

**Year 4 Annual Report**  
**Massachusetts Small MS4 General Permit**  
**Reporting Period: July 1, 2021-June 30, 2022**

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

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2021 and June 30, 2022 unless otherwise requested.

**Part I: Contact Information**

Name of Municipality or Organization:

EPA NPDES Permit Number:

**Primary MS4 Program Manager Contact Information**

Name:

Title:

Street Address Line 1:

Street Address Line 2:

City:

State:

Zip Code:

Email:

Phone Number:

**Stormwater Management Program (SWMP) Information**

SWMP Location (web address):

Date SWMP was Last Updated:

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

## Part II: Self-Assessment

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

Impairment(s)

Bacteria/Pathogens     
  Chloride     
  Nitrogen     
  Phosphorus  
 Solids/ Oil/ Grease (Hydrocarbons)/ Metals

TMDL(s)

In State:     
  Assabet River Phosphorus     
  Bacteria and Pathogen     
  Cape Cod Nitrogen  
 Charles River Watershed Phosphorus     
  Lake and Pond Phosphorus

Out of State:     
  Bacteria/Pathogens     
  Metals     
  Nitrogen     
  Phosphorus

Clear Impairments and TMDLs

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

### Year 4 Requirements

Developed a report assessing current street design and parking lot guidelines and other local

requirements within the municipality that affect the creation of impervious cover, made it available as part of the SWMP, and:

No updates were recommended

Updates were recommended. The anticipated date or date of completion for updates is/was:

Developed a report assessing local regulations to determine the feasibility of making green

infrastructure practices allowable when appropriate site conditions exist, made it available as part of the SWMP, and:

No updates were recommended

Updates were recommended. The anticipated date or date of completion for updates is/was:

Identified a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious cover

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

See Attached Report

Annual Requirements

- Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- Kept records relating to the permit available for 5 years and made available to the public
- The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
  - This is not applicable because we do not have sanitary sewer
  - This is not applicable because we did not find any new SSOs
  - The updated SSO inventory is attached to the email submission
  - The updated SSO inventory can be found at the following website:

- Updated system map due in year 2 as necessary
- Provided training to employees involved in IDDE program within the reporting period
- Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- All curbed roadways were swept at least once within the reporting period
- Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Updated inventory of all permittee owned facilities as necessary
- O&M programs for all permittee owned facilities have been completed and updated as necessary
- Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Inspected all permittee owned treatment structures (excluding catch basins)

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

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

Annual Requirements

Public Education and Outreach\*

- Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time

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

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

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

Phosphorus (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

Public Education and Outreach\*

- Distributed an annual message in the spring (April/May) encouraging the proper use and disposal of grass clippings and encouraging the proper use of slow-release and phosphorus-free fertilizers
- Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

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

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

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

Phosphorus Source Identification Report

- Completed the Phosphorus Source Identification Report
  - The Phosphorus Source Identification Report is attached to the email submission
  - The Phosphorus Source Identification Report can be found at the following website:

Potential structural BMPs

- Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. 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 were documented.

- The BMP information is attached to the email submission
- The BMP information can be found at the following website:

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

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

### Part III: Receiving Waters/Impaired Waters/TMDL

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

- Yes
- No

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

### Part IV: Minimum Control Measures

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

#### MCM1: Public Education

Number of educational messages completed during this reporting period:

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

BMP: Maintain Educational Website

Message Description and Distribution Method:

Maintained a comprehensive educational website to serve the Neponset Stormwater Partnership service area as a primary resource for key information for all four target audiences.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Message Date(s):

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Operate Stormwater Hotline

Message Description and Distribution Method:

Operated a regional "stormwater hotline" to field questions and problem reports regarding stormwater from across the region. Responses were collected via a website form hosted at yourcleanwater.org, via email submissions to stormwater@neponset.org, and phone calls to 781-575-0354 x 300. Responses included answers to questions, additional information or follow up investigation, and/or referral of inquiries/reports to the appropriate municipalities as appropriate. Anonymity of inquiries was maintained as requested.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

[Empty text box]

Message Date(s): Ongoing since May 1, 2018

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

[Empty text box]

BMP: Distribute Pet Waste Information with Dog Licenses

Message Description and Distribution Method:

Educational "rack cards" regarding proper pet waste disposal were printed and provided to town clerks' offices in member towns to include with dog license renewal requests, either in person or via mail. In towns where online renewal is either available or the only renewal method offered, online graphics that link to the pet waste page of the NSP website were provided. In one town, a pet waste message was printed directly on the dog license receipts. The following distribution numbers were based on the number of licensed dogs per NSP town. The number of rack cards distributed correlated to the number of dogs licensed per town to ensure all dog owners received the message, although some towns had leftover cards from last year.

Targeted Audience: Residents

Responsible Department/Parties: [Empty text box]

Measurable Goal(s):

Participation by 100% of Town Clerks in order to reach 80% of dog owners annually with pet waste management information. Over the 5-year permit period achieve a reduction in the number of pet waste bags found when cleaning catch basins in the member communities that track this information.

Message Date(s): Materials were distributed to Town Clerks in December 2021 and disseminated to dog owners as licenses were issued.

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

[Empty text box]

BMP: Summer Pet Waste Campaign

Message Description and Distribution Method:

Prepared a social media campaign consisting of Facebook and Twitter messages directed at the proper disposal of pet waste. The social media materials were posted to the Neponset River Watershed Association's Facebook and Twitter Accounts and Neponset Stormwater Partnership member communities were asked to "share/retweet" it on their own Facebook and/or Twitter accounts where available. The social media posts were shared on the Town's Facebook and Twitter pages. The Facebook ad campaign reached 6,073 Sharon

residents.

Targeted Audience: Residents, Businesses, Industry

Responsible Department/Parties:

Measurable Goal(s):

Participation by 100% of NSP communities and reach to at least 1,000 people in the NSP region through social media.

Message Date(s): July 14 and July 26, 2021

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Fall Leaf Waste Campaign

Message Description and Distribution Method:

Prepared a social media campaign directed at the proper disposal of leaf waste consisting of a social media post to Facebook, Instagram and Twitter. The social media messages were posted to the Neponset River Watershed Association’s accounts and member communities were asked to “share/retweet” it to their own accounts where available. The leaf and yard waste campaign directed users to a section of the NSP website detailing local information on yard waste disposal options. Additionally, Facebook ads regarding yard waste were created and run in Towns who chose to participate in paid social media advertising. Additionally, NepRWA tagged @TownofSharonMA on Twitter. Social media message shared on Town’s website, Facebook and Twitter pages. The Facebook/Instagram social media campaign reached 6,967 Sharon residents.

Targeted Audience: Residents, Businesses, Industry

Responsible Department/Parties:

Measurable Goal(s):

Participation by 100% of NSP communities and reach to at least 1,000 people in the NSP region through social media.

Message Date(s): October 17, 2021 and October 29, 2021

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Spring Fertilizer and Grass Clipping Campaign

Message Description and Distribution Method:

Prepared an outreach campaign regarding proper use (or abstention from use) of fertilizer consisting of social media posts and an interactive “fertilizer calculator” on the NSP website. Social media posts were made on the Neponset River Watershed Association’s Facebook, Instagram, and Twitter Accounts and Neponset Stormwater Partnership member communities were asked to “share/retweet” it to their own accounts where available. The fertilizer and lawn care section of the NSP website was included in the post. Additionally, Facebook ads regarding fertilizer and lawn maintenance were created and run in Towns who chose to participate. Additionally, NepRWA tagged @TownofSharonMA on Twitter. The social media message was shared on the Town’s Facebook and Twitter pages. The Facebook/Instagram social media campaign reached 12,764 Sharon residents.

Targeted Audience: Residents, Businesses, Industry

Responsible Department/Parties:

Measurable Goal(s):

Participation by 100% of NSP communities and reach to at least 1,000 people in the NSP region through social media.

Message Date(s): March 28 – April 13, 2022

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: School Outreach Program

Message Description and Distribution Method:

Due to COVID-19, most of the fall 2021 lessons took place on-line over Zoom or Google Meet. Prepared on-line PowerPoint-based program presentation that covered drinking water and stormwater infrastructure, local water resources, wastewater systems, water conservation, and stormwater pollution prevention techniques. As in previous years, the curriculum aligned with the MA 5th grade science curriculum standards. By March, we were presenting the program in-person. The program was delivered at the individual classroom level over the course of one (Foxborough, Norwood, Quincy) or two (Avon, Canton, Medfield, Milton, Sharon, Stoughton, Dedham and Westwood), 45-60-minute visits by a watershed educator. The educator also provided teachers with follow up materials to share with students and their families.

Targeted Audience: Residents

Responsible Department/Parties:

Measurable Goal(s):

Reach at least 80% of households with 5th grade children in participating communities, and 100% positive feedback from participating classroom teachers.

Message Date(s): September 2021 through June 2022 (school year)

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

[Empty text box for describing changes]

BMP: Regional Education Mailing

Message Description and Distribution Method:

An educational mailing was prepared and mailed to all addresses in participating communities. The mailing was an 6x11 postcard that highlighted general stormwater pollution prevention tips. The mail piece referenced key information on fertilizer, lawn maintenance, methods to reduce stormwater runoff, and referred readers to additional information available at yourcleanwater.org and the stormwater hotline. The mailing was distributed to all business and residential addresses in the participating communities (Avon, Canton, Dedham, Foxborough, Medfield, Milton, Norwood Randolph, Sharon, Stoughton and Westwood) totaling 103,697 mailing addresses in all.

Targeted Audience: Residents and Businesses

Responsible Department/Parties:

Measurable Goal(s):

Reach 100% of addresses in participating towns, including those who do not use social media or follow town government communication channels.

Message Date(s): June 28, 2022

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

[Empty text box for describing changes]

BMP: Outreach to Septic System Owners

Message Description and Distribution Method:

Prepared four social media outreach posts directed at all septic system owners in member communities. Effective outreach was designed to be efficiently delivered to the target audience. The campaign was designed to coordinate with the U.S. EPA's SepticSmart Week in the month of September and included EPA-provided graphics. NepRWA's shared the campaigns on Facebook and Twitter which tagged available municipal social media accounts to encourage them to share within each community. Additionally, digital flyers were distributed to each town for use on their own websites, newsletters, and social media.

Targeted Audience: Septic System Owners

Responsible Department/Parties:

Measurable Goal(s):

Participation by 100% of NSP communities and reach to at least 1,000 people in the NSP region through social media

Message Date(s): September 20-24, 2021

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: "Problem Area" Outreach

Message Description and Distribution Method:

Maintain a list of "problem areas" relying on the knowledge of Town officials as well as communications via the stormwater hotline. Address these "problem areas" with methods designed to correct stormwater pollution problems.

Targeted Audience: Residents, Businesses, Industry, Developers

Responsible Department/Parties:

Measurable Goal(s):

Respond to identified "problem areas" with methods designed to correct specific pollution-generating behaviors.

Message Date(s): Spring 2022

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Storm Drain Marking

Message Description and Distribution Method:

A program through which volunteers mark storm drains with educational messages has continued this year. The program consists of providing volunteers with all materials and information they need to carry out the task. Aluminum medallions are attached to the curb or pavement adjacent to storm drains using construction adhesive. The medallions have one of 3 messages "No Dumping, Only Rain in the Drain," "Drains to Neponset," or "No Dumping, Drains to Ocean." Additional medallion variations such as "Drains to Charles" may be developed as the program ramps up. Volunteers are able to pick the areas they'd like to mark but are

encouraged to choose areas with high pedestrian traffic or areas with known issues that can be addressed by storm drain marking (such as the “problem areas” discussed in Public Education BMP 9). Records of which catch basins have been marked are maintained by the NSP. The Program is expanding in 2022 to cover a larger number of NSP Towns.

Targeted Audience: Residents, Businesses, and Institutions

Responsible Department/Parties:

Measurable Goal(s):

Continually distribute drain marking kits to interested volunteers.

Message Date(s): Summer 2021 and Spring-Summer 2022

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Think Blue “Fowl Weather” Video

Message Description and Distribution Method:

Partnered with MA Statewide Municipal Stormwater Coalition to secure MassDEP grant funding to distribute “Fowl Weather” advertising campaign, which helps viewers visualize how motor oil, pet waste, and trash become stormwater pollution. The campaign was operated on Facebook, Instagram, and YouTube. The video was translated into both Spanish and English and social media messaging was translated into the top six most spoken languages in the state.

Targeted Audience: Residents

Responsible Department/Parties:

Measurable Goal(s):

Reach a significant portion of the NSP service area population with a stormwater awareness message in a highly engaging format.

Message Date(s): May 31 to June 17, 2022

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Regional Water Quality Forum

Message Description and Distribution Method:

Organized a public presentation on data from the 2021 Volunteer Water Quality Monitoring Program (Public Participation BMP 2). The presentation covered the results from the 2021 sampling season and how they fit into the broader context of long-term water quality trends in the watershed. Also discussed were remaining challenges facing various waterways in the Watershed, and actions individuals can take to address those challenges. Due to COVID protocols, the event was held via Zoom. Additionally, a recording of the presentation was posted on YouTube.

Targeted Audience: Residents

Responsible Department/Parties:

Measurable Goal(s):

Deliver detailed site-specific water quality data to interested residents and local officials in addition to general "state of the watershed" information for broader audiences.

Message Date(s): February 1, 2022

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Regional Water Quality Data Reports and Press

Message Description and Distribution Method:

Organized data from the 2021 Volunteer Water Quality Monitoring Program (Public Participation BMP 2) into town specific reports and press releases. These materials were provided to participating towns to aid in the dissemination of the results of the water quality monitoring program to residents and/or the media.

Targeted Audience: Residents, Businesses, Institutions

Responsible Department/Parties:

Measurable Goal(s):

Produce materials for each participating town to use in disseminating the results of this year's water quality monitoring program.

Message Date(s): Summer 2022

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Educational Outreach Evaluation

Message Description and Distribution Method:

Conducted a survey that was included in the general mailer to all the residents to determine the extent of the public’s knowledge regarding stormwater pollution prevention and the impact of the outreach campaigns thus far. The survey also served as an educational opportunity, as information on why a particular answer was correct was revealed after the user submitted their responses. These feedback pieces also contained links to the pertinent webpages on the YourCleanWater.org website. The survey was also advertised via social media channels and various municipal email listservs. The intent is to repeat this survey regularly and monitor results over time.

Targeted Audience: Residents, Businesses, Institutions

Responsible Department/Parties:

Measurable Goal(s):

Produce results to compare future surveys against. In the results, determine the number of respondents who recall seeing previous NSP outreach materials, and quantify the correct responses to basic stormwater pollution prevention questions.

Message Date(s): Summer 2022

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

BMP: Stormwater Education Presentations

Message Description and Distribution Method:

Delivered several stormwater-related presentations to various groups of residents. At these events, residents received basic information on stormwater pollution and tips to prevent it around their own residences and places of business. At some presentations, residents were also educated on stormwater utility programs and how they can help to provide the funding needed for stormwater system management, upgrades, and enhancements. Due to COVID restrictions, all presentations occurred online via Zoom.

Targeted Audience: Residents

Responsible Department/Parties:

Measurable Goal(s):

Present pertinent stormwater-related information to gathered groups as the opportunity arises.

Message Date(s): Throughout the Permit Year

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

[Empty text box]

BMP: Developer/Construction Outreach

Message Description and Distribution Method:

Prepared and provided the construction-focused stormwater pollution prevention outreach to Building Departments to distribute with permits involving earth work related activities. In addition, mailed 160 brochures to individual companies who have participated in land disturbing activities within the watershed. Last, developed an e-brochure for towns to display on their websites for those applying for permits online.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Provide construction-focused stormwater pollution prevention outreach to all companies who had engaged in land-disturbing activities in participating towns over the last year.

Message Date(s):

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

[Empty text box]

BMP: Industrial Outreach

Message Description and Distribution Method:

Prepared and provided stormwater best management practices to over 1000 industrial facilities in participating towns.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Provide industrial land use-focused stormwater pollution prevention outreach to all industrial properties in participating towns as determined by GIS.

Message Date(s):

Message Completed for: Appendix F Requirements  Appendix H Requirements

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

If yes, describe why the change was made:

[Empty text box for describing changes]

Add an Educational Message

MCM2: Public Participation

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

Stormwater information is posted on our website. In addition, flyers, Conservation Commission meetings, Lake Massapoag Advisory Committee meetings, and a Town Meeting vote revolved around changes, modifications, and updates to our stormwater process and regulations.

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

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

[Empty text box for describing other opportunities]

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

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

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

Number of SSOs identified: 0

Number of SSOs removed: 0

MS4 System Mapping

Optional: Provide additional status information regarding your map:

Screening of Outfalls/Interconnections

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

- No outfalls were inspected
- The outfall screening data is attached to the email submission
- The outfall screening data can be found at the following website:

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

Number of outfalls screened:

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

Percent of outfalls screened:

Optional: Provide additional information regarding your outfall/interconnection screening:

Catchment Investigations

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

- No catchment investigations were conducted
- The catchment investigation data is attached to the email submission
- The catchment investigation data can be found at the following website:

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

Number of catchment investigations completed this reporting period:

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

Percent of total catchments investigated:

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

[Empty text box for optional information]

IDDE Progress

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

- No illicit discharges were found
- The illicit discharge removal report is attached to the email submission
- The illicit discharge removal report can be found at the following website:

[Empty text box for website URL]

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

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed:  gallons/day

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

Total number of illicit discharges identified:

Total number of illicit discharges removed:

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

[Empty text box for optional information]

Employee Training

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

Employees attended a training session at Mass Maritime Academy in Buzzards Bay and MASSTC I/A training in Barnstable County. In addition, interns and Co-Op students were trained in the process of outfall and catchment investigations and the importance of BMP maintenance and monitoring.

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

Number of site plan reviews completed: 47

Number of inspections completed: 1,244

Number of enforcement actions taken: 4

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

The Engineering Division is constantly reviewing and monitoring for MS4 compliance and enforcement to protect the interests of the environment and the Town of Sharon.

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

#### Ordinance or Regulatory Mechanism

Date update was completed (due in year 3): May 2022

#### As-built Drawings

Below, report on the number of as-built drawings received during this reporting period.

Number of as-built drawings received: 41

Optional: Enter any additional information relevant to the submission of as-built drawings:

The Gallery Mall is moving forward with multiple construction projecting following finalization of court proceedings. Also, a 40B application is underway for a three (3) 5-unit (45 bedroom) condominium construction site.

#### Retrofit Properties Inventory

Below, list the permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas (at least 5):

Sharon DPW - 217R South Main Street  
Debra Sampson Park - 30 East Foxboro Street  
Town Hall - 90 South Main Street  
Community Center - 219 Massapoag Avenue  
Memorial Park Beach - 82 Gunhouse Street

### MCM6: Good Housekeeping

#### Catch Basin Cleaning

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

Number of catch basins inspected:

Number of catch basins cleaned:

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

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

Total number of catch basins:

If applicable:

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

#### Street Sweeping

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

Number of miles cleaned:

Volume of material removed:

Weight of material removed:

#### Stormwater Pollution Prevention Plan (SWPPP)

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

Number of site inspections completed:

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

Lose debris cleanup, secured hazardous locations, general additional safety measures taken.

