from MS4 outfalls, these waterbodies have impairments with specific requirements such as fecal coliform, estuarine bioassessments and harmful algal blooms. Any newly located outfalls discharging to these waterbodies should be prioritized for sampling these impairments.

## SECTION 4.2 ADDITIONAL IMPAIRMENT REQUIREMENTS

### Section 4.2.1 Public Education and Outreach

#### A. Bacteria or Pathogens

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



## Section 4.2.2 Stormwater Management in New Development and Redevelopment

### A. Solids, Oil and Grease, or Metals

- Incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or unexpected event.
- Require any stormwater management system designed to infiltrate stormwater on commercial or industrial sites 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.

## Section 4.2.3 Good Housekeeping and Pollution Prevention

### A. Solids, Oil and Grease, or Metals

- Increase street sweeping frequency of all municipal owned streets and parking lots to a schedule determined by the permittee to target areas with potential for high pollutant loads.
- Prioritize inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full. Each annual report shall include the street sweeping schedule determined by the permittee to target high pollutant loads.

## Section 4.2.4 Illicit Discharge

### A. Bacteria or Pathogens

- Implement the illicit discharge program required by the MS4 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.

At any time during the MS4 Permit term, the permittee 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

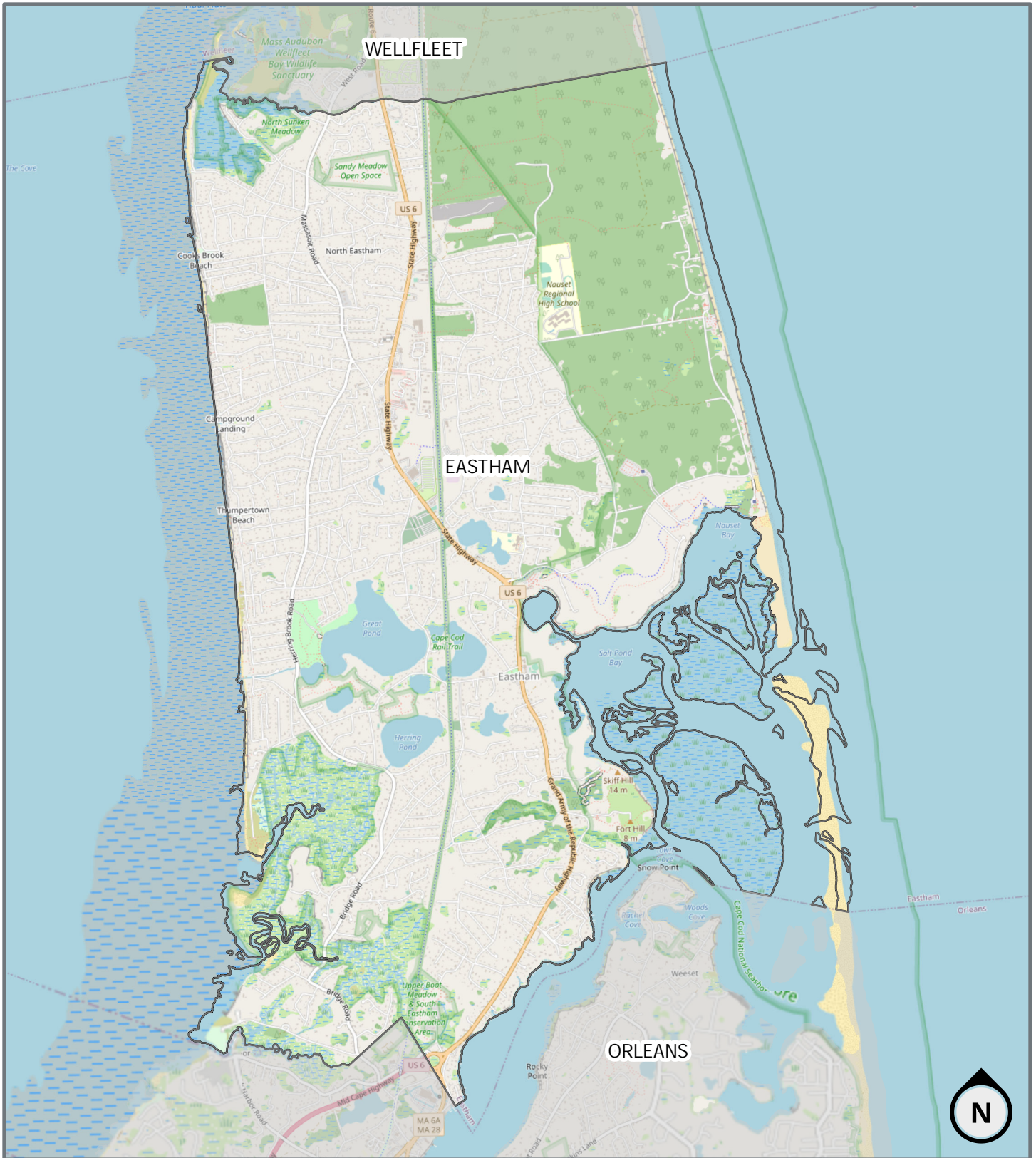
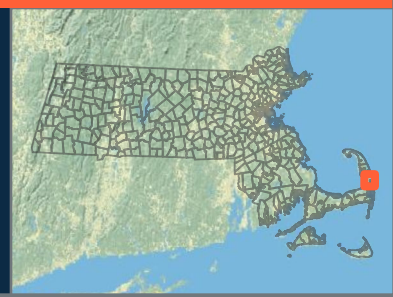
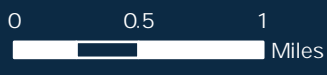