### Additional Information

#### Monitoring or Study Results

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

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

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

#### Additional Information

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

#### COVID-19 Impacts

Optional: If any of the above year 4 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

#### Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 5 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Review as-built drawings for new and redevelopment to ensure compliance with post construction bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)
- Identify additional permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas so that the permittee maintains a minimum of 5 sites in their inventory, until such a time when the permittee has less than 5 sites remaining

Provide any additional details on activities planned for permit year 5 below:

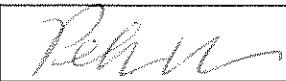
### Part V: Certification of Small MS4 Annual Report 2021

40 CFR 144.32(d) Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: PETER O'CAIN

Title: TOWN ENGINEER

Signature: 

Date: 4/20/2022

[Signatory may be a duly authorized representative]

# APPENDIX A

## REPORTS

- Green Infrastructure Regulation Review
- Street Design and Parking Lot Guideline Assessment
- Town Properties for Retrofit



Impervious area report and design  
Under NPDES MS4 Requirements

### ABSTRACT

This report covers the year four (4) requirements of the NPDES – MS4 program. The report shall address; assessing current street design and parking lot guidelines, analysis of existing green infrastructure, and town property that may be retrofitted with BMPs to reduce the frequency, volume, and pollutant loads of stormwater discharges.

Department of Public Works  
Engineering Division  
Stormwater Systems

By: Kevin Davis and Sonal Pai

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# Green Infrastructure Regulation Review

## Introduction

This report aims to provide a comparative and in-depth analysis of the existing Green Infrastructure regulations in the Town of Sharon and illustrate potential opportunities to improve various regulations and bylaws. The requirements of this report per NPDES MS4 are as follows;

*"Within four (4) years from the effective date of the permit, the permittee shall develop a report assessing existing local regulations to determine the feasibility of making, at a minimum, the following practices allowable when appropriate site conditions exist:*

- i. Green roofs;*
- ii. Infiltration practices such as rain gardens, curb extensions, planter gardens, porous and pervious pavements, and other designs to manage stormwater using landscaping and structured or augmented soils; and*
- iii. Water harvesting devices such as rain barrels and cisterns, and the use of stormwater for non-potable uses.*

*The assessment should indicate if the practices are allowed in the MS4 jurisdiction and under what circumstances are they allowed. If the practices are not allowed, the permittee shall determine what hinders the use of these practices, what changes in local regulations may be made to make them allowable and provide a schedule for implementation of recommendations. The permittee shall implement all recommendations, in accordance with the schedules, contained in the assessment. The permittee shall report in each annual report on its findings and progress towards making the practices allowable."*

## Existing Applicable Bylaws and Regulations Referenced

### Town of Sharon

Chapter 230, Article I and II "Stormwater Management"  
Chapter 275 Article I, II, and IV "Zoning"  
Chapter 340 Article IV "Subdivision Regulations"

### Town of Walpole

Chapter 200 Section 1 "Stormwater Management"  
Chapter 235 Section 28 "Zoning"  
Chapter 503 Section 4 "Wetland Regulations"

### Town of Stoughton

Chapter 159 Section 7

7. B.1 Low Impact Design (LID) site planning and stormwater design strategies must be used to the maximum extent practicable. Specific strategies and BMPs to be considered include - but are not limited to – reducing or minimizing impervious surfaces, incorporating stormwater management facilities into landscape islands, bioretention basins, grass and surface swales, infiltrative basins and chambers, pervious pavers, etc. A decentralized approach to stormwater management, including installing

different BMP's throughout the site, should be included. Traditional collect and convey systems should be minimized. In the event that LID site design strategies and BMPs are not proposed, the applicant should provide a narrative describing why these facilities cannot be incorporated into the site design.

#### Chapter 159 Section 10

10.0A The Town of Stoughton will not accept ownership of stormwater BMPs located outside of street rights of way, Town easements, or Town Parcels of land. The maintenance of such facilities shall remain the permanent responsibility of the applicant or his successors and/or assigns. The OWNER of the property on which work has been done pursuant to these Regulations for private stormwater management facilities, or any other PERSON or agent in control of such property, shall maintain in good condition and promptly repair and restore all grade surfaces, walls, drains, dams and structures, vegetation, erosion and SEDIMENTATION controls, and other protective devices. Such repairs or restoration and maintenance shall be in accordance with approved plans. When a project is a Definitive Subdivision, it is responsibility of the developer to maintain the stormwater system until the Subdivision is accepted by the Town. In the event a homeowner's association is created to maintain the subdivision, it will be the responsibility of the homeowner's association to maintain the stormwater management system.

#### Town of Canton

##### Article XXI, Section 6

6.0A(1) Low Impact Development and Green Infrastructure site design strategies shall be utilized to preserve existing natural features of the site, minimize the creation of impervious surfaces and manage stormwater in a decentralized fashion, to the maximum extent feasible.

6.0A(2) The selection, design and construction of all pretreatment, treatment and infiltration BMPs shall be in accordance with Massachusetts Stormwater Handbook and shall be consistent with all elements of the Massachusetts Stormwater Standards including but not limited to those regarding new stormwater conveyances, peak runoff rates, recharge, land uses with higher potential pollutant loads, discharges to Zone II or interim wellhead protection areas, sediment and erosion control, and illicit discharges.

6.0E (3) Projects must use Low Impact Development techniques where adequate soil, groundwater and topographic conditions allow. These may include but not be limited to reduction in impervious surfaces, disconnection of impervious surfaces, bioretention (rain gardens) and infiltration systems. The use of one or more Low Impact Development site design measures by the applicant may allow for a reduction in the water quality treatment volume required by these regulations. The applicant may, if approved by the Stormwater Authority, take credit for the use of stormwater Low Impact Development measures to reduce some of the requirements specified in these regulations. The site design practices that qualify for these credits and procedures for applying and calculating credits are identified in the Massachusetts Stormwater Handbook.

## Town of Foxborough

Chapter 275 Section 9.4.13 "Zoning"

Chapter 232 "Stormwater Management"

## Town of Mansfield

Chapter 230 Section 4.9 "Zoning"

Chapter 185 Section 22 "Stormwater Management"

## Other References

<http://www.epa.gov/region1/npdes/stormwater/assets/pdf/AddressingBarrier2LID.pdf>

<http://www.mapc.org/resources/low-impact-dev-toolkit/local-codes-lid>

## Green Infrastructure Regulation Review Summary

After reviewing various other municipalities and our regulations and reference documents, no changes to the existing policies have been recommended. However, the Conservation Commission is drafting new Stormwater Regulations, including additional regulatory requirements. Therefore, after the Stormwater Regulation Draft is final, further review may be warranted.

## Street Design and Parking Lot Guideline Assessment

### Introduction

This report aims to provide a comparative and in-depth analysis of the existing street design and parking lot guidelines in the Town of Sharon and illustrate potential opportunities to improve various regulations and bylaws. The requirements of this report per NPDES MS4 are as follows;

*"2.3.6 b. - Within four (4) years of the effective date of this permit, the permittee shall develop a report assessing current street design and parking lot guidelines and other local requirements that affect the creation of impervious cover. This assessment shall be used to provide information to allow the permittee to determine if changes to design standards for streets and parking lots can be made to support low impact design options. If the assessment indicates that changes can be made, the assessment shall include recommendations and proposed schedules to incorporate policies and standards into relevant documents and procedures to minimize impervious cover attributable to parking areas and street designs. The permittee shall implement all recommendations, in accordance with the schedules, contained in the assessment. The local planning board and local transportation board should be involved in this assessment. This assessment shall be part of the SWMP. The permittee shall report in each annual report on the status of this assessment including any planned or completed changes to local regulations and guidelines."*

## Street Design and Parking Lot Guidelines Assessment Summary

After reviewing various other municipalities and our regulations and reference documents, no changes to the existing policies have been recommended.

## Town Properties for Retrofit

### Introduction

This report aims to provide a comprehensive list of retrofit opportunities for municipal lands in the Town of Sharon and illustrate potential opportunities to improve the sites with innovative LID and green infrastructure designs. The requirements of this report per NPDES MS4 are as follows;

*"Four (4) years from the effective date of this permit, the permittee shall identify a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs designed to reduce the frequency, volume, and pollutant loads of stormwater discharges to and from its MS4 through the reduction of impervious area. Properties and infrastructure for consideration shall include those with the potential for reduction of on-site impervious area (I.A.) as well as those that could provide reduction of off-site I.A. At a minimum, the permittee shall consider municipal properties with significant impervious cover (including parking lots, buildings, and maintenance yards) that could be modified or retrofitted. MS4 infrastructure to be considered includes existing street rights-of-way, outfalls and conventional stormwater conveyances and controls (including swales and detention practices) that could be readily modified or retrofitted to provide reduction in frequency, volume or pollutant loads of such discharges through reduction of impervious cover.*

*In determining the potential for modifying or retrofitting particular properties, the permittee shall consider factors such as access for maintenance purposes; subsurface geology; depth to water table; proximity to aquifers and subsurface infrastructure including sanitary sewers and septic systems; and opportunities for public use and education. In determining its priority ranking, the permittee shall consider factors such as schedules for planned capital improvements to storm and sanitary sewer infrastructure and paving projects; current storm sewer level of service; and control of discharges to water quality limited waters, first or second order streams, public swimming beaches, drinking water supply sources and shellfish growing areas.*

*Beginning with the fifth-year annual report and in each subsequent annual report, the permittee shall identify additional permittee owned sites and infrastructure that could be retrofitted such that the permittee maintains a minimum of 5 sites in their inventory, until such a time as when the permittee has less than 5 sites remaining. In addition, the permittee shall report on all properties that have been modified or retrofitted with BMPs to mitigate I.A. that were inventoried in accordance with this part. The permittee may also include in its annual report non-MS4 owned property that has been modified or retrofitted with BMPs to mitigate I.A."*

### Details of Potential Properties

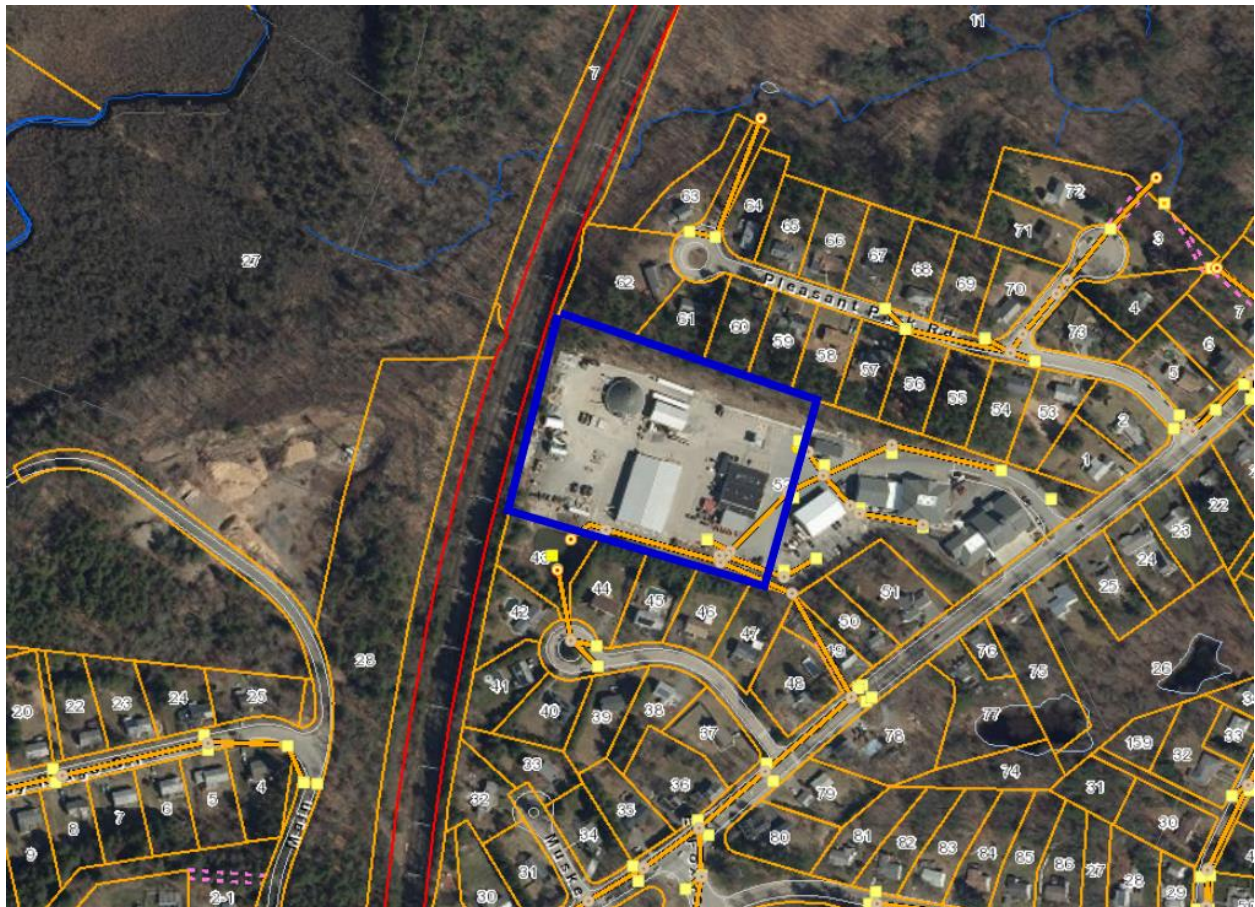
Sharon DPW- 217 R South Main Street

## Existing Conditions

The site at 217R South Main Street has 59,000 S.F. of impervious area. The site is located on the westerly side of South Main Street and abuts various residential dwellings. The ten (10) acre site is identified on the assessing records as Map 80 Lot 52 in Single Residential District A and houses the Public Safety Building, The Department of Public Works, Various Garages and Workshops, Storage Units, Salt Sheds, Corrals, and Work Trailers. Existing improvements include a drainage basin at the property's rear and grass and gravel strips lining the southerly portion of the impervious area.

The site is a multi-department office, storage, and garage for Police, Fire, and the Department of Public Works. According to historical data, the existing depth from the surface to groundwater in that area is 10-12 feet. In addition, the site is in the Groundwater Protection District as defined by Chapter 275, "Zoning."

Potential Projects: DPW located at 217 R South Main Street



*Addition of Rain Garden to Center of Pavement Area*

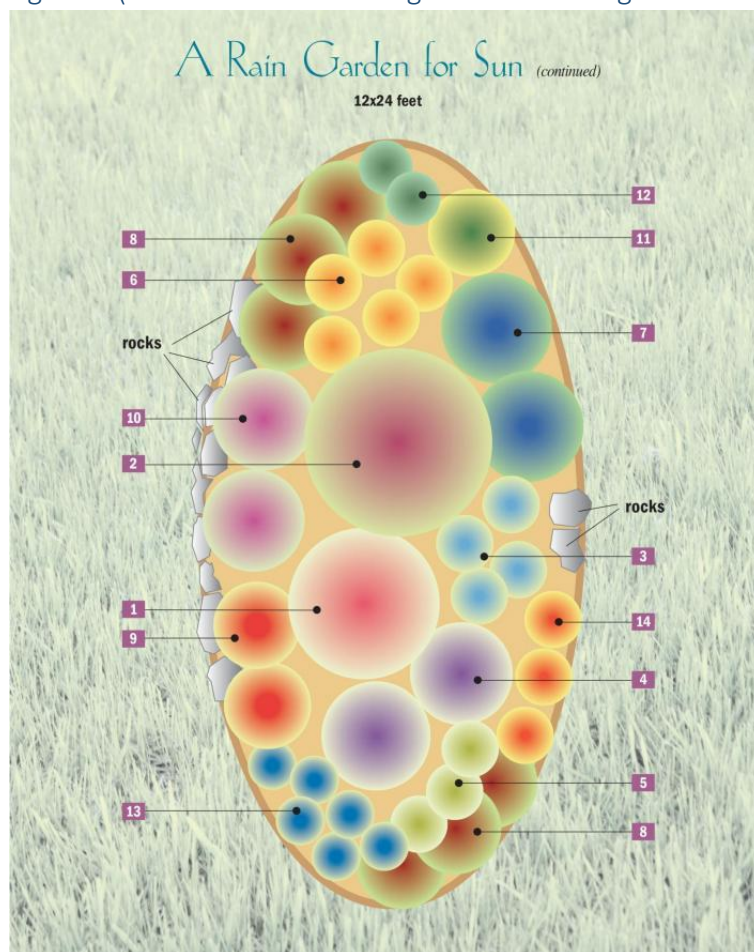
Type of Improvement: Rain Garden

Size of Improvement: 5 to 10% of impervious area

Reduction in TSS and Pollutant Load: 90 % with Filter Strip or Pretreatment

Details: This is an example of a rain garden that can be created for this location using Native New England Plants. (Figure 1)

Figure 1 ( Sun Rain Garden using Native New England Plants)



*Sun Rain Garden Plant List/ Description*

In the center, plant #1 to #6. For the drier, outer edge, plant #7 to #14.

**1. Summersweet (*Clethra alnifolia*' Ruby Spice')**, a woody shrub that bears fragrant, pink, bottlebrush flowers in the summer. 5 to 6 feet tall; Zones 4 to 9. One plant.

2. **Red osier dogwood (*Cornus sericea*)**, which has white blossoms in spring and reddish-purple leaves in the fall—although its most attractive features are its red stems, which lend winter interest to the landscape. 6 to 10 feet tall; Zones 2 to 8. One plant.

3. **Blue flag iris (*Iris versicolor*)**, which brightens the rain garden with lavender-blue flowers in the spring. It looks very natural in a wet setting. Avoid the yellow flag iris (*Iris pseudacorus*), which is an invasive species that will take over. 2 to 4 feet tall; Zones 3 to 9. Four plants.

Figure 2 ( Blue flag iris)



4. **Joe Pye weed (*Eupatorium maculatum*)**, which has purple flowers in late summer that butterflies can't resist. 3 to 5 feet tall; Zones 3 to 7. Two plants.

5. **Astilbes (*Astilbe*)**, which are long-lived, moisture-loving perennials that will thrive in the sunny rain garden if planted where they get some afternoon shade from taller shrubs nearby. They bloom in summer and are available in pinks, reds, purple, and white. 1 to 3 feet tall; Zones 3 to 8. Three plants.

6. **Daylilies (*Hemerocallis*)**, which may not be natives but can keep your rain garden in bloom over a long season if you plant early, midseason, and late varieties. Assorted heights and a rainbow of colors are available. Zones 4 to 11. Five plants.

7. **Blueberries (*Vaccinium*)**, whether highbush (up to 5 feet tall) or lowbush (up to 2 feet tall) varieties, which add both a flowering shrub and an edible fruit to your landscape. Zones 3 to 8. Two plants.

8. **American cranberry (*Vaccinium macrocarpon*)**, which is a pretty, ground-covering shrub that also bears edible fruit. About 6 inches tall; Zones 2 to 7. Six plants.

9. **Bee balm (*Monarda*)**, which in summer features brilliant-red, pink, or white flowers that attract hummingbirds and butterflies. Look for a mildew-resistant variety. 3 feet tall and wide; Zones 3 to 9. Two plants.

10. **New England aster (*Aster novae-angliae*)**, which will carry the show into fall with its bright, violet-purple flowers. It gets quite tall but can be cut back to half its height in June to create a shorter and bushier plant, if desired. Up to 6 feet tall; Zones 4 to 8. Two plants.

**11. Sneezeweed (*Helenium autumnale*)**, which bears sunny yellow flowers in late summer. It is highly adaptable to wet or dry soil. 3 to 5 feet tall; Zones 4 to 8. One plant.

**12. Meadow anemone (*Anemone canadensis*)**, which is deer-resistant and salt-tolerant. This tough little perennial bears pure-white blossoms in late spring. 2 feet tall; Zones 2 to 9. Two plants.

**13. Blue cardinal flower (*Lobelia siphilitica*)**, which has spikes of true blue flowers in late summer. 2 to 4 feet tall; Zones 5 to 9. Six plants.

**14. Butterfly weed (*Asclepias tuberosa*)**, which features orange blossoms that provide excellent nectar for butterflies. In addition, the plants are an important larval food for monarch butterflies. 2 to 3 feet tall; Zones 4 to 9. Three plants

# APPENDIX B

## CHARTS AND TABLES

- BMP Phosphorus Chart
- Catchment Investigations
- Catchment Testing
- Outfall Investigations

## Phosphorus & BMPs

No.	Location	BMP Description	BMP Type	Estimated Design Storage Volume (ft <sup>3</sup> )	Estimated Phosphorus Removed (lb/acre)
38	Richards Ave	Detention Basin	Structural BMP	40000	3.386592287
90	Maskwonicut St	Detention Basin	Structural BMP	18000	3.229758035
27	Pheasant Wood Rd	Detention Basin	Structural BMP	13000	1.034264463
17R	Old Wolomoloog St	Detention Basin	Structural BMP	9000	0.56140303
13	Ginger Way	Detention Basin	Structural BMP	14000	1.240153092
74	Aspen Rd	Detention Basin	Structural BMP	16000	5.148015132
6	Bramble Ln	Detention Basin	Structural BMP	10000	1.360279522
12	Mink Trap Ln	Proprietary Treatment Devices	Structural BMP	9000	2.196003306
229	Lakeview St	Retention & Detention Basin	Structural BMP	50000	7.362851593
100	Gavins Pond Rd	Retention & Detention Basin	Structural BMP	24000	3.528180126
15	Red Fox Run	Retention & Detention Basin	Structural BMP	11000	1.49532865
36	Cottage St	Infiltration Structures / Detention & Retention Basin	Structural BMP	60000	4.552342967
19	Flintlock Rd	Retention Basin	Structural BMP	11000	7.661199421
1	Bella Rd	Drainage Swale / Detention	Structural BMP	52000	1.152388228
11	Woods Way	Retention Basin	Structural BMP	10000	0.697809621
6	Chive Dr	Detention Basin	Structural BMP	11000	0.808442298
9	Chippewa Ln	Retention Basin	Structural BMP	9000	0.556014609
9R	Lu Stubbs Ln	Detention Basin	Structural BMP	10000	0.950199027
30	Gavins Pond Rd	Retention Basin	Structural BMP	30000	3.528180126
233	Furnace St	Retention / Detention Basin	Structural BMP	13000	1.33187359
12	Burnt Bridge Rd	Retention Basin	Structural BMP	10000	1.174719266
2	Massasoit Rd	Detention Basin	Structural BMP	10000	0.382803264

Catchment Investigations

Manhole ID	Water Status	Location	Ammonia	E. coli	Phosphorus	Salinity	Conductivity	Surfactants	Chlorine	pH	Temp (C)	Outfall ID	Outfall Location
993	Full	Pheasant Wood Road	ND	ND	ND	0.16	366	ND	0.04	6.49	6.3	320	2 Blueberry Ln.
994	Full	Pheasant Wood Road	ND	ND	ND	0.16	376	ND	0.03	6.44	5.2	320	2 Blueberry Ln.
1180	Full	Pheasant Wood Road	ND	<10	ND	0.13	313	ND	0.06	6.51	10.2	320	2 Blueberry Ln.
995	Full	Huckleberry Lane	ND	<10	ND	0.38	824	0.11	0.06	6.62	9.9	320	2 Blueberry Ln.
1050	Stream	Indian Lane	ND	10	0.19	0.25	561	0.12	0.79	6.72	11.2	159	12 Indian Ln.
E4	Stream	Indian Lane	0.28	<10	0.09	0.21	480	0.12	1.36	6.75	11.6	159	12 Indian Ln.
1047	Full	Greenwood Drive	0.58	1700	0.07	0.34	741	0.13	0.12	6.74	11.5	159	12 Indian Ln.
743	Stream	Williams Road	0.12	<10	ND	0.14	326	ND	0.03	6.83	10.9	90	56 Williams Rd.
762	Full	Eisenhower Drive	ND	ND	ND	0.2	451	ND	0.03	6.81	11.1	90	56 Williams Rd.
E9	Full	Eisenhower Drive	0.13	<10	0.24	0.17	401	0.12	ND	6.78	10.6	90	56 Williams Rd.
761	Full	Eisenhower Drive	0.14	<10	ND	0.13	303	ND	ND	6.8	10.8	90	56 Williams Rd.
E10	Stream	Eisenhower Drive	ND	<10	ND	0.15	352	ND	0.14	6.81	10.9	90	56 Williams Rd.
759	Stream	Bishop Road	0.1	<10	ND	0.1	233	ND	0.02	6.81	10.8	90	56 Williams Rd.
760	Stream	Bishop Road	0.83	<10	ND	0.26	586	ND	ND	6.8	10.7	90	56 Williams Rd.
1051	Full	Greenwood Drive	ND	ND	0.03	0.2	450	0.1	0.02	6.61	10.1	160	39 Greenwood Rd
1052	Stream	Greenwood Drive	0.45	<10	0.09	0.2	465	0.1	0.03	6.42	10.3	160	39 Greenwood Rd
598	Full	Hampton Drive	0.15	10	0.19	0.28	619	ND	1.36	6.53	10.5	330	26 Oakhill Dr
596	Shallow Stream	Hampton Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	26 Oakhill Dr
49	Shallow Stream	Hampton Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	26 Oakhill Dr
48	N/A	Hampton Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	26 Oakhill Dr
47	N/A	Hampton Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	26 Oakhill Dr
46	N/A	Hampton Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	26 Oakhill Dr
589	N/A	Hampton Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	26 Oakhill Dr
50	N/A	Oakhill Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	26 Oakhill Dr
E7	Stream	Oakhill Drive	0.19	300	ND	0.21	481	ND	0.04	6.49	10.7	330	26 Oakhill Dr
E8	N/A	Oakhill Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	26 Oakhill Dr
534	Moist	Gavins Pond Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	328	30 Gavins Pond Rd
535	Stream	Gavins Pond Road	ND	<10	0.04	0.21	489	0.11	0.31	7.43	19.3	328	30 Gavins Pond Rd
536	Stream	Gavins Pond Road	ND	<10	0.15	0.22	491	ND	0.16	6.64	18.2	328	30 Gavins Pond Rd
538	Stream	Gavins Pond Road	0.19	<10	ND	0.21	485	ND	0.03	6.89	18.3	328	30 Gavins Pond Rd
541	Full	Gavins Pond Road	ND	1000	0.06	ND	124	0.17	0.12	6.72	18.9	328	30 Gavins Pond Rd
544	N/A	Gavins Pond Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	328	30 Gavins Pond Rd
E2	N/A	Gavins Pond Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	328	30 Gavins Pond Rd
545	N/A	Gavins Pond Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	328	30 Gavins Pond Rd
E3	N/A	Colonel Gridley Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	328	30 Gavins Pond Rd
543	N/A	Colonel Gridley Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	328	30 Gavins Pond Rd
466	Heavy	Grapeshot Road	ND	<10	ND	ND	94.5	ND	0.04	6.45	12.3	60	164 Furnace St
467	Stream	Grapeshot Road	ND	<10	ND	ND	87.8	ND	0.02	6.58	12.6	60	164 Furnace St
463	N/A	Grapeshot Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60	164 Furnace St
465	N/A	Grapeshot Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60	164 Furnace St
464	N/A	Grapeshot Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60	164 Furnace St
E1	N/A	Grapeshot Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60	164 Furnace St
460	N/A	Grapeshot Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60	164 Furnace St
479	Stream	Foundry Road	ND	<10	0.17	ND	84.1	ND	0.11	6.52	12.5	60	164 Furnace St
480	Full	Foundry Road	0.27	<10	0.07	0.12	296	0.11	0.05	6.49	12.5	60	164 Furnace St
481	Shallow	Foundry Road	0.18	<10	0.06	0.17	397	0.14	0.1	6.5	12.1	60	164 Furnace St
447	Shallow	Foundry Road	1.02	<10	0.11	0.14	340	0.19	0.21	6.46	12.2	60	164 Furnace St
443	N/A	Foundry Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60	164 Furnace St
431	N/A	Foundry Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60	164 Furnace St
1166	Moist	Sandy Ridge Circle	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	39 Sandy Ridge Cir.
239	N/A	Sandy Ridge Circle	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	39 Sandy Ridge Cir.
238	N/A	Sandy Ridge Circle	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	39 Sandy Ridge Cir.
825	Full	Ames Street	ND	<10	ND	0.26	586	ND	0.03	6.95	16.3	106	159 Ames St.
95	Shallow	Knob Hill Street	ND	10	0.13	ND	155	ND	0.07	6.62	13	298	10 Knob hill St.
96	N/A	Knob Hill Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	298	10 Knob hill St.
93	N/A	Knob Hill Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	298	10 Knob hill St.
826	Heavy	Ames Street	ND	<10	0.17	0.26	595	0.1	0.03	6.85	15.7	107	132 Ames St
1168	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St
E11	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St
209	N/A	Ames Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St
55	N/A	Ames Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St
208	N/A	Ames Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St
205	N/A	Dunbar Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St

Catchment Investigations

Manhole ID	Water Status	Location	Ammonia	E. coli	Phosphorus	Salinity	Conductivity	Surfactants	Chlorine	pH	Temp (C)	Outfall ID	Outfall Location	
851	N/A	Robin Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
848	N/A	Robin Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
854	N/A	Woodland Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
856	N/A	Woodland Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
857	N/A	Woodland Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
855	N/A	Summers Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
1167	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
190	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
189	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
188	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
187	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
E12	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
184	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
185	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
186	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
E13	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
E14	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
183	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
182	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
E15	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
181	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
E16	N/A	Post Office Square	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	132 Ames St	
1004	N/A	Bullard Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	226	30 Bullard St	
100	Full	Knob Hill Road	ND	<10	ND	ND	182	ND	0.04	6.5	12.3	180	53 Knob Hill St.	
101	Full	Knob Hill Road	ND	<10	ND	ND	171	ND	0.04	6.55	12.5	180	53 Knob Hill St.	
107	Full	Knob Hill Road	ND	20	0.02	0.11	257	ND	0.02	6.53	12.6	180	53 Knob Hill St.	
102	Stream	Howard Farm Road	ND	<10	ND	ND	105	ND	0.03	6.61	12.8	180	53 Knob Hill St.	
103	Stream	Howard Farm Road	ND	<10	0.38	0.1	241	ND	0.03	6.59	12.5	180	53 Knob Hill St.	
104	N/A	Howard Farm Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	180	53 Knob Hill St.	
293	Full	Canoe River Road					AWAITING TEST RESULTS				7.2	10	185	14 Canoe River Rd.
E6	N/A	Canoe River Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	185	14 Canoe River Rd.	
296	Stream	Canoe River Road	ND	<10	ND	ND	142	ND	ND	6.95	9.3	185	14 Canoe River Rd.	
297	Stream	Canoe River Road	0.13	10	1.08	ND	158	ND	0.24	6.99	9.4	185	14 Canoe River Rd.	
759	Full	Carbrey Avenue	0.13	ND	ND	ND	192	ND	0.04	6.78	8.1	369	8 Carbrey Ave.	
797	Dry	Carbrey Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	369	8 Carbrey Ave.	
798	N/A	Carbrey Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	369	8 Carbrey Ave.	
799	N/A	Gannett Terrace	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	369	8 Carbrey Ave.	
800	N/A	Gannett Terrace	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	369	8 Carbrey Ave.	
803	N/A	Gannett Terrace	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	369	8 Carbrey Ave.	
804	N/A	Abbot Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	369	8 Carbrey Ave.	
805	N/A	Abbot Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	369	8 Carbrey Ave.	
880	Full	Mountain Street	0.22	ND	ND	0.1	234	ND	0.05	6.21	6.5	340	155 Mountain St.	
881	N/A	Mountain Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	340	155 Mountain St.	
578	Full	Azalea Rd	ND	10	ND	0.11	273	0.16	0.04	6.64	6.3	228	14 Azalea Rd.	
61	Full	Azalea Rd	ND	ND	ND	ND	194	ND	0.02	6.8	6.9	123	50 Azalea Rd.	
888	Shallow	Azalea Rd	0.31	<10	0.1	ND	224	ND	0.1	6.62	12.8	123	50 Azalea Rd.	
62	N/A	Azalea Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	123	50 Azalea Rd.	
59	N/A	Azalea Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	123	50 Azalea Rd.	
58	N/A	Azalea Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	123	50 Azalea Rd.	
60	N/A	Juniper Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	123	50 Azalea Rd.	
1181	N/A	Juniper Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	123	50 Azalea Rd.	
569	Stream	Samoset Lane	ND	<10	ND	0.21	481	0.1	0.07	6.31	11.5	258	Samoset Ln.	
570	Stream	Foxfire Drive	0.32	<10	ND	0.12	279	0.12	0.14	6.35	11.6	258	Samoset Ln.	
571	Full	Foxfire Drive	ND	<10	ND	0.13	308	0.15	0.06	6.35	11.6	258	Samoset Ln.	
135	Full	Wilshire Drive	ND	<10	ND	0.26	576	ND	ND	6.86	10.4	83	188 Wilshire Dr	
136	Full	Wilshire Drive	ND	<10	0.08	0.26	576	ND	ND	6.84	10.4	83	188 Wilshire Dr	
138	Full	Wilshire Drive	ND	<10	0.01	0.28	630	ND	ND	6.8	10.6	83	188 Wilshire Dr	
139	Full	Wilshire Drive	ND	<10	ND	0.27	606	ND	ND	6.79	10.4	83	188 Wilshire Dr	
141	N/A	Wilshire Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83	188 Wilshire Dr	
143	N/A	Wilshire Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83	188 Wilshire Dr	
144	N/A	Wilshire Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83	188 Wilshire Dr	
690	Full	Johnson Road	ND	<10	ND	0.23	517	ND	0.02	6.52	10.7	83	188 Wilshire Dr	
691	Stream	Johnson Road	0.1	<10	ND	0.22	506	ND	0.03	6.45	10.7	83	188 Wilshire Dr	

Catchment Investigations

Manhole ID	Water Status	Location	Ammonia	E. coli	Phosphorus	Salinity	Conductivity	Surfactants	Chlorine	pH	Temp (C)	Outfall ID	Outfall Location
693	Dry	Kennedy Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83	188 Wilshire Dr
694	N/A	Kennedy Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83	188 Wilshire Dr
615	N/A	Kennedy Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83	188 Wilshire Dr
614	N/A	Kennedy Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83	188 Wilshire Dr
616	N/A	Kennedy Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83	188 Wilshire Dr
613	N/A	Kennedy Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	83	188 Wilshire Dr
361	Full	King Phillip Road	ND	ND	ND	0.12	277	0.13	0.02	5.3	8.1	323	1 King Phillip Rd.
359	Moist	King Phillip Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	323	1 King Phillip Rd.
358	N/A	King Phillip Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	323	1 King Phillip Rd.
357	N/A	King Phillip Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	323	1 King Phillip Rd.
1186	Full	Drake Circle	ND	ND	ND	0.19	436	0.13	0.02	7.19	7.6	234	Drake Cir.
92	Full	Drake Circle	0.19	<10	ND	0.2	458	0.11	ND	7.23	11.2	234	Drake Cir.
91	Full	Drake Circle	0.24	<10	0.07	0.2	457	0.12	ND	7.24	11.3	234	Drake Cir.
833	Dry	Massapoag Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
827	N/A	Massapoag Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
843	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
E5	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
847	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
844	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
845	N/A	Pond Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
8	N/A	Beach Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
211	N/A	Beach Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
210	N/A	Beach Street	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
11	N/A	Massapoag Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
9	N/A	Massapoag Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
8	N/A	Massapoag Avenue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
1161	N/A	Arboro Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
67	N/A	Arboro Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
837	N/A	Circle Way	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	109	2 East Street
1182	Stream	Castle Drive				AWAITING TEST RESULTS				6.9	18.2	360	3 Castle Drive
1184	Stream	Castle Drive				AWAITING TEST RESULTS				6.87	18.3	360	3 Castle Drive