Figure 1  
System Locus  
Eastham, Massachusetts



**FIGURE 2**  
MS4 Urbanized Areas



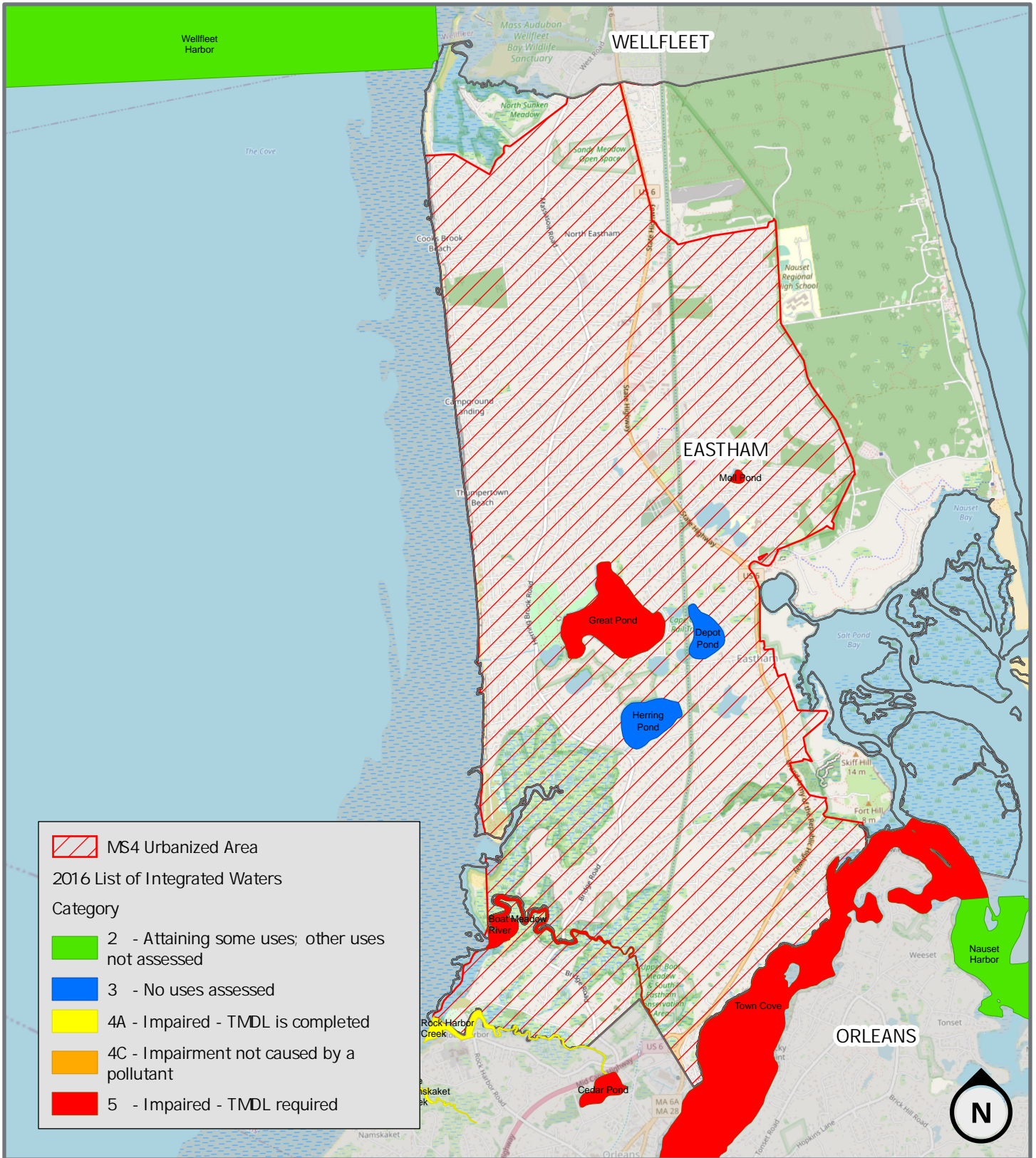
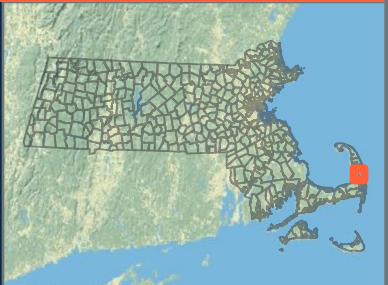


Figure 2  
 MS4 Urbanized Areas  
 Eastham, Massachusetts

0 0.5 1  
 Miles



**FIGURE 3**  
Town Watersheds

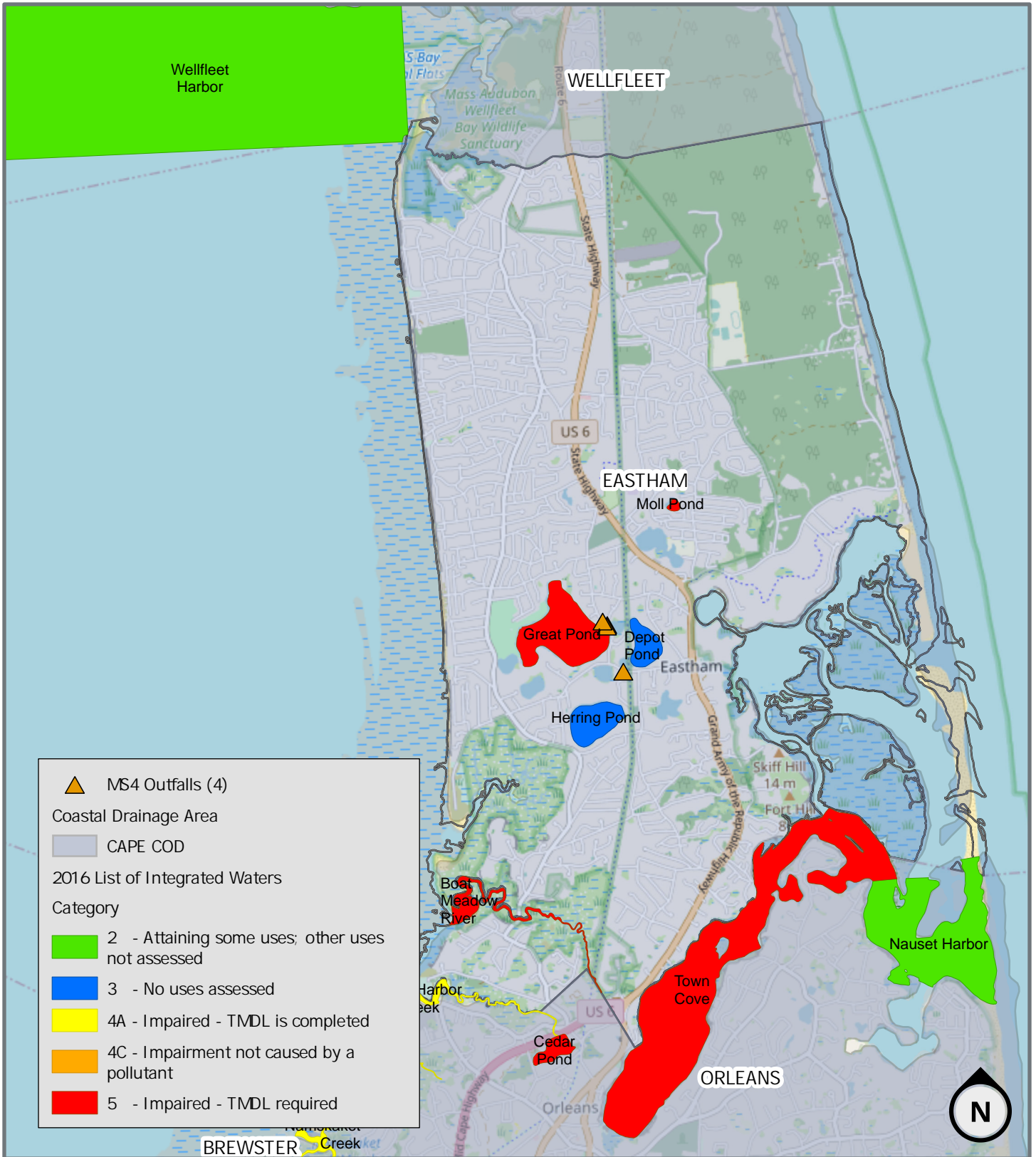
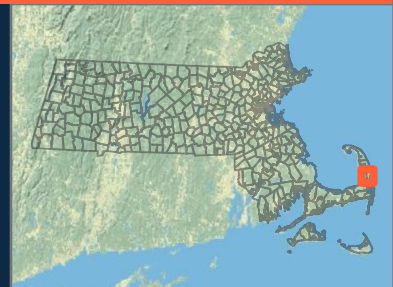