Catchment Testing

Manhole ID	Water Status	Location	Ammonia	E. coli	Phosphorus	Salinity	Conductivity	Surfactants	Chlorine	pH	Temp (C)	Outfall ID	Outfall Location
993	Full	Pheasant Wood Road	ND	ND	ND	0.16	366	ND	0.04	6.49	6.3	320	2 Blueberry Ln.
994	Full	Pheasant Wood Road	ND	ND	ND	0.16	376	ND	0.03	6.44	6.2	320	2 Blueberry Ln.
1180	Full	Pheasant Wood Road	ND	<10	ND	0.13	313	ND	0.06	6.51	10.2	320	2 Blueberry Ln.
995	Full	Huckleberry Lane	ND	<10	ND	0.38	824	0.11	0.08	6.62	9.9	320	2 Blueberry Ln.
1050	Stream	Indian Lane	ND	10	0.19	0.25	581	0.12	0.79	6.72	11.2	159	12 Indian Ln.
E4	Stream	Indian Lane	0.26	<10	0.09	0.21	480	0.12	1.36	6.75	11.6	159	12 Indian Ln.
1047	Full	Greenwood Drive	0.58	1700	0.07	0.34	741	0.13	0.12	6.74	11.5	159	12 Indian Ln.
743	Stream	Williams Road	0.12	<10	ND	0.14	326	ND	0.03	6.83	10.9	90	56 Williams Rd.
762	Full	Eisenhower Drive	ND	ND	ND	0.2	451	ND	0.03	6.81	11.1	90	56 Williams Rd.
E9	Full	Eisenhower Drive	0.13	<10	0.24	0.17	401	0.12	ND	6.78	10.6	90	56 Williams Rd.
761	Full	Eisenhower Drive	0.14	<10	ND	0.13	303	ND	ND	6.8	10.8	90	56 Williams Rd.
E10	Stream	Eisenhower Drive	ND	<10	ND	0.15	362	ND	0.14	6.81	10.9	90	56 Williams Rd.
759	Stream	Bishop Road	0.1	<10	ND	0.1	233	ND	0.02	6.81	10.8	90	56 Williams Rd.
760	Stream	Bishop Road	0.83	<10	ND	0.26	586	ND	ND	6.8	10.7	90	56 Williams Rd.
1051	Full	Greenwood Drive	ND	ND	0.03	0.2	450	0.1	0.02	6.61	10.1	160	39 Greenwood Rd
1052	Stream	Greenwood Drive	0.45	<10	0.09	0.2	455	0.1	0.03	6.42	10.3	160	39 Greenwood Rd
598	Full	Hampton Drive	0.15	10	0.19	0.28	619	ND	1.36	6.53	10.5	330	26 Oakhill Dr
E7	Stream	Oakhill Drive	0.19	300	ND	0.21	481	ND	0.04	6.49	10.7	330	26 Oakhill Dr
535	Stream	Gavins Pond Road	ND	<10	0.04	0.21	489	0.11	0.31	7.43	19.3	328	30 Gavins Pond Rd
536	Stream	Gavins Pond Road	ND	<10	0.16	0.22	491	ND	0.16	6.64	18.2	328	30 Gavins Pond Rd
538	Stream	Gavins Pond Road	0.19	<10	ND	0.21	485	ND	0.03	6.89	18.3	328	30 Gavins Pond Rd
541	Full	Gavins Pond Road	ND	1000	0.06	ND	124	0.17	0.12	6.72	18.9	328	30 Gavins Pond Rd
466	Heavy	Grapeshot Road	ND	<10	ND	ND	94.5	ND	0.04	6.45	12.3	60	164 Furnace St
467	Stream	Grapeshot Road	ND	<10	ND	ND	87.8	ND	0.02	6.66	12.6	60	164 Furnace St
479	Stream	Foundry Road	ND	<10	0.17	ND	84.1	ND	0.11	6.52	12.5	60	164 Furnace St
480	Full	Foundry Road	0.27	<10	0.07	0.12	296	0.11	0.05	6.49	12.5	60	164 Furnace St
481	Shallow	Foundry Road	0.18	<10	0.06	0.17	397	0.14	0.1	6.5	12.1	60	164 Furnace St
447	Shallow	Foundry Road	1.02	<10	0.11	0.14	340	0.19	0.21	6.46	12.2	60	164 Furnace St
825	Full	Ames Street	ND	<10	ND	0.26	586	ND	0.03	6.95	16.3	106	159 Ames St.
95	Shallow	Knob Hill Street	ND	10	0.13	ND	155	ND	0.07	6.62	13	298	10 Knob Hill St.
826	Heavy	Ames Street	ND	<10	0.17	0.26	595	0.1	0.03	6.85	15.7	107	132 Ames St
100	Full	Knob Hill Road	ND	<10	ND	ND	182	ND	0.04	6.5	12.3	180	53 Knob Hill St.
101	Full	Knob Hill Road	ND	<10	ND	ND	171	ND	0.04	6.55	12.5	180	53 Knob Hill St.
107	Full	Knob Hill Road	ND	20	0.02	0.11	257	ND	0.02	6.53	12.6	180	53 Knob Hill St.
102	Stream	Howard Farm Road	ND	<10	ND	ND	105	ND	0.03	6.61	12.8	180	53 Knob Hill St.
103	Stream	Howard Farm Road	ND	<10	0.38	0.1	241	ND	0.03	6.59	12.5	180	53 Knob Hill St.
293	Full	Canoe River Road					AWAITING TEST RESULTS			7.2	10	185	14 Canoe River Rd.
295	Stream	Canoe River Road	ND	<10	ND	ND	142	ND	ND	6.95	9.3	185	14 Canoe River Rd.
297	Stream	Canoe River Road	0.13	10	1.08	ND	158	ND	0.24	6.99	9.4	185	14 Canoe River Rd.
759	Full	Carbrey Avenue	0.13	ND	ND	ND	192	ND	0.04	6.78	8.1	369	8 Carbrey Ave.
880	Full	Mountain Street	0.22	ND	ND	0.1	234	ND	0.05	6.21	6.5	340	155 Mountain St.
578	Full	Azalea Rd	ND	10	ND	0.11	273	0.18	0.04	6.64	6.3	228	14 Azalea Rd.
61	Full	Azalea Rd	ND	ND	ND	ND	194	ND	0.02	6.8	5.9	123	50 Azalea Rd.
888	Shallow	Azalea Rd	0.31	<10	0.1	ND	224	ND	0.1	6.62	12.8	123	50 Azalea Rd.
569	Stream	Samoset Lane	ND	<10	ND	0.21	481	0.1	0.07	6.31	11.5	258	Samoset Ln.
570	Stream	Foxfire Drive	0.32	<10	ND	0.12	279	0.12	0.14	6.35	11.6	258	Samoset Ln.
571	Full	Foxfire Drive	ND	<10	ND	0.13	308	0.15	0.06	6.35	11.6	258	Samoset Ln.
135	Full	Wilshire Drive	ND	<10	ND	0.26	576	ND	ND	6.86	10.4	83	188 Wilshire Dr
136	Full	Wilshire Drive	ND	<10	0.08	0.26	576	ND	ND	6.84	10.4	83	188 Wilshire Dr
138	Full	Wilshire Drive	ND	<10	0.01	0.28	630	ND	ND	6.8	10.6	83	188 Wilshire Dr
139	Full	Wilshire Drive	ND	<10	ND	0.27	606	ND	ND	6.79	10.4	83	188 Wilshire Dr
690	Full	Johnson Road	ND	<10	ND	0.23	517	ND	0.02	6.52	10.7	83	188 Wilshire Dr
691	Stream	Johnson Road	0.1	<10	ND	0.22	506	ND	0.03	6.45	10.7	83	188 Wilshire Dr
361	Full	King Phillip Road	ND	ND	ND	0.12	277	0.13	0.02	5.3	8.1	323	1 King Phillip Rd.
1186	Full	Drake Circle	ND	ND	ND	0.19	436	0.13	0.02	7.19	7.6	234	Drake Cir.
92	Full	Drake Circle	0.19	<10	ND	0.2	468	0.11	ND	7.23	11.2	234	Drake Cir.
91	Full	Drake Circle	0.24	<10	0.07	0.2	457	0.12	ND	7.24	11.3	234	Drake Cir.
1182	Stream	Castle Drive					AWAITING TEST RESULTS			6.9	18.2	360	3 Castle Drive
1184	Stream	Castle Drive					AWAITING TEST RESULTS			6.87	18.3	360	3 Castle Drive

Outfall Testing

Outfall ID	Flow	Location	Ammonia	E. coli	Phosphorus	Salinity	Conductivity	Surfactants	Chlorine	pH	Temp (C)
355	Heavy	63 Canton Street	0.26	<10	0.01	0.38	822	0.15	0.03	6.11	23.3
320	Heavy	2 Blueberry Ln.	ND	<10	0.01	0.13	301	0.15	0.04	6.55	9.9
159	Moderate	12 Indian Ln.	0.39	<10	0.01	0.42	916	0.19	0.02	6.87	11.1
90	Moderate	56 Williams Rd.	ND	<10	0.01	ND	200	0.14	ND	6.82	10.3
160	Moderate	39 Greenwood Rd	0.2	50	0.14	0.25	559	0.129	0.03	6.75	6.8
330	Moderate	26 Oakhill Dr	ND	<10	0.01	ND	196	0.19	ND	6.95	10.1
177	Moderate	30 Gavins Pond Rd River	0.14	<10	ND	0.19	428	ND	ND	6.58	11.8
328	Moderate	30 Gavins Pond Rd Retention Area	ND	<10	ND	0.17	402	0.13	0.04	6.21	13.4
60	Moderate	164 Furnace St	0.22	<10	ND	ND	82.7	ND	ND	5.85	23.2
11	Moderate	39 Sandy Ridge Cir.	ND	<10	0.03	0.16	368	0.15	ND	6.66	13.3
107	Moderate	132 Ames St	ND	<10	0.06	0.14	388	0.17	0.02	6.63	11.5
298	Trickle	10 Knob hill St.	ND	<10	ND	ND	201	ND	0.03	6.59	9.9
106	Trickle	159 Ames St.	ND	10	ND	0.31	682	0.19	ND	5.98	11.7
170	Trickle	430 North Main St.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
226	Trickle	30 Bullard St	ND	90	ND	0.24	535	0.1	0.04	6.75	6.2
180	Trickle	53 Knob Hill St.	ND	<10	ND	ND	207	ND	ND	5.91	10.9
185	Trickle	14 Canoe River Rd.	ND	<10	ND	ND	189	0.44	ND	6.82	11.2
369	Trickle	8 Carfrey Ave.	ND	270	0.02	0.11	267	0.27	ND	6.79	10.3
340	Trickle	155 Mountain St.	0.75	<10	0.04	0.1	248	0.11	0.08	6.24	6.9
228	Trickle	14 Azalea Rd.	ND	<10	0.01	0.11	255	0.15	0.02	6.69	12.9
123	Trickle	50 Azalea Rd.	ND	<10	ND	ND	191	0.19	ND	6.83	13.5
258	Trickle	Samoset Ln.	ND	<10	0.01	ND	174	0.13	0.08	5.65	11.8
83	Trickle	188 Wilshire Dr	0.18	<10	ND	0.19	428	0.13	ND	5.67	13.4
323	Trickle	1 King Philip Rd. River	0.26	<10	0.01	0.22	497	ND	0.63	5.4	7.7
234	Trickle	Drake Cir.	ND	<10	ND	0.1	240	0.12	0.07	7.1	9.1
109	Trickle	2 East Street	0.44	10	ND	0.33	725	0.11	0.15	6.41	23.3
360	Trickle	3 Castle Drive				AWAITING TEST RESULTS				6.94	19.3
	LIMITS	LIMITS	0.5	235		800		0.25	DET		

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
1	Ethan Pipes	yes	Dry				
2	Adam Ganz		Standing Water	None	Clear	Clear	None
3	Zachary Ferreria	Yes	Dry	None	Clear	Clear	Other
4	Ethan Pipes	yes	Dry				
5	Ethan Pipes	yes	Dry				
6	Ethan Pipes	yes	Dry				
7	Adam Ganz	Yes	Dry	None	Clear	Clear	None
8	Adam Ganz	Yes	Dry	None	Clear	Clear	None
9	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
10	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
11	Adam Ganz	Yes	Moderate	None	Clear	Clear	None
12	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
13	Ethan Pipes	no					
14	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
15	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
16	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
17	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
18	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
19	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
20	Ethan Pipes	no					
21	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
22	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
23	Ethan Pipes	yes	Dry				
24	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
25	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
27	Ethan Pipes	yes	Dry				
28	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
29	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
30	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
31	Adam Ganz	Yes	Dry	None	Clear	Clear	None
32	Zachary Ferreria	Yes	Standing Water	None	Clear	Clear	None
33	Adam Ganz	No					
34	Ethan Pipes	Yes	Dry	None	Clear	Clear	None

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
35	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
36	Ethan Pipes	yes	Dry				
37	Ethan Pipes	No					
38	Ethan Pipes	yes	Dry				
39	Ethan Pipes	yes	Dry				
40	Ethan Pipes	yes	Dry				
41	Ethan Pipes	yes	Dry				
42	Ethan Pipes	no					
43	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
44	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
45	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
46	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
47	Adam Ganz	No					
48	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
49	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
50	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
51	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
53	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
56	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
57	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
58	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
59	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
60	Ethan Pipes	Yes	Moderate	None	Clear	Clear	None
61	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
62	Ethan Pipes	No					
63	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
64	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
65	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
66	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
67	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
68	Ethan Pipes	yes	Dry				
70	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
71	Ethan Pipes	Yes	Dry	None	Clear	Clear	None

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
72	Ethan Pipes	Yes	Submerged	None	Clear	Clear	None
73	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
74	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
75	Ethan Pipes	yes	Dry				
76	Ethan Pipes	yes	Dry				
77	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
78	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	Oily Sheen
79	Ethan Pipes	No					
80	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
83	Ethan Pipes	Yes	Trickle	None	Clear	Clear	None
84	Ethan Pipes	Yes	Submerged	None	Clear	Clear	None
85	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
86	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
87	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
88	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
89	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
90	Ethan Pipes	Yes	Moderate	None	Clear	Clear	None
91	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
92	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
93	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
94	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
95	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
96	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
97	Ethan Pipes	Yes	Submerged	None	Clear	Clear	None
98	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
99	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
100	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
101	Ethan Pipes	No					
102	Ethan Pipes	no					
103	Ethan Pipes	Yes	Submerged	None	Clear	Clear	None
104	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
105	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
106	Zachary Ferreria	Yes	Moderate	None	Clear	Clear	None

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
107	Adam Ganz	Yes	Moderate	None	Clear	Clear	None
108	Adam Ganz	Yes	Dry	None	Clear	Clear	None
109	Adam Ganz		Trickle	None	Clear	Clear	None
110	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
111	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
112	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
113	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
114	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
115	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
116	Ethan Pipes	Yes	Submerged	None	Clear	Clear	None
119	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
120	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
121	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
122	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
123	Ethan Pipes	Yes	Trickle	None	Clear	Clear	None
124	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
125	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
126	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
127	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
128	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
129	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
130	Ethan Pipes	no					
131	Ethan Pipes	no					
132	Ethan Pipes	No					
133	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
134	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
135	Ethan Pipes	No					
136	Ethan Pipes	Yes	Submerged	Musty	Brown	Cloudy	None
137	Ethan Pipes	yes	Dry				
138	Ethan Pipes	yes	Dry				
139	Ethan Pipes	yes	Dry				
141	Ethan Pipes	yes	Dry				
142	Ethan Pipes	no					

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
145	Adam Ganz	Yes	Standing Water	None	Clear	Clear	None
146	Ethan Pipes	No					
147	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
148	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
149	Adam Ganz	Yes	Dry	None	Brown	Clear	None
150	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
151	Ethan Pipes	Yes	Submerged	None	Clear	Clear	None
152	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
154	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
155	Ethan Pipes	Yes	Submerged	None	Clear	Clear	None
156	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
157	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
158	Ethan Pipes	yes	dry				
158	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
159	Ethan Pipes	Yes	Moderate	Rotten Eggs	Orange	Clear	None
160	Ethan Pipes	Yes	Moderate	None	Clear	Clear	None
161	Zachary Ferreria	Yes	Dry	None	Clear	Clear	None
162	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
163	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
164	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
165	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
166	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
167	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
168	Adam Ganz	Yes	Dry	None	Clear	Clear	None
169	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
170	Ethan Pipes	Yes	Trickle	Musty	Clear	Cloudy	Oily Sheen
173	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
174	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
175	Ethan Pipes	no					
176	Ethan Pipes	No					
177	Ethan Pipes	Yes	Moderate	None	Clear	Clear	None
178	Ethan Pipes	Yes	Dry	None	Brown	Opaque	Sewage
179	Ethan Pipes	Yes	Dry	None	Clear	Clear	None

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
180	Ethan Pipes	Yes	Trickle	None	Clear	Clear	None
181	Ethan Pipes	Yes	Submerged	None	Clear	Clear	None
182	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
183	Ethan Pipes	no					
184	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
185	Ethan Pipes	Yes	Trickle	None	Clear	Cloudy	None
186	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
187	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
188	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
189	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
190	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
191	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
192	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
193	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
194	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
195	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
196	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
197	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
198	Adam Ganz	Yes	Dry	None	Clear	Clear	None
199	Adam Ganz	Yes	Dry	None	Clear	Clear	None
200	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
201	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
202	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
207	Adam Ganz		Dry	None	Clear	Clear	None
208	Adam Ganz		Dry	None	Clear	Clear	None
209	Zachary Ferreria	No					
210	Ethan Pipes	no					
212	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
214	Ethan Pipes	yes	Dry				
215	Ethan Pipes	No					
216	Ethan Pipes	No					
217	Zachary Ferreria	No					
218	Ethan Pipes	Yes	Dry	Musty	Clear	Clear	None

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
219	Ethan Pipes	Yes	Dry	None	Clear	Cloudy	None
220	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
221	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
224	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
225	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
226	Ethan Pipes	Yes	Trickle	Musty	Clear	Cloudy	None
227	Adam Ganz	Yes	Dry	None	Clear	Clear	None
228	Ethan Pipes	Yes	Trickle	Musty	Clear	Clear	None
229	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
230	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
231	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
232	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
233	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
234	Adam Ganz	Yes	Trickle	None	Clear	Clear	None
235	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
236	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
237	Ethan Pipes	no					
238	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
240	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
243	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
246	Adam Ganz	No					
247	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
248	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
249	Adam Ganz	No					
249	Ethan Pipes	no					
250	Ethan Pipes	yes	Dry				
251	Ethan Pipes	yes	Dry				
252	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
253	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
254	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
255	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
256	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
257	Adam Ganz	No					

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
257	Ethan Pipes	yes	Dry				
258	Ethan Pipes	Yes	Trickle	None	Clear	Clear	Other
261	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
263	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
265	Ethan Pipes	yes	Dry				
266	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
267	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
268	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
269	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
270	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
271	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
272	Ethan Pipes	Yes	Dry	Sour Milk	Clear	Clear	None
272	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
273	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
274	Zachary Ferreria	Yes	Dry	None	Clear	Clear	None
275	Adam Ganz	Yes	Dry	None	Clear	Clear	None
276	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
277	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
278	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
279	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
280	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
281	Adam Ganz	Yes	Dry	None	Clear	Clear	None
282	Adam Ganz	Yes	Dry	None	Clear	Clear	None
283	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
284	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
285	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
286	Ethan Pipes	yes	Dry				
288	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
289	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
290	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
291	Adam Ganz	Yes	Dry	None	Clear	Clear	None
292	Ethan Pipes	yes	Dry				
293	Adam Ganz	Yes	Dry	None	Clear	Clear	None

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
294	Adam Ganz	No					
294	Ethan Pipes	yes	Dry				
295	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
296	Adam Ganz	No					
296	Ethan Pipes	yes	Dry				
297	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
298	Adam Ganz	Yes	Moderate	None	Clear	Clear	None
299	Adam Ganz	Yes	Submerged	Musty	Orange	Suspended Solids	Garbage
300	Ethan Pipes	Yes	Submerged	None	Clear	Clear	None
301	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
302	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
303	Ethan Pipes	No					
304	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
305	Ethan Pipes	no					
306	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
307	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
310	Ethan Pipes	yes	Dry				
311	Ethan Pipes	yes	Dry				
312	Ethan Pipes	yes	Dry				
313	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
314	Ethan Pipes	no					
315	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
316	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
317	Ethan Pipes	no					
318	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
319	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
320	Adam Ganz	Yes	Heavy	None	Clear	Clear	None
321	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
322	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
323	Ethan Pipes	Yes	Trickle	None	Clear	Clear	None
324	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
325	Adam Ganz	Yes	Dry	None	Clear	Clear	None
326	Ethan Pipes	Yes	Submerged	Musty	Brown	Clear	Oily Sheen

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
327	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
328	Ethan Pipes	Yes	Moderate	None	Clear	Clear	None
330	Ethan Pipes	Yes	Moderate	None	Clear	Clear	None
331	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
332	Adam Ganz	Yes	Dry	None	Clear	Clear	None
333	Ethan Pipes	no					
334	Ethan Pipes	No					
335	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
336	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
337	Adam Ganz	Yes	Dry	None	Clear	Clear	None
338	Adam Ganz	Yes	Dry	None	Clear	Clear	None
339	Ethan Pipes	yes	Dry				
340	Ethan Pipes	Yes	Trickle	None	Orange	Opaque	Oily Sheen
341	Ethan Pipes	yes	Dry				
341	Ethan Pipes	Yes	Standing Water	Sewage	Red	Opaque	Oily Sheen
342	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
343	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
344	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
348	Ethan Pipes	Yes	Standing Water	None	Clear	Clear	None
349	Ethan Pipes	no					
350	Ethan Pipes	yes	Dry				
351	Ethan Pipes	no					
352	Ethan Pipes	No					
353	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
354	Zachary Ferreria	Yes	Dry	None	Clear	Clear	None
355	Ethan Pipes	Yes	Heavy	None	Clear	Clear	None
356	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
357	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
358	Ethan Pipes	Yes	Submerged	Musty	Brown	Cloudy	Oily Sheen
360	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
361	Ethan Pipes	Yes	Standing Water	None	Brown	Clear	None
362	Ethan Pipes	No					
363	Zachary Ferreria	Yes	Dry	None	Clear	Clear	Garbage

Outfall Screening

Outfall ID	Screening Agent	Located Outfall?	Flow Condition	Odor	Color	Clarity	Turbidity
364	Zachary Ferreria	No					
365	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
366	Adam Ganz	Yes	Dry	None	Clear	Clear	None
367	Adam Ganz	Yes	Dry	None	Clear	Clear	None
368	Ethan Pipes	yes	Dry				
369	Ethan Pipes	Yes	Trickle	Musty	Clear	Clear	None
370	Ethan Pipes	Yes	Dry	None	Clear	Clear	None
371	Ethan Pipes	Yes	Submerged	None	Clear	Clear	None
372	Ethan Pipes	No					
373	Ethan Pipes	No					
374	Ethan Pipes	Yes	Dry	Musty	Clear	Clear	None

# APPENDIX C

## NUTRIENT IDENTIFICATION

- Nutrient Identification Report
- Nutrient Identification Report Addendum

# **Nutrient Source Identification Report**

## **Town of Sharon**

Prepared By: Neponset River Watershed Association  
June 16, 2021

This report is being submitted as a final grant deliverable for the MS4 Municipal Assistance Grant Program. This specific submission is not intended for regulatory compliance purposes.

## Acknowledgements

*This is one among twenty Nutrient Source Identification Reports prepared by the Neponset River Watershed Association (NepRWA) and the Pioneer Valley Planning Commission (PVPC). These reports are meant to provide MS4 permitted municipalities with documents they can finalize and submit to U.S. EPA as part of their Year 4 reporting requirements.*

*This work is made possible through a grant from the MassDEP Municipal Assistance Program. Project staff from NepRWA and PVPC appreciate the conversation and feedback provided by MassDEP and U.S. EPA staff in working through methodology to prepare these reports. Aside from producing nutrient source identification reports for 20 communities, this project also resulted in the following: lake-pond phosphorous control plan Year 4 submission requirements for two communities; documentation of approach and methods for use by other MS4 permittees across MA in meeting these Year 4 requirements; and setting of the stage for upgrading existing stormwater infrastructure in key high pollutant loading catchments.*

*NepRWA and PVPC staff are grateful also to the partner communities who joined them in this pilot project. Following is a list of cities and towns who participated in this project:*

<i>Agawam</i>	<i>Medfield</i>	<i>Southampton</i>
<i>Canton</i>	<i>Milton</i>	<i>Southwick</i>
<i>Dedham</i>	<i>Northampton</i>	<i>Stoughton</i>
<i>Foxborough</i>	<i>Quincy</i>	<i>Westfield</i>
<i>Granby</i>	<i>Randolph</i>	<i>Westwood</i>
<i>Longmeadow</i>	<i>Sharon</i>	<i>Wilbraham</i>
<i>Ludlow</i>	<i>South Hadley</i>	

## *Background: The Nutrient Pollution Problem*

Nitrogen and phosphorous are naturally occurring plant fertilizers or “nutrients.” When land is developed, and storm drain systems are installed, the amount of nitrogen and phosphorous discharged to local streams, ponds and wetlands increases significantly relative to natural stream conditions. In the urban environment, nitrogen and phosphorous come from a variety of sources including organic debris such as fallen leaves, animal and pet waste, lawn and agricultural fertilizers, malfunctioning sewers and septic systems, and atmospheric deposition from car exhaust, among other sources.

Some of these sources also occur in the natural environment. However, in the urban environment the prevalence of paved and impervious areas coupled with the availability of storm drain collection systems allows street runoff containing excess nutrient pollution to be very quickly collected and conveyed to the nearest waterbody, generally with little or no treatment—bypassing the natural processes such as soil filtration and infiltration that would capture and recycle nutrients before they reached waterways in an undeveloped landscape.

As a result, nutrient pollution from polluted stormwater runoff has become a major source of pollution across the country. Nutrient pollution increases undesirable plant and algae growth in waterways, which can be highly toxic to humans and wildlife and reduce oxygen levels in the water. This, in turn, impedes recreation and creates chronic challenges for aquatic life, sometimes leading to fish kills. In freshwater waterways phosphorous is generally the primary pollutant of concern, while nitrogen becomes the primary concern once freshwater rivers flow into saltwater estuaries and bays.

## *Background: Regulatory Context*

Under the federal and state clean water acts, the Massachusetts Department of Environmental Protection (MassDEP) is charged with establishing water quality standards and determining whether waterways meet these designated standards. MassDEP publishes its Integrated List of Waters, also referred to as the 303d Impaired Waters List, identifying waters that do not meet standards. These waterways are referred to as being “impaired” or “water quality limited” based on one or more causes which may include nitrogen, phosphorous, “nutrient/eutrophication biological indicators” or in some cases turbidity or transparency. MassDEP is also charged with preparing waterbody-specific cleanup plans for nutrient pollution known as Total Maximum Daily Loads or TMDLs, though these are yet to be prepared for many impaired waterways.

The Town of Sharon (“the Town”) is subject to the requirements of US Environmental Protection Agency’s (EPA’s) 2016 Massachusetts Small MS4 General Permit. One of the requirements of this permit is that communities discharging stormwater to waterways that are listed by MassDEP as impaired for phosphorous or nitrogen, or that flow into impaired waterways, and for which a total maximum daily load does not exist, shall prepare a Nutrient Source Identification Report as detailed in Appendix H of the permit. This report has been developed to satisfy this requirement of the permit.

The nutrient source identification report must be submitted with the permit year 4 annual report (year ending June 30, 2022 and report due late September 2022). The requirements include (excerpt from EPA 2016 MS4 Permit Appendix H):

1. 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;
2. All screening and monitoring results pursuant to part 2.3.4.7.b., targeting the receiving water segment(s);
3. Impervious area and DCIA for the target catchment;
4. Identification, delineation and prioritization of potential catchments with high [*nitrogen and/or phosphorous*] loading;
5. Identification of potential retrofit opportunities or opportunities for the installation of structural BMPs during redevelopment.

### *MS4 Permit Appendix H Applicability*

Portions of the Town lie both within the Neponset River Watershed and the Taunton River Watershed. Of the Town’s 18 receiving waters, two have been identified as specifically impaired for phosphorus. In some cases, the Town’s receiving waters also flow into another water body that is impaired for phosphorous, or waters that are listed as impaired for a cause in which phosphorous pollution is a factor such as dissolved oxygen, or eutrophication biological indicators.

The saltwater portion of the Neponset River, known as the Neponset River Estuary, is not specifically listed as impaired for nitrogen by MassDEP, but is listed as impaired for several other factors for which nitrogen pollution is a contributing factor. Furthermore, EPA has directed the City of Quincy to prepare a nutrient source identification report for nitrogen based on its stormwater discharges to the Neponset River. While EPA has not provided any clear direction to other communities in the Neponset River Watershed that are upstream of the Neponset Estuary regarding the need for a nitrogen source identification report, the possibility exists that EPA may issue such a requirement in the future. In the interest of efficiency of analysis, this report also includes an analysis of nitrogen pollution loading for all communities in the Neponset River Watershed. Further, catchments in the Taunton River Watershed are subject to the Mount Hope Bay TMDL.

Therefore, this report has been prepared in accordance with the guidelines in sections I.1.b and II.1.b of Appendix H of the 2016 Massachusetts Small MS4 General Permit.

The status of receiving waters in the Town is summarized in Table 1 below.

*Table 1. Receiving Waters for the Town of Sharon*

Receiving Water	Number of Outfalls	Impaired for P?	Impaired for N?	Other Impairments
<b>Neponset River (MA73-01)</b>	2	Yes	No	Dissolved Oxygen, TSS, DDT, E. Coli, Excess Algal Growth, Other, PCB in Fish Tissue, Sedimentation, Turbidity

<b>Massapoag Brook (MA73-21)</b>	21	Yes	No	TSS, Aquatic Macroinvertebrate Bioassessments, Non-Native Aquatic Plants, Turbidity
<b>Canoe River (MA62-27)</b>	24	No	No	
<b>Rumford River (MA62-39)</b>	2	No	No	Aquatic Macroinvertebrate Bioassessments, Dioxin, Fecal Coliform, Fishes Bioassessments, PCP, Physical Substrate Habitat Alterations, Sedimentation
<b>Ames Long Pond (MA62001)</b>	10	No	No	Aquatic Plants, Non-Native Aquatic Plants, Turbidity
<b>Briggs Pond (MA62021)</b>	3	No	No	
<b>Gavins Pond (MA62077)</b>	37	No	No	Non-Native Aquatic Plants
<b>Upper Leach Pond (MA62123)</b>	2	No	No	
<b>Whiteville Pond (MA62211)</b>	4	No	No	
<b>Wolomolopoag Pond (MA62216)</b>	8	No	No	
<b>School Meadow Brook (MA73-06)</b>	6	No	No	Fecal Coliform
<b>Traphole Brook (MA73-17)</b>	3	No	No	Fecal Coliform
<b>Beaver Brook (MA73-19)</b>	24	No	No	Aquatic Macroinvertebrate Bioassessments, Dissolved Oxygen
<b>Unnamed Tributary to the Neponset River (MA73-31)</b>	7	No	No	Fecal Coliform
<b>Clark Pond (MA73008)</b>	4	No	No	Non-Native Aquatic Plants
<b>Massapoag Lake (MA73030)</b>	50	No	No	Mercury in Fish Tissue, Non-Native Aquatic Plants
<b>Town Pond (MA73056)</b>	12	No	No	Non-Native Aquatic Plants
<b>Billing Street/East Street Pond (MA73065)</b>	18	No	No	Non-Native Aquatic Plants

### *Data Sources and Analytical Methods*

Several existing datasets were used to complete this work. Table 2 below lists the utilized data sets and their origin.

Table 2. Data Sources

Existing Data Set	Origin	Date Published/Updated	Link
<b>2016 Land Cover/Land Use</b>	MassGIS	May 2019	<a href="https://docs.digital.mass.gov/dataset/massgis-data-2016-land-coverland-use">https://docs.digital.mass.gov/dataset/massgis-data-2016-land-coverland-use</a>
<b>Soil Survey Geographic (SSURGO) Database for Norfolk and Suffolk Counties, Massachusetts</b>	USDA	June 2020	Downloaded through Web Soil Survey ( <a href="https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm">https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm</a> ).  Hydrologic soil groups extracted using Soil Data Viewer Version 6.1 ( <a href="https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nracs142p2_053619">https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nracs142p2_053619</a> )
<b>Town Catchments</b>	Town GIS Files	Current as of the publishing of this report	N/A
<b>Massachusetts Land Parcel Database (Metro Boston Region)</b>	MAPC	May 2019	Used to locate SCM opportunities, this shapefile contains the “Parloc_ID” field used to identify parcels.  <a href="https://datacommon.mapc.org/browser/datasets/360">https://datacommon.mapc.org/browser/datasets/360</a>

Impervious area is the portion of the Town that is paved, covered by buildings, or otherwise rendered unable to absorb water naturally due to development. Impervious area for the town was calculated using the MassGIS 2016 Land Cover/Land Use data layer which was published in 2019. This data layer maps impervious and pervious land cover by land use type based on aerial photography and other data sources. This was overlaid with the Town’s data layer for outfall catchment areas (the area draining to each town-owned stormwater discharge point) to estimate total areas and total impervious area discharging to or upstream of nutrient-impaired waterways, as well as to estimate impervious area for each stormwater outfall catchment.

Directly connected impervious area (DCIA), also referred to as “effective impervious cover,” is the amount of impervious area that is directly connected to the storm drain system. Most land in the Town was developed before the creation of modern requirements to capture, clean, slow down, and recharge stormwater runoff using stormwater control measures (SCMs). However, many new development and redevelopment projects constructed in recent years have required the installation or upgrade of SCMs, such that today some properties have no SCMs, some have SCMs that meet some modern standards, and some have SCMs that are fully compliant with

modern standards. Because site-specific information about the existence of specific SCMs is not available at the parcel level, an estimate of DCIA or effective impervious cover is used to approximate the average level of SCMs installed across the watershed. Estimating DCIA can yield a more specific pollutant loading estimate for a given area. DCIA was estimated based on land use categories following EPA guidance.

To estimate the pollutant loads for nitrogen and/or phosphorous in each catchment, estimated pollutant loading rates for different combinations of land use type, land cover type, and soil type were applied in accordance with guidance in the EPA 2016 MS4 Permit. The individual loading rates for these unique subsections were summed based on catchment, which produced an overall estimated catchment pollutant loading rate.

For a more detailed description of the analytical methods used for this project, please refer to the supplement to this report, entitled “Nutrient Source Identification Report Addendum: Methods.”

Note that two catchments in the Town’s data set identified as “0” and “313” were multipart shapefiles made up of several catchments spread throughout the Town. These were assumed to be a collective entry for catchments with no definitive outfall. While these catchments were included in analysis, they were removed from any rankings.

### *Total Area Draining to Water Quality Limited Segments (or Tributaries)*

The total area of the Town is approximately 15,598 acres. Since all areas of the Town are located either in the Neponset River Watershed or the Taunton River Watershed and drainage flows either directly to waters that are impaired for phosphorus or waters that are listed as impaired for a cause in which phosphorous pollution is a factor, this report included all areas of the town in the evaluation. Table 3 below shows how much of the Town is located in each watershed.

Similarly, portions of the town are upstream of the Neponset Estuary and therefore drain to a segment that EPA may consider impaired for nitrogen. While EPA has not provided clear guidance indicating that the Town is subject to the requirements of Appendix H of the 2016 MS4 permit for nitrogen, this report includes the analysis for nitrogen so that the relevant data is available should EPA make such a determination in the future. Therefore, catchments located in the Neponset River Watershed were included in this nitrogen loading analysis sections of this report. Catchments located in the Taunton River Watershed are subject to the Mt. Hope Bay TMDL and therefore were also included in catchment rankings for nitrogen.

*Table 3. Summary of Area Draining to Water Quality Limited Segments*

<b>Receiving Water Impaired for Phosphorus</b>	<b>Neponset Watershed</b>	<b>Taunton Watershed</b>	<b>Total</b>
<b>Total Area of Town (Acres)</b>	10,020	5,578	15,598
<b>Area Draining to Phosphorous Impaired Waters or Potentially Impaired Waters (Acres)</b>	10,020	5,578	15,598

<b>Area Draining to Nitrogen Impaired or Potentially Impaired Waters (Acres)</b>	10,020	5,578	15,598
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### *Impervious Area and Directly Connected Impervious Area*

Table 4 below summarizes the total impervious area (IA) and estimated DCIA in the Town. It is also important to note that most of the impervious area in the Town is not owned or maintained by the Town, but by private parties or other public agencies.

*Table 4. Summary of Impervious Area and DCIA*

	Neponset Watershed	Taunton Watershed	Total
<b>Impervious Area (Acres)</b>	944	425	1,369
<b>Estimated DCIA (Acres)</b>	19	6.5	25.5

Table A-1 and A-2 in Appendix A of this report provides impervious area and estimates of DCIA for the Town’s catchments in the Taunton and Neponset River Watersheds, respectively. Table 5 and 6 below show the same information for the ten catchments with the most impervious area in each watershed. The catchments are labeled using the Town’s identifier for the outfall to which they drain. The table is sorted in descending order of total impervious area.

*Table 5. Total Impervious Area and DCIA for the Ten Most Impervious Town Catchments in the Taunton River Watershed*

Catchment Identifier	Impervious Area (Acres)	Percent Impervious	DCIA (Acres)	Percent DCIA
<b>219</b>	50.90	16.43 %	3.93	1.27 %
<b>326</b>	23.77	5.30 %	0.78	0.17 %
<b>279</b>	11.96	3.72 %	0.53	0.17 %
<b>92</b>	10.41	26.80 %	2.29	5.89 %
<b>10</b>	9.31	43.96 %	2.14	10.11 %
<b>134</b>	8.12	37.96 %	1.82	8.52 %
<b>358</b>	7.26	25.80 %	1.57	5.58 %
<b>128</b>	6.51	24.57 %	0.93	3.51 %
<b>12</b>	6.10	32.36 %	1.17	6.19 %
<b>298</b>	6.07	13.50 %	0.49	1.09 %
<b>Top 10 Catchments as a % of Town Watershed Total</b>		31.82 %		29.67 %

Table 6. Total Impervious Area and DCIA for the Ten Most Impervious Town Catchments in the Neponset River Watershed

Catchment Identifier	Impervious Area (Acres)	Percent Impervious	DCIA (Acres)	Percent DCIA
109	81.45	5.83 %	2.46	0.18 %
146	33.23	2.74 %	0.72	0.06 %
107	32.45	29.36 %	4.12	3.73 %
138	23.77	14.99 %	2.54	1.60 %
4	18.59	29.81 %	2.66	4.26 %
355	17.32	9.35 %	1.10	0.59 %
89	16.95	12.55 %	1.20	0.89 %
145	16.40	43.95 %	3.25	8.71 %
153	16.16	26.14 %	2.18	3.53 %
217	11.85	18.97 %	1.35	2.16 %
<b>Top 10 Catchments as a % of Town Watershed Total</b>	40.91 %		21.83 %	

### Estimated Nutrient Loading from Catchments

Using the methods described in the addendum to this report, estimates of phosphorus and nitrogen loading potential were created for each of the Town’s storm drain outfall catchments.