Figure 3  
Town Watersheds

Eastham, Massachusetts

0 0.5 1 Miles



**FIGURE 4**  
Stormwater System Map



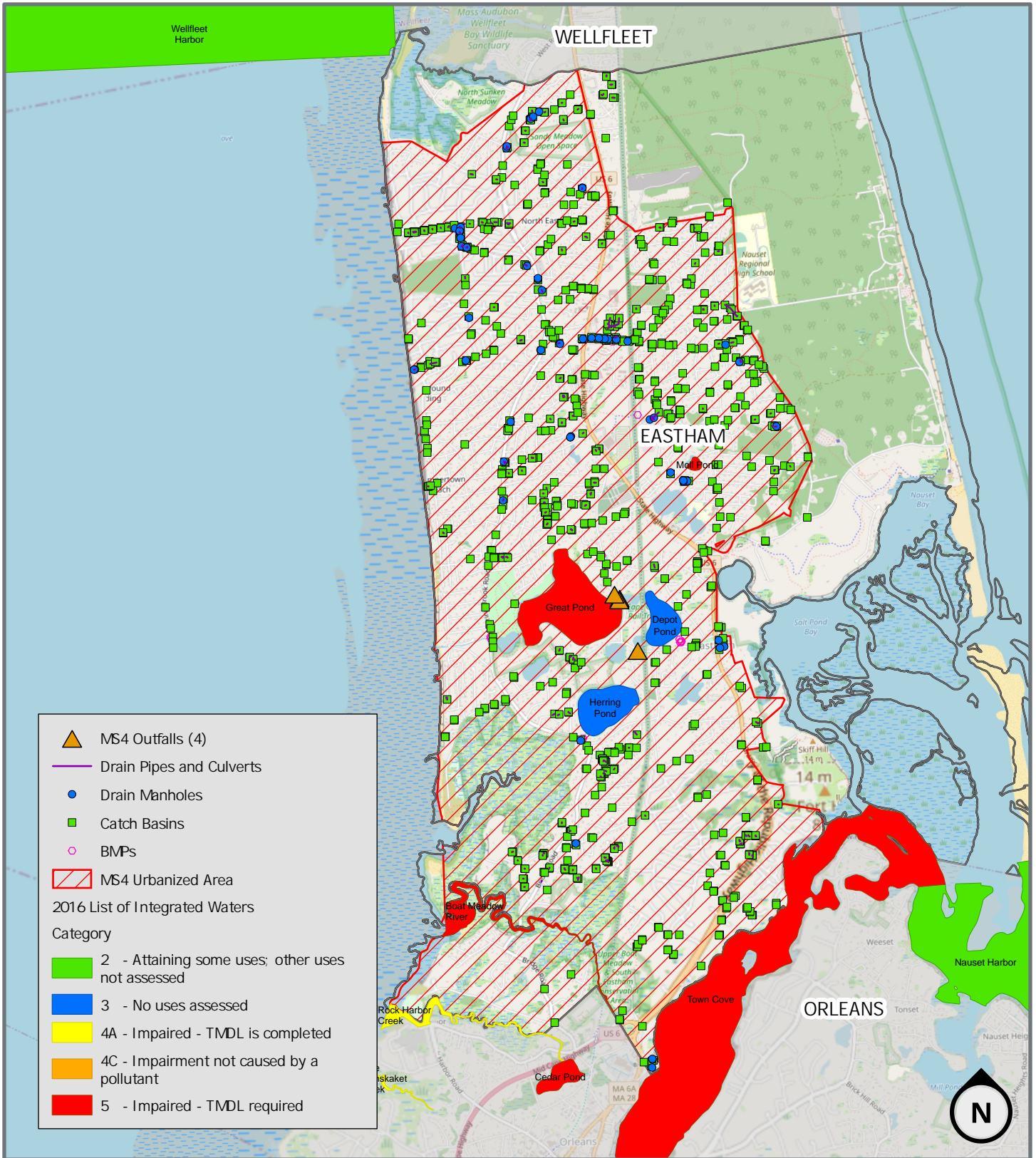
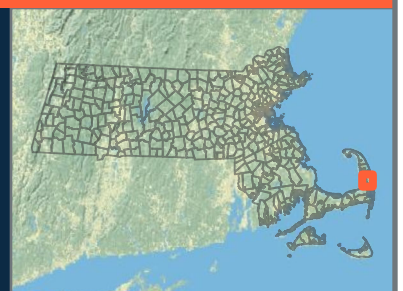


Figure 4  
Stormwater System  
Eastham, Massachusetts

0 0.5 1  
Miles





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