Tables B-1 and B-2 in Appendix B and C-1 and C-2 in Appendix C of this report show calculated phosphorus and nitrogen loading estimates, respectively, for all catchments in the Town. Tables 7-10 below show the five catchments with the highest estimated phosphorus and nitrogen loading, respectively.

Table 7. Estimated Phosphorus Loading for Five Highest-Load Town Catchments in the Taunton River Watershed

Catchment Identifier	Estimated P Load (Lbs/Yr)
219	129.40
326	114.71
279	62.27
15	21.60
298	20.43
<b>Top 5 as a % of Total Town Watershed Load</b>	28.56 %

Table 8. Estimated Nitrogen Loading for Five Highest-Load Town Catchments in the Taunton River Watershed

Catchment Identifier	Estimated N Load (Lbs/Yr)
219	1129.02
326	778.47
279	496.81
298	191.83
92	155.36
<b>Top 5 as a % of Total Town Watershed Load</b>	28.57 %

Table 9. Estimated Phosphorus Loading for Five Highest-Load Town Catchments in the Neponset River Watershed

Catchment Identifier	Estimated P Load (Lbs/Yr)
109	282.79
146	213.65
107	81.44
138	56.79
355	56.78
<b>Top 5 as a % of Total Town Watershed Load</b>	37.66 %

Table 10. Estimated Nitrogen Loading for Five Highest-Load Town Catchments in the Neponset River Watershed

Catchment Identifier	Estimated N Load (Lbs/Yr)
109	3539.67
146	2024.23
107	683.33
336	470.07
355	444.65
<b>Top 5 as a % of Total Town Watershed Load</b>	43.79 %

Note these are estimated loadings based on soil type, land use and estimated DCIA (e.g. typical level of SCMs in town). Actual loading may vary considerably from site to site depending on what SCMs are actually present, and regional studies such as the Charles River Phosphorous TMDL have indicated that the default DCIA assumptions used by EPA are somewhat optimistic, such that actual loading rates may be higher. However, these estimates provide a valuable guide to help identify those areas of the Town that should be the highest priorities for interventions to begin reducing pollutant loading.

### Outfall Screening Monitoring Results

The Town’s dry weather outfall screening results as of 2/1/2021 were reviewed during the writing of this report. A table showing dry weather sampling data is included in Appendix F. Twenty-five MS4 outfalls were sampled, but no significant nutrient concentrations were found during sampling. As future outfall screening and catchment investigations take place, this report shall be updated.

### Catchment Prioritization

Since outfall screening activities did not indicate any specific catchments with high nutrient loads, this report is prioritizing the catchments based solely on the phosphorus and nitrogen loading estimates, in the order shown in Tables B-1 and B-2 (phosphorus) and C-1 and C-2 (nitrogen). As outfall screening and catchment investigations continue, the list of catchments should be re-examined and the “Top 5” list should be updated based on these real-world data.

### Potential Retrofit Opportunities

Town parcels were examined for potential BMP retrofit opportunities using the Neponset Stormwater Partnership’s BMP Tool (NSP BMP Tool). This tool analyzes soil data, estimated pollutant loading, and various limitations of each parcel in Town to determine the locations most suitable for further field assessment of SCM opportunities to reduce chosen pollutants.

The NSP BMP Tool uses slightly different methods to estimate pollutant loading than are utilized in this report so estimated loading rates will differ. However, this does not diminish the utility of the NSP BMP Tool as a means to help identify potential retrofit sites, especially given additional features that are incorporated into the Tool.

After assessing the data, each high-loading catchment was reviewed for potential SCM sites. Five parcels were chosen and are listed in Tables 11-14 below. All parcels in these lists are Town-owned, as town-owned properties often present the fewest barriers to SCM development. These sites should be visited first when performing reconnaissance work to locate SCMs that will reduce nutrient loading in the town. Additionally, it should be noted that the NSP BMP Tool does not rank rights-of-way as Town-owned, but they are often highly desirable sites for SCMs. All rights-of-way, particularly in the high-loading catchments, should be considered in addition to individual parcels. Note that “Parloc\_ID” is an attribute from the MAPC parcel data set that may be helpful in identifying the indicated parcels.

More extensive lists of Town-owned properties to be considered for SCM development is included in Appendix D and E. In these lists, they are ranked by the BMP Tool’s priority score, which projects each parcel’s pollutant load and considers how suited that parcel is for SCM’s designed to remove the targeted pollutant. Appendix D ranks parcels for phosphorus removal and Appendix E ranks them for nitrogen removal. The larger lists in these appendices should be considered a more comprehensive collection of the parcels that should be considered first for SCM development. As Town-owned parcels are evaluated, the Town should begin considering privately-owned parcels, as well, using the NSP BMP Tool as a guide.

*Table 11. High-Priority Parcels in the Taunton Watershed to be Considered for SCM Development for Phosphorus Pollution*

<b>Address</b>	<b>Parloc_ID</b>	<b>Catchment</b>	<b>Notes</b>
<b>36 R Norfolk Pl</b>	F_738097_2862400	326	Undeveloped land bordering a large residential area.
<b>115 Old Post Rd</b>	F_731859_2861629	279	Undeveloped land behind a residential area.
<b>61 Gavins Pond Rd</b>	F_732830_2856195	219	Undeveloped land bordering a residential area.
<b>235R Wolomolopoag St</b>	F_737072_2857582	326	Undeveloped land bordering a residential area.
<b>250 East Foxboro St</b>	F_741304_2859546	18	Undeveloped land in a residential area. Not located in a high-load catchment, but the parcel was scored very well by the NSP BMP Tool.

Table 12. High-Priority Parcels in the Taunton Watershed to be Considered for SCM Development for Nitrogen Pollution

Address	Parloc_ID	Catchment	Notes
<b>115 Old Post Rd</b>	F_731859_2861629	279	Undeveloped land behind a residential area.
<b>154R Wolomolopoag St</b>	F_736502_2859897	326	Undeveloped land behind a residential area. Multiple parcels available in this area.
<b>93R Mansfield St</b>	F_741519_2852418	313	Undeveloped land behind a residential area. Multiple parcels available in this area.
<b>17R Old Wolomolopoag St</b>	F_737558_2854803	313	Undeveloped land bordering several residential areas.
<b>21R Gavins Pond Rd</b>	F_732166_2858853	313	Undeveloped land in a residential area.

\*Few Town-owned parcels were found in the Taunton River Watershed in prioritized catchments. It is recommended that roadways in the high-load catchments are strongly considered to address nitrogen pollution.

Table 13. High-Priority Parcels in the Neponset River Watershed to be Considered for SCM Development for Phosphorus Pollution

Address	Parloc_ID	Catchment	Notes
<b>179R Morse St</b>	F_744829_2858764	109	Undeveloped land near residential area.
<b>110 Lakeview St</b>	F_742746_2860263	109	Undeveloped land bordering Lake Massapoag
<b>30 East Foxboro St</b>	F_741450_2865494	109	Athletic fields and a parking area along with a large area of undeveloped land.
<b>12-17 Farnham Rd</b>	F_739433_2867371	146	Undeveloped land bordering a residential area. Parcel also borders a stream, so wetlands may be present. Recommend focusing assessment on section of parcel near the residential area.
<b>62R Upland Rd</b>	F_740632_2871135	146	Undeveloped land in residential area.

Table 14. High-Priority Parcels in the Neponset River Watershed to be Considered for SCM Development for Nitrogen Pollution

Address	Parloc_ID	Catchment	Notes
<b>219 Massapoag Ave</b>	F_744820_2859540	109	Undeveloped land bordering Lake Massapoag.
<b>181 Pond St</b>	F_743482_2866485	109	Sharon High School. Multiple open spaces around the area.
<b>75 Mountain St</b>	F_746802_2864140	109	Sharon Middle School. Multiple open spaces around the area.
<b>12-17 Farnham Rd</b>	F_739433_2867371	146	Undeveloped land bordering a residential area. Parcel also borders a stream, so wetlands may be present. Recommend focusing assessment on section of parcel near the residential area.
<b>000 Hixson Farm Rd</b>	F_748823_2874491	0	Multi-family housing with multiple open spaces.

These results provide a valuable starting point for the next phase of requirements in Appendix H of the 2016 MS4 Permit which are due by the end of permit year 5 (6/30/2023), which include:

- “Evaluate all permittee-owned properties identified as presenting retrofit opportunities”,
- “Provide a listing of planned structural BMPs and a plan and schedule for implementation”, and
- “Any structural BMPs installed...by the permittee...shall be tracked and the permittee shall estimate the phosphorus removal by the BMP.”

## **Appendix A: Impervious/DCIA Summary by Catchment**

Table A-1. Impervious and DCIA Amounts for All Town Catchments in the Taunton River Watershed, Sorted by Impervious Area

Catchment Identifier	Impervious Area (Acres)	Percent Impervious	DCIA (Acres)	Percent DCIA
313	151.63	13.09	7.77	0.67
219	50.90	16.43	3.93	1.27
326	23.77	5.30	0.78	0.17
279	11.96	3.72	0.53	0.17
92	10.41	26.80	2.29	5.89
10	9.31	43.96	2.14	10.11
134	8.12	37.96	1.82	8.52
358	7.26	25.80	1.57	5.58
128	6.51	24.57	0.93	3.51
12	6.10	32.36	1.17	6.19
298	6.07	13.50	0.49	1.09
300	4.61	11.73	0.57	1.45
60	4.57	17.70	0.59	2.29
218	4.41	20.40	0.46	2.12
225	4.36	25.63	0.73	4.27
62	4.16	25.04	0.57	3.41
8	4.11	34.16	0.73	6.09
180	3.99	13.47	0.45	1.51
328	3.96	30.87	0.86	6.72
95	3.94	11.22	0.34	0.96
90	3.60	21.34	0.79	4.67
15	3.58	4.19	0.25	0.30
258	3.45	9.41	0.44	1.19
249	3.40	13.97	0.39	1.62
18	3.26	9.46	0.21	0.61
129	3.20	30.80	0.50	4.76
59	3.15	18.84	0.42	2.52
299	3.08	21.43	0.50	3.49
126	3.05	23.93	0.61	4.79

185	2.90	18.95	0.59	3.88
7	2.86	31.32	0.72	7.88
44	2.72	16.19	0.25	1.50
127	2.54	70.95	2.05	57.34
178	2.43	10.75	0.41	1.80
29	2.42	25.28	0.71	7.41
323	2.28	9.56	0.23	0.98
366	2.16	14.84	0.31	2.11
136	2.04	4.37	0.34	0.72
210	2.00	28.91	0.40	5.71
221	1.97	21.84	0.31	3.41
13	1.85	14.79	0.34	2.70
34	1.82	14.94	0.25	2.05
327	1.80	12.88	0.22	1.59
234	1.76	29.51	0.52	8.80
243	1.66	27.30	0.48	7.88
94	1.63	19.81	0.27	3.31
324	1.60	21.90	0.25	3.47
43	1.58	8.87	0.15	0.83
288	1.56	29.63	0.35	6.70
325	1.56	29.37	0.39	7.29
28	1.44	13.70	0.23	2.18
36	1.34	26.99	0.44	8.79
91	1.32	22.30	0.23	3.93
27	1.28	21.48	0.20	3.40
14	1.25	20.53	0.24	3.93
63	1.24	26.28	0.25	5.23
68	1.19	17.76	0.28	4.13
22	1.17	36.25	0.35	10.69
31	1.14	12.12	0.11	1.19
66	1.12	15.82	0.18	2.58
289	1.09	8.56	0.19	1.47

39	1.09	11.90	0.21	2.35
33	1.08	15.95	0.16	2.39
277	1.04	16.89	0.19	3.02
24	0.95	38.23	0.40	16.22
220	0.92	16.14	0.10	1.69
214	0.90	68.28	0.56	42.04
45	0.86	22.78	0.15	3.88
183	0.83	22.23	0.16	4.22
67	0.74	17.44	0.17	4.11
291	0.71	26.34	0.16	5.80
65	0.69	21.06	0.17	5.20
231	0.65	34.15	0.18	9.70
40	0.62	40.63	0.26	16.73
131	0.60	27.94	0.23	10.92
26	0.60	16.94	0.12	3.45
30	0.59	34.54	0.27	15.72
348	0.57	78.30	0.47	64.16
47	0.57	10.20	0.09	1.63
46	0.56	24.74	0.11	4.78
23	0.56	28.75	0.16	7.93
184	0.55	42.53	0.33	25.67
182	0.53	31.35	0.20	12.05
58	0.53	13.73	0.10	2.63
49	0.49	33.29	0.26	17.50
233	0.48	13.83	0.08	2.25
224	0.47	14.23	0.11	3.22
42	0.44	21.47	0.09	4.30
337	0.44	40.50	0.15	14.14
93	0.41	18.29	0.12	5.28
181	0.40	23.53	0.14	8.29
57	0.38	20.26	0.14	7.47
278	0.38	14.48	0.09	3.56

48	0.38	72.96	0.32	61.36
248	0.37	29.54	0.15	11.80
360	0.36	13.43	0.06	2.26
38	0.35	17.60	0.07	3.44
9	0.35	23.72	0.07	4.59
173	0.32	13.34	0.07	3.00
56	0.28	38.26	0.14	18.79
130	0.25	6.30	0.07	1.68
132	0.22	36.96	0.10	16.53
70	0.20	38.68	0.11	21.50
41	0.19	29.55	0.08	11.58
174	0.18	69.37	0.11	41.42
362	0.18	27.70	0.07	11.32
301	0.17	6.72	0.04	1.67
25	0.15	30.37	0.06	11.89
61	0.09	27.50	0.05	14.42
64	0.05	34.97	0.02	17.26
212	0.04	0.22	0.00	0.01
177	0.00	15.06	0.00	5.84
232	0.00	30.00	0.00	16.43

Table A-2. Impervious and DCIA Amounts for All Town Catchments in the Neponset River Watershed, Sorted by Impervious Area

Catchment Identifier	Impervious Area (Acres)	Percent Impervious	DCIA (Acres)	Percent DCIA
109	81.45	5.83	2.46	0.18
0	67.17	18.49	3.82	1.05
146	33.23	2.74	0.72	0.06
107	32.45	29.36	4.12	3.73
138	23.77	14.99	2.54	1.60
4	18.59	29.81	2.66	4.26
355	17.32	9.35	1.10	0.59

89	16.95	12.55	1.20	0.89
145	16.40	43.95	3.25	8.71
153	16.16	26.14	2.18	3.53
217	11.85	18.97	1.35	2.16
286	11.80	68.84	4.66	27.20
369	11.49	7.91	0.68	0.46
84	11.15	22.48	1.70	3.43
170	8.44	34.37	1.79	7.27
151	8.12	18.45	1.95	4.44
83	7.95	18.22	1.02	2.34
116	7.83	41.04	3.26	17.08
53	7.57	7.39	0.45	0.44
88	7.17	15.42	1.06	2.27
287	7.11	41.37	2.56	14.87
344	7.09	41.86	5.41	31.93
330	6.31	17.48	0.57	1.58
320	6.26	12.49	0.75	1.49
365	5.55	10.62	0.35	0.66
196	5.08	22.42	1.04	4.61
186	4.87	19.12	0.93	3.67
195	4.39	29.12	1.25	8.31
193	3.90	9.95	0.29	0.73
194	3.80	17.74	0.54	2.54
236	3.63	8.75	0.41	0.98
168	3.45	25.06	1.33	9.67
123	3.44	20.16	0.63	3.68
336	3.41	1.94	0.12	0.07
161	3.40	26.03	0.64	4.91
159	3.39	34.03	0.54	5.46
142	3.32	34.26	1.00	10.31
172	3.29	33.21	1.37	13.80
371	3.25	11.07	0.28	0.96

163	3.11	18.13	0.29	1.66
125	3.10	6.17	0.15	0.29
156	3.08	22.31	0.41	2.98
347	3.00	37.99	1.26	15.99
87	3.00	17.70	0.49	2.90
21	2.93	23.92	0.59	4.86
72	2.91	17.97	0.41	2.54
97	2.86	32.57	0.66	7.55
105	2.80	11.62	0.26	1.07
155	2.78	33.19	0.87	10.37
76	2.58	23.06	0.54	4.84
268	2.54	22.17	0.46	4.00
124	2.46	34.41	0.66	9.31
150	2.43	19.53	0.35	2.84
332	2.41	17.37	0.55	3.97
230	2.31	20.35	0.41	3.60
346	2.29	24.05	0.94	9.90
154	2.27	19.15	0.20	1.66
118	2.25	24.94	0.54	5.97
32	2.24	24.33	0.55	5.96
115	2.23	3.03	0.13	0.17
367	2.22	23.32	0.51	5.35
285	2.19	29.54	0.38	5.16
256	2.18	26.26	0.51	6.15
144	1.98	59.04	1.14	34.10
122	1.95	30.07	0.69	10.59
372	1.94	28.59	0.65	9.60
117	1.92	29.75	0.56	8.67
103	1.91	30.01	0.60	9.48
227	1.89	23.18	0.45	5.53
77	1.87	24.17	0.43	5.49
79	1.83	28.94	0.52	8.23

302	1.81	38.02	0.64	13.50
137	1.81	15.59	0.30	2.59
345	1.77	23.46	0.64	8.44
339	1.77	8.44	0.15	0.71
370	1.76	17.12	0.31	3.03
147	1.75	26.31	0.33	4.91
50	1.69	22.59	0.39	5.15
353	1.67	20.48	0.43	5.31
1	1.66	27.50	0.28	4.57
149	1.63	21.82	0.39	5.15
238	1.56	14.32	0.18	1.65
237	1.56	20.64	0.29	3.80
160	1.53	26.28	0.32	5.52
228	1.46	11.15	0.12	0.95
78	1.45	16.05	0.34	3.80
11	1.40	19.99	0.30	4.31
190	1.35	21.27	0.28	4.45
162	1.33	17.77	0.16	2.17
3	1.29	27.59	0.42	8.91
351	1.29	20.28	0.29	4.49
257	1.27	31.90	0.40	9.92
157	1.25	20.84	0.20	3.41
96	1.25	32.38	0.43	11.24
368	1.25	35.27	0.36	10.25
203	1.23	29.17	0.32	7.71
75	1.22	28.96	0.45	10.56
292	1.22	23.76	0.24	4.67
229	1.19	28.19	0.30	7.09
100	1.19	40.90	0.42	14.59
255	1.18	23.90	0.32	6.42
73	1.09	23.64	0.23	4.91
113	1.06	14.72	0.20	2.77

251	1.06	25.10	0.30	7.07
139	1.00	1.69	0.04	0.07
98	0.93	4.98	0.09	0.50
121	0.92	20.81	0.27	6.02
71	0.91	25.16	0.25	6.93
110	0.91	38.79	0.38	16.06
167	0.90	34.34	0.25	9.59
197	0.89	19.63	0.20	4.47
112	0.81	33.11	0.23	9.56
304	0.79	29.79	0.17	6.51
5	0.77	44.68	0.28	16.34
331	0.75	22.79	0.15	4.51
86	0.74	25.24	0.15	5.21
208	0.73	17.07	0.13	3.11
106	0.72	22.84	0.17	5.43
143	0.69	35.77	0.28	14.47
334	0.65	21.67	0.23	7.67
283	0.62	20.76	0.14	4.53
222	0.60	49.51	0.33	27.38
114	0.60	42.70	0.29	20.21
191	0.58	18.39	0.13	4.15
165	0.58	23.37	0.12	4.89
188	0.54	32.82	0.18	11.15
166	0.53	41.16	0.20	15.04
342	0.53	9.27	0.07	1.17
223	0.49	25.39	0.24	12.27
80	0.47	30.46	0.16	10.55
189	0.47	25.78	0.15	8.16
19	0.47	44.39	0.13	12.83
275	0.46	32.66	0.10	7.08
158	0.45	40.25	0.22	19.40
6	0.44	39.86	0.18	16.67

187	0.44	33.99	0.17	13.43
16	0.44	27.80	0.14	8.70
169	0.43	47.98	0.21	23.47
352	0.43	48.61	0.27	29.90
235	0.43	25.36	0.15	8.67
17	0.42	14.66	0.10	3.35
104	0.42	30.02	0.16	11.25
51	0.39	20.29	0.13	6.73
141	0.38	11.32	0.08	2.31
35	0.38	48.03	0.18	22.95
148	0.37	35.95	0.09	8.31
85	0.34	23.69	0.08	5.84
111	0.33	51.01	0.18	28.44
74	0.31	43.23	0.20	28.08
206	0.31	23.25	0.09	6.91
207	0.28	23.81	0.08	6.81
226	0.26	36.43	0.08	10.98
102	0.24	40.60	0.13	21.38
99	0.21	25.10	0.06	6.85
202	0.18	39.63	0.09	19.55
101	0.16	8.49	0.03	1.38
205	0.16	18.65	0.05	6.25
204	0.16	32.28	0.05	9.37
133	0.15	1.19	0.02	0.12
215	0.14	35.91	0.04	10.57
119	0.13	6.43	0.02	1.17
209	0.10	14.68	0.02	3.35
120	0.10	30.20	0.03	10.27
108	0.07	29.38	0.03	11.01
240	0.06	57.28	0.03	33.77
135	0.05	51.37	0.03	31.52
171	0.04	100.00	0.04	100.00

<b>20</b>	0.03	32.32	0.02	18.37
<b>216</b>	0.03	40.65	0.02	23.89
<b>340</b>	0.00	0.00	0.00	0.00

## **Appendix B: Estimated Phosphorus Loading Summary by Catchment**

Table B-1. Estimated Phosphorus Loading for All Town Catchments in the Taunton River Watershed

Catchment Identifier	Estimated P Load (Lbs/Yr)
313	414.46
219	129.40
326	114.71
279	62.27
15	21.60
298	20.43
92	20.34
10	17.71
258	16.64
134	15.76
358	14.89
128	13.47
300	13.03
12	12.11
60	12.08
95	11.10
225	10.89
180	10.35
62	10.17
18	9.83
136	9.83
218	9.74
44	8.88
8	8.45
328	7.61
178	7.45
323	7.40
249	7.30
59	7.26

90	7.20
43	6.63
129	6.40
299	6.15
7	6.05
185	6.01
126	6.01
29	5.93
34	4.75
28	4.59
127	4.57
366	4.50
327	4.18
234	4.12
221	4.07
210	3.98
243	3.96
31	3.93
289	3.77
13	3.58
288	3.56
27	3.54
94	3.30
324	3.25
325	3.21
33	2.82
39	2.64
91	2.63
45	2.62
212	2.62
36	2.59

22	2.58
14	2.57
63	2.46
68	2.45
66	2.32
277	2.25
58	1.96
233	1.95
130	1.95
220	1.93
24	1.79
183	1.69
214	1.62
47	1.52
67	1.50
40	1.47
42	1.45
65	1.41
291	1.40
46	1.35
30	1.29
231	1.25
360	1.23
131	1.23
182	1.22
26	1.21
49	1.14

23	1.12
224	1.09
348	1.04
184	1.01
278	0.87
93	0.86
337	0.83
57	0.82
181	0.78
248	0.77
38	0.72
48	0.72
9	0.71
173	0.70
56	0.56
41	0.52
132	0.44
301	0.38
70	0.37
362	0.35
174	0.32
25	0.29
61	0.19
64	0.09
177	0.01
232	0.00

Table B-2. Estimated Phosphorus Loading for All Town Catchments in the Neponset River Watershed

Catchment Identifier	Estimated P Load (Lbs/Yr)
109	282.79
146	213.65
0	168.09
107	81.44
138	56.79
355	56.78
89	42.53
153	41.55
4	38.91
217	34.34
145	33.99
369	31.97
53	31.27
336	28.90
286	22.73
84	22.08
320	19.30
151	18.71
170	17.27
88	17.07
344	16.73
83	16.28
365	15.46
330	14.96
116	14.75
287	14.64
125	13.12
193	12.45
115	11.47
186	10.98
196	10.06
139	9.88
371	9.39
161	9.21
163	8.82
105	8.60
195	8.34
236	8.29
194	7.91

156	7.75
159	7.69
168	7.44
347	7.12
142	7.05
154	6.96
123	6.87
21	6.76
172	6.71
346	6.33
332	6.27
87	6.05
72	5.96
155	5.90
150	5.85
97	5.71
32	5.59
285	5.52
230	5.31
256	5.22
76	5.12
370	5.08
268	5.06
345	5.02
228	4.86
147	4.77
124	4.72
144	4.47
137	4.45
367	4.41
118	4.40
50	4.37
149	4.24
339	4.19
160	4.05
1	3.88
122	3.88
237	3.80
77	3.78
162	3.76
117	3.75

227	3.71
372	3.69
103	3.67
79	3.54
302	3.45
238	3.43
203	3.34
353	3.32
157	3.13
78	2.90
257	2.84
11	2.83
255	2.82
190	2.76
351	2.66
3	2.64
98	2.44
368	2.42
292	2.42
96	2.40
75	2.37
229	2.33
113	2.28
100	2.27
73	2.20
342	2.19
251	2.08
71	1.99
304	1.99
133	1.90
167	1.89
197	1.88
121	1.81
112	1.77
110	1.70
208	1.68
143	1.56
331	1.51
86	1.48
334	1.47
5	1.46
165	1.46
106	1.44
283	1.33
222	1.22

223	1.18
191	1.18
114	1.15
166	1.08
188	1.04
275	0.97
80	0.92
189	0.92
206	0.91
158	0.89
19	0.89
51	0.88
235	0.88
148	0.86
17	0.86
16	0.86
169	0.85
6	0.84
187	0.84
141	0.82
104	0.80
352	0.79
35	0.74
85	0.68
119	0.65
207	0.62
111	0.60
74	0.60
226	0.52
205	0.52
102	0.45
99	0.43
204	0.42
202	0.42
101	0.37
215	0.28
209	0.21
120	0.19
108	0.13
240	0.10
135	0.09
171	0.08
20	0.07
216	0.05
340	0.01

## **Appendix C: Estimated Nitrogen Loading Summary by Catchment**

Table C-1. Estimated Nitrogen Loading for All Catchments in the Taunton River Watershed

Catchment Identifier	Estimated N Load (Lbs/Yr)
313	3258.92
219	1129.02
326	778.47
279	496.81
298	191.83
92	155.36
15	138.30
10	135.85
136	122.48
134	120.34
358	110.66
60	108.65
300	107.55
128	103.42
12	91.93
95	89.46
18	86.60
62	85.13
225	84.45
180	84.09
218	76.67
44	69.82
178	68.84
258	66.65
8	65.73
328	58.56
59	57.84
249	56.37
90	54.70

323	53.21
43	52.54
29	51.19
129	48.70
7	47.46
299	46.92
126	45.88
212	45.63
185	44.61
289	43.79
28	41.95
34	40.86
127	36.10
366	35.07
31	35.03
234	34.89
243	34.01
327	31.36
27	31.14
210	30.25
221	29.84
13	29.27
288	27.31
325	25.38
94	24.97
33	24.91
324	24.69
39	23.47
22	21.19
45	20.64
91	20.26

14	20.18
36	19.97
63	18.50
68	18.39
58	17.78
66	17.74
277	16.24
233	15.81
220	14.39
24	13.84
214	12.84
183	12.58
40	12.09
360	11.98
47	11.84
42	11.67
67	11.42
65	10.99
30	10.93
46	10.90
291	10.56
182	10.29
49	9.63
231	9.52
26	9.28
131	8.88
224	8.59

23	8.43
348	8.11
184	7.92
57	6.47
93	6.39
337	6.33
248	6.20
181	6.15
278	6.01
48	5.85
38	5.47
9	5.29
173	5.12
130	4.62
56	4.48
41	4.40
132	3.44
301	3.12
70	2.90
362	2.66
174	2.56
25	2.19
61	1.34
64	0.69
177	0.05
232	0.01

Table C-2. Estimated Nitrogen Loading for All Catchments in the Neponset River Watershed

Catchment Identifier	Estimated N Load (Lbs/Yr)
109	3539.67
146	2024.23
0	1284.81
107	683.33
336	470.07
355	444.65
138	403.49
153	352.96
53	327.44
217	326.75
89	325.42
4	303.16
145	257.39
369	226.56
286	180.12
84	168.69
320	166.03
151	148.37
170	131.03
83	125.89
287	115.86
116	115.62
330	114.47
88	112.87
193	110.69
139	106.89
344	103.18
365	99.91
105	87.39
125	78.56
196	76.94
161	76.83
163	75.31
186	74.79
156	67.66
195	65.13
236	63.30
159	62.86
115	61.69
332	61.47
194	60.62
154	59.26

142	58.14
21	56.57
172	54.74
371	54.60
123	52.54
168	51.80
150	50.21
346	50.04
32	48.33
347	47.53
155	47.22
87	46.61
285	45.93
72	45.50
256	44.90
97	44.52
230	43.80
133	41.87
147	39.05
76	38.94
268	38.55
345	37.85
149	37.05
50	36.53
124	36.03
137	35.54
367	34.17
162	34.01
160	33.94
118	33.78
370	31.39
228	31.38
339	31.11
1	30.61
237	30.55
144	29.87
122	28.83
372	28.82
117	28.55
227	28.52
103	28.26
77	28.17
157	27.91
79	27.16

302	26.40
238	26.22
255	25.73
353	25.53
257	24.44
78	22.67
11	21.50
342	21.06
190	20.86
203	20.85
351	19.79
3	19.23
98	18.51
96	18.39
292	18.32
368	18.28
75	18.16
229	17.97
100	17.28
113	16.87
73	16.61
304	16.05
251	15.87
71	15.72
334	14.82
167	14.74
121	13.97
197	13.70
110	13.21
112	12.65
165	12.64
208	11.89
331	11.80
143	11.39
5	11.21
86	11.11
106	10.89
223	10.39
283	10.28
222	10.09
191	8.97
114	8.75

166	8.45
188	7.89
275	7.40
148	7.16
158	7.09
80	7.01
189	6.98
19	6.84
17	6.70
169	6.69
16	6.53
187	6.46
235	6.43
6	6.41
141	6.30
352	6.23
104	6.18
51	6.00
35	5.51
206	5.46
85	5.24
74	4.82
111	4.70
226	4.57
207	4.44
102	3.46
99	3.08
205	3.07
101	2.83
202	2.82
204	2.61
119	2.36
215	2.11
209	1.56
120	1.42
108	1.00
240	0.80
135	0.66
171	0.63
20	0.51
216	0.44
340	0.03

**Appendix D: Town-Owned Parcels Sorted by the NSP  
BMP Tool's Phosphorus Priority Ranking**

Table D-1. Town-Owned Parcels Sorted by BMP Tool Priority Score for Phosphorus Removal

Address	Parloc_ID	Use Description	BMP Tool Priority Score (Max Score = 1)
81R MANSFIELD ST	F_742301_2853663	Municipal Vacant	1.0000
2601 BAY RD	F_754005_2851972	Municipal, Federal, or State	1.0000
202 MORSE ST	F_744619_2857143	Municipal Vacant	1.0000
156 MOUNTAIN ST	F_748693_2862642	Municipal Vacant	1.0000
56R COTTAGE ST	F_745542_2868042	Municipal Vacant	1.0000
35 HIGH PLAIN ST	F_736193_2877857	Municipal Vacant	1.0000
20 CEDAR ST	F_742250_2865173	Municipal Vacant	1.0000
000 FARNHAM RD	F_739762_2866417	Municipal Vacant	1.0000
57 OAK HILL DR	F_749477_2865823	Municipal Vacant	1.0000
22 OAK HILL DR	F_750786_2866174	Municipal Vacant	1.0000
36 MONT FERN AVE	F_741016_2877403	Municipal Vacant	1.0000
0 MONT FERN AVE	F_741609_2876784	Municipal Vacant	1.0000
19 TRACEY LN	F_744039_2850654	Municipal Vacant	0.9706
61 GAVINS POND RD	F_732830_2856195	Municipal Vacant	0.9706
12 MINK TRAP LN	F_735015_2856905	Municipal Vacant	0.9706
165 MORSE ST	F_745138_2858440	Municipal Vacant	0.9706
8R LU STUBBS LN	F_748734_2867686	Municipal Vacant	0.9706
15 HICKORY WAY	F_749665_2865190	Municipal Vacant	0.9706
45 SANDY RIDGE CIR	F_737416_2865984	Municipal Vacant	0.9706
25 OAK HILL DR	F_749774_2866963	Municipal Vacant	0.9706
9R LU STUBBS LN	F_748291_2867821	Municipal Vacant	0.9706
000 CREST RD WAY	F_747703_2871001	Municipal Vacant	0.9706
13 GINGER WAY	F_750782_2873234	Municipal Vacant	0.9706
195 GAVINS POND RD	F_734467_2855143	Municipal, Federal, or State	0.9617
68R MOHAWK ST	F_739391_2859128	Municipal Vacant	0.9617
5 MANOR LN	F_745941_2863767	Municipal Vacant	0.9617
66A R MASSAPOAG AVE	F_745879_2864293	Municipal Vacant	0.9617
74 ASPEN RD	F_751646_2863863	Municipal Vacant	0.9617
26 OAK HILL DR	F_750386_2865809	Municipal Vacant	0.9617
154A BILLINGS ST	F_746720_2869914	Municipal Vacant	0.9617
93R MANSFIELD ST	F_741519_2852418	Municipal Vacant	0.9556
164 FURNACE ST	F_735286_2854594	Municipal Vacant	0.9556
10 HILLSIDE AVE	F_742480_2870789	Municipal Vacant	0.9556
368R NORTH MAIN ST	F_748831_2875924	Municipal Vacant	0.9517
000 MANSFIELD ST	F_742894_2854303	Municipal Vacant	0.9517
10 BRAMBLE LN	F_746574_2854692	Municipal Vacant	0.9517
30 COBBLESTONE RD	F_736551_2854717	Municipal Vacant	0.9517
29 BRIAR HILL RD	F_746081_2855285	Municipal Vacant	0.9517

<b>110 FURNACE ST</b>	F_735676_2855563	Municipal Vacant	0.9517
<b>2 MASSASOIT RD</b>	F_743240_2849628	Municipal Vacant	0.9517
<b>2589 BAY RD</b>	F_753939_2852348	Municipal Vacant	0.9517
<b>169R MANSFIELD ST</b>	F_740971_2852149	Municipal Vacant	0.9517
<b>235R WOLOMOLOPOAG ST</b>	F_737072_2857582	Municipal Vacant	0.9517
<b>195 WOLOMOLOPOAG ST</b>	F_736897_2858103	Municipal Vacant	0.9517
<b>250 EAST FOXBORO ST</b>	F_741304_2859546	Municipal Vacant	0.9517
<b>110 LAKEVIEW ST</b>	F_742746_2860263	Municipal Vacant	0.9517
<b>R LAKEVIEW ST</b>	F_742912_2860383	Municipal Vacant	0.9517
<b>000 CHESSMAN DR</b>	F_753287_2864013	Municipal Vacant	0.9517
<b>156 OAK HILL DR EXT</b>	F_751853_2864443	Municipal Vacant	0.9517
<b>5 KINGS RD</b>	F_753636_2862792	Municipal Vacant	0.9517
<b>1571 BAY RD</b>	F_753988_2860878	Municipal Vacant	0.9517
<b>252R MOUNTAIN ST</b>	F_752436_2861779	Municipal Vacant	0.9517
<b>89 OAK HILL DR</b>	F_749999_2865226	Municipal Vacant	0.9517
<b>45 BLAIR CIR</b>	F_728089_2865306	Municipal Vacant	0.9517
<b>45R BLAIR CIR</b>	F_727189_2865910	Municipal Vacant	0.9517
<b>149 EDGE HILL RD</b>	F_740260_2879024	Municipal Vacant	0.9517
<b>1 HIXSON FARM RD</b>	F_749010_2873826	Municipal Vacant	0.9517
<b>55 RICHARDS AVE</b>	F_744073_2874831	Municipal Vacant	0.9517
<b>368R NORTH MAIN ST</b>	F_748831_2875924	Municipal Vacant	0.9517
<b>R EDGE HILL RD</b>	F_742120_2877786	Municipal Vacant	0.9517
<b>28R KING PHILIP RD</b>	F_741134_2853987	Municipal Vacant	0.9056
<b>6 BRAMBLE LN</b>	F_746016_2855046	Municipal Vacant	0.9056
<b>1 KING PHILIP RD</b>	F_739527_2856020	Municipal Vacant	0.9056
<b>200 GAVINS POND RD</b>	F_735061_2855974	Municipal Vacant	0.9056
<b>62R UPLAND RD</b>	F_740632_2871135	Municipal Vacant	0.9056
<b>27 PHEASANT WOOD RD</b>	F_739866_2877027	Municipal Vacant	0.9056
<b>81R MANSFIELD ST</b>	F_741592_2854073	Municipal Vacant	0.8987
<b>71R MANSFIELD ST</b>	F_741266_2854534	Municipal Vacant	0.8987
<b>R R BRIAR HILL RD</b>	F_746684_2854982	Municipal Vacant	0.8987
<b>20 MASSASOIT RD</b>	F_744033_2849555	Municipal Vacant	0.8987
<b>2 CANOE RIVER RD</b>	F_740337_2856607	Municipal Vacant	0.8987
<b>60R FURNACE ST</b>	F_736379_2857770	Municipal Vacant	0.8987
<b>30 GAVINS POND RD</b>	F_732640_2858205	Municipal Vacant	0.8987
<b>147 BEACH ST</b>	F_741262_2863765	Municipal Vacant	0.8987
<b>247 SOUTH WALPOLE ST</b>	F_728638_2864060	Municipal Vacant	0.8987
<b>223 HAMPTON RD</b>	F_749533_2860729	Municipal Vacant	0.8987
<b>115 OLD POST RD</b>	F_731859_2861629	Municipal Vacant	0.8987
<b>59 EISENHOWER DR</b>	F_753087_2862449	Municipal Vacant	0.8987

100A HAMPTON RD	F_751405_2864880	Municipal Vacant	0.8987
32 COMMERCIAL ST	F_728590_2866020	Municipal Vacant	0.8987
R HUNTERS RIDGE RD	F_746970_2872539	Municipal Vacant	0.8987
90 MASKWONICUT ST	F_742493_2873615	Municipal Vacant	0.8987
28 RICHARDS AVE	F_743385_2874854	Municipal Vacant	0.8987
000 CANTON ST	F_747089_2877054	Municipal Vacant	0.8987
15 RED FOX RUN	F_741633_2850899	Municipal Vacant	0.8907
25R CONDOR RD	F_741769_2856068	Municipal Vacant	0.8907
11 RHODES AVE	F_744572_2874129	Municipal Vacant	0.8907
40 GAVINS POND RD	F_732420_2858438	Municipal Vacant	0.8873
179R MORSE ST	F_744829_2858764	Municipal Vacant	0.8873
9 CHIPPEWA LN	F_736885_2859553	Municipal Vacant	0.8873
5 PINE ST	F_729367_2867164	Municipal Vacant	0.8873
000 BILLINGS ST	F_747992_2869967	Municipal Vacant	0.8873
R GREENWOOD RD	F_743534_2872846	Municipal Vacant	0.8873
7R HOLLY LN	F_733362_2857603	Municipal Vacant	0.8731
10 SAMOSET LN	F_734878_2858644	Municipal Vacant	0.8731
154 WOLOMOLOPOAG ST	F_736036_2859279	Single family residence	0.8731
36R NORFOLK PL	F_738097_2862400	Municipal Vacant	0.8731
000 HILLSIDE AVE	F_742323_2871110	Municipal Vacant	0.8731
25 EAST FOXBORO ST	F_740099_2865370	Municipal Vacant	0.8713
30 EAST FOXBORO ST	F_741450_2865494	Municipal Vacant	0.8713
424 EAST FOXBORO ST	F_739970_2856587	Municipal Vacant	0.8454
411 EAST FOXBORO ST	F_739584_2857473	Municipal Vacant	0.8432
12-17 FARNHAM RD	F_739433_2867371	Municipal Vacant	0.8432
263 SOUTH WALPOLE ST	F_728628_2864611	Single family residence	0.8432
000 MINUTE MAN RD	F_745432_2865931	Municipal Vacant	0.8432
11 COMMERCIAL ST	F_727836_2866320	Municipal Vacant	0.8432
000 CREST RD WAY	F_747311_2871703	Municipal Vacant	0.8432
00N EDGE HILL RD	F_740956_2883132	Municipal Vacant	0.8432
69 AZALEA RD	F_749205_2863988	Single family residence	0.8321
1300 GENERAL EDWARDS HWY	F_727425_2866053	Municipal Vacant	0.8321
50R GAVINS POND RD	F_733458_2858246	Municipal Vacant	0.7762
161 EDGE HILL RD	F_740738_2879041	Municipal Vacant	0.7762
71 CHESTNUT ST	F_741093_2868324	Condominium	0.7748
17R OLD WOLOMOLOPOAG ST	F_737558_2854803	Municipal Vacant	0.7707
1969R BAY RD	F_752925_2857431	Municipal Vacant	0.7707
150 LAKEVIEW ST	F_743319_2859123	Municipal Vacant	0.7707
231 MASSAPOAG AVE	F_745642_2859866	Municipal Vacant	0.7707
36R NORFOLK PL	F_738283_2863101	Municipal Vacant	0.7707

<b>50R BRADFORD AVE</b>	F_742921_2867873	Municipal Vacant	0.7707
<b>148 BROOK RD</b>	F_748090_2870746	Municipal Vacant	0.7707
<b>000 CREST RD WAY</b>	F_746557_2871261	Municipal Vacant	0.7707
<b>83 BELCHER ST</b>	F_748158_2872421	Municipal Vacant	0.7707
<b>000 EDGE HILL RD</b>	F_742029_2882379	Municipal Vacant	0.7707
<b>279 NORTH MAIN ST</b>	F_746998_2874831	Municipal Vacant	0.7707
<b>203 EDGE HILL RD</b>	F_742288_2878572	Municipal Vacant	0.7707
<b>207 EDGE HILL RD</b>	F_742487_2878677	Municipal Vacant	0.7707
<b>15 ATHERTON LN</b>	F_732469_2856557	Municipal Vacant	0.7455
<b>276 MOUNTAIN ST</b>	F_750375_2859573	Municipal Vacant	0.7455
<b>35 QUINCY ST</b>	F_744701_2866134		0.7455
<b>000 EDGE HILL RD</b>	F_742705_2884731	Municipal Vacant	0.7396
<b>2 HORIZONS RD</b>	F_744701_2856117	Municipal Vacant	0.7396
<b>356 MANSFIELD ST</b>	F_744004_2846512	Municipal Vacant	0.7396
<b>000 EAST FOXBORO ST</b>	F_739255_2856827		0.7396
<b>226 HAMPTON RD</b>	F_749728_2860097	Municipal Vacant	0.7396
<b>45 MOHAWK ST</b>	F_739641_2861069	Municipal Vacant	0.7396
<b>64 EISENHOWER DR</b>	F_753139_2861284	Municipal Vacant	0.7396
<b>157 EDGE HILL RD</b>	F_740514_2879086	Municipal Vacant	0.7396
<b>000 EDGE HILL RD</b>	F_742705_2884731	Municipal Vacant	0.7396
<b>249 NORTH MAIN ST</b>	F_746191_2874642	Municipal Vacant	0.7396
<b>233 FURNACE ST</b>	F_734950_2853769	Municipal Vacant	0.7174
<b>80R CANNON BALL RD</b>	F_735715_2855887	Municipal Vacant	0.7139
<b>348 MANSFIELD ST</b>	F_743933_2846651	Municipal Vacant	0.7139
<b>340 MANSFIELD ST</b>	F_743861_2846782	Municipal Vacant	0.7139
<b>16 BAREFOOT HILL RD</b>	F_735565_2859051	Municipal Vacant	0.7139
<b>205 EAST FOXBORO ST</b>	F_740564_2860990	Municipal Vacant	0.7139
<b>25 MOHAWK ST</b>	F_740126_2861414	Municipal Vacant	0.7139
<b>25R MOHAWK ST</b>	F_739801_2861684	Municipal Vacant	0.7139
<b>10 CHESSMAN DR</b>	F_755336_2864058	Municipal Vacant	0.7139
<b>20R PLEASANT ST</b>	F_742480_2871096	Municipal Vacant	0.7139
<b>15 CANTON ST</b>	F_747505_2875862	Municipal Vacant	0.7139
<b>340R MANSFIELD ST</b>	F_744279_2847005	Municipal Vacant	0.7077
<b>17 DRAKE CIR</b>	F_745173_2848221	Municipal Vacant	0.7077
<b>229 LAKEVIEW ST</b>	F_743509_2856005	Municipal Vacant	0.7077
<b>37R MASKWONICUT ST</b>	F_743968_2874214	Municipal Vacant	0.7077
<b>21R GAVINS POND RD</b>	F_732166_2858853	Municipal Vacant	0.6917
<b>51 LAKEVIEW ST</b>	F_742053_2860670	Municipal Vacant	0.6917
<b>161 BILLINGS ST</b>	F_746019_2867966	Municipal Vacant	0.6917
<b>0 EDGE HILL RD</b>	F_741047_2881390	Municipal Vacant	0.6917
<b>219 MASSAPOAG AVE</b>	F_744820_2859540	Municipal, Federal, or State	0.6868
<b>13 KING PHILIP RD</b>	F_740402_2855017	Municipal Vacant	0.6862

<b>49 KNOB HILL ST</b>	F_744803_2850440	Municipal Vacant	0.6841
<b>3R PRESCOTT RD</b>	F_740047_2859513	Municipal Vacant	0.6841
<b>000 SOUTH MAIN ST</b>	F_736621_2861304	Municipal Vacant	0.6841
<b>48R BELCHER ST</b>	F_750521_2872993	Municipal Vacant	0.6841
<b>13 DRAKE CIR</b>	F_745406_2848188		0.6650
<b>301 HAMPTON RD</b>	F_749007_2863857	Municipal Vacant	0.6642
<b>12 UPLAND RD</b>	F_741646_2870888	Municipal Vacant	0.6642
<b>400 EAST FOXBORO ST</b>	F_740508_2856795	Municipal Vacant	0.6231
<b>100 GAVINS POND RD</b>	F_734526_2856547	Municipal Vacant	0.6231
<b>25 MANOMET RD</b>	F_738432_2859436	Municipal Vacant	0.6231
<b>11 CEDAR PARK RD</b>	F_740605_2864444	Municipal Vacant	0.6231
<b>146 EAST FOXBORO ST</b>	F_741235_2862628	Municipal Vacant	0.6231
<b>299R EAST ST</b>	F_748990_2868701	Municipal Vacant	0.6231
<b>171 AMES ST</b>	F_746237_2866814	Municipal Vacant	0.6231
<b>25 BEACH ST</b>	F_742819_2865729	Municipal Vacant	0.6231
<b>192 BILLINGS ST</b>	F_747452_2869425	Municipal Vacant	0.6231
<b>15 TREE LN</b>	F_741781_2871438	Municipal Vacant	0.6231
<b>000 RR R/W #36</b>	F_743185_2873239	Municipal Vacant	0.6231
<b>288R NORTH MAIN ST</b>	F_747363_2875384	Municipal Vacant	0.6231
<b>409 EAST FOXBORO ST</b>	F_740416_2857003	Municipal Vacant	0.5862
<b>24 CASTLE DR</b>	F_754609_2861990	Municipal Vacant	0.5862
<b>360 MANSFIELD ST</b>	F_743571_2846158	Municipal Vacant	0.5804
<b>4 BRAMBLE LN</b>	F_745793_2854932		0.5804
<b>25 BLACK ELK RD</b>	F_737624_2855229	Municipal Vacant	0.5804
<b>50 CONDOR RD</b>	F_742594_2856213	Municipal Vacant	0.5804
<b>14 MATTAKESETT CIR</b>	F_745085_2850000	Municipal Vacant	0.5804
<b>20 TRACEY LN</b>	F_743761_2851072	Municipal Vacant	0.5804
<b>135 BEACH ST</b>	F_741679_2864027	Municipal Vacant	0.5804
<b>141 EAST FOXBORO ST</b>	F_740454_2862892	Municipal Vacant	0.5804
<b>117 EAST FOXBORO ST</b>	F_740938_2863390	Municipal Vacant	0.5804
<b>43 CASTLE DR</b>	F_753793_2863469	Municipal Vacant	0.5804
<b>19 CATTAIL LN</b>	F_752558_2863570	Municipal Vacant	0.5804
<b>00 LOTHROP WAY</b>	F_747091_2868142	Municipal Vacant	0.5804
<b>00 LOTHROP WAY</b>	F_746759_2868279	Municipal Vacant	0.5804
<b>200R EAST ST</b>	F_747365_2868222	Municipal Vacant	0.5804
<b>000 BIRCHWOOD CIR</b>	F_750716_2866835	Municipal Vacant	0.5804
<b>2 MASSAPOAG AVE</b>	F_744279_2865480	Municipal Vacant	0.5804
<b>000 SHEILA RD</b>	F_753171_2865631	Municipal Vacant	0.5804
<b>000 TAMARACK WAY</b>	F_749502_2866314	Municipal Vacant	0.5804
<b>16R HIGH ST</b>	F_743810_2870593		0.5804
<b>138 BROOK RD</b>	F_747769_2870808	Municipal Vacant	0.5804
<b>000 UPLAND RD</b>	F_741907_2871259	Municipal Vacant	0.5804
<b>60 HUNTINGTON AVE</b>	F_746322_2872336	Municipal Vacant	0.5804

<b>16 BELLA RD</b>	F_745713_2872954	Municipal Vacant	0.5804
<b>26 POND VIEW CIR</b>	F_746555_2874710	Municipal Vacant	0.5804
<b>263 NORTH MAIN ST</b>	F_746679_2874720	Municipal Vacant	0.5804
<b>9 PHEASANT WOOD RD</b>	F_739043_2877221	Municipal Vacant	0.5804
<b>21 SOUTH PLEASANT ST</b>	F_742480_2869932	Municipal, Federal, or State	0.5575
<b>9 KNOB HILL ST</b>	F_745163_2849356	Municipal Vacant	0.5406
<b>000 MASSAPOAG AVE</b>	F_745551_2850205	Municipal Vacant	0.5406
<b>5 GROVE AVE</b>	F_741142_2863748	Municipal Vacant	0.5406
<b>000 MASSAPOAG AVE</b>	F_744490_2865079	Municipal Vacant	0.5406
<b>19 QUINCY ST</b>	F_745089_2866519	Municipal Vacant	0.5406
<b>303 SOUTH WALPOLE ST</b>	F_727390_2864731	Municipal Vacant	0.5372
<b>000 MASSAPOAG AVE</b>	F_745373_2849853	Municipal Vacant	0.5278
<b>93R MANSFIELD ST</b>	F_741398_2853001	Municipal Vacant	0.5278
<b>25 CONDOR RD</b>	F_741995_2856539	Municipal Vacant	0.5278
<b>9R FALCON RD</b>	F_740144_2859207	Municipal Vacant	0.5278
<b>14 HARDING ST</b>	F_740903_2864341	Municipal Vacant	0.5278
<b>18 CASTLE DR</b>	F_754762_2861537	Municipal Vacant	0.5278
<b>60 CEDAR ST</b>	F_741506_2864923	Municipal Vacant	0.5278
<b>38 GUNHOUSE ST</b>	F_741346_2866035	Municipal Vacant	0.5278
<b>R CHERYL DR</b>	F_746555_2873493	Municipal Vacant	0.5278
<b>7 POND VIEW CIR</b>	F_746480_2874181	Municipal Vacant	0.5278
<b>000 MANSFIELD ST</b>	F_744182_2846473	Municipal Vacant	0.5111
<b>49 CONDOR RD</b>	F_742365_2856009	Municipal Vacant	0.5111
<b>11 MATTAKESETT CIR</b>	F_745156_2849803	Municipal Vacant	0.5111
<b>93R MANSFIELD ST</b>	F_741384_2853059	Municipal Vacant	0.5111
<b>80 RICHARDS AVE</b>	F_744140_2876092	Municipal Vacant	0.5111
<b>27 IRON HOLLOW RD</b>	F_733366_2855446	Municipal Vacant	0.5093
<b>80 CANNON BALL RD</b>	F_735889_2855971	Municipal Vacant	0.5093
<b>9R MATTAKESETT CIR</b>	F_745316_2849585	Municipal Vacant	0.5093
<b>22A HOWARD FARM RD</b>	F_744728_2851488	Municipal Vacant	0.5093
<b>000 FURNACE ST</b>	F_735153_2853359	Municipal Vacant	0.5093
<b>177 FURNACE ST</b>	F_735035_2853597	Municipal Vacant	0.5093
<b>0000 UNKNOWN</b>	F_732023_2857050	Municipal Vacant	0.5093
<b>30 FURNACE ST</b>	F_735907_2858392	Municipal Vacant	0.5093
<b>37 FURNACE ST</b>	F_735798_2858456	Municipal Vacant	0.5093
<b>20 FURNACE ST</b>	F_736054_2858554	Municipal Vacant	0.5093
<b>950 SOUTH MAIN ST</b>	F_730833_2858647	Municipal Vacant	0.5093
<b>25 FURNACE ST</b>	F_735997_2858640	Municipal Vacant	0.5093
<b>16 GAVINS POND RD</b>	F_733031_2859405	Municipal Vacant	0.5093
<b>121 WOLOMOLOPOAG ST</b>	F_735535_2859521	Municipal Vacant	0.5093

<b>115 WOLOMOLOPOAG ST</b>	F_735374_2859661	Municipal Vacant	0.5093
<b>000 LEE RD</b>	F_737354_2862870	Municipal Vacant	0.5093
<b>135 EAST FOXBORO ST</b>	F_739881_2863100	Municipal Vacant	0.5093
<b>R ESSEX RD</b>	F_739216_2863473	Municipal Vacant	0.5093
<b>73 ASPEN RD</b>	F_752234_2863585	Municipal Vacant	0.5093
<b>21 LAKEVIEW ST</b>	F_741155_2861057	Municipal Vacant	0.5093
<b>000 SOUTH WALPOLE ST</b>	F_730138_2862382	Municipal Vacant	0.5093
<b>26 STURGES RD</b>	F_741116_2862289	Municipal Vacant	0.5093
<b>R OLD POST RD</b>	F_730043_2862492	Municipal Vacant	0.5093
<b>284R NORTH MAIN ST</b>	F_747254_2875439	Municipal Vacant	0.5093
<b>276 NORTH MAIN ST</b>	F_746857_2875396	Municipal Vacant	0.5093
<b>000 RR R/W #26</b>	F_740019_2866612	Municipal Vacant	0.5093
<b>75 MOUNTAIN ST</b>	F_746802_2864140	Municipal, Federal, or State	0.5093
<b>000 HAMPSHIRE AVE</b>	F_737634_2865147	Municipal Vacant	0.5093
<b>82 GUNHOUSE ST</b>	F_743435_2865718	Municipal, Federal, or State	0.5093
<b>000 FARNHAM RD</b>	F_739611_2866200	Municipal Vacant	0.5093
<b>80 GUNHOUSE ST</b>	F_742637_2865969	Municipal Vacant	0.5093
<b>000 FARNHAM RD</b>	F_739646_2866383	Municipal Vacant	0.5093
<b>17 SANDY RIDGE CIR</b>	F_739087_2866377	Municipal Vacant	0.5093
<b>19 FLINTLOCK RD</b>	F_740153_2866702	Municipal Vacant	0.5093
<b>154 BROOK RD</b>	F_748211_2870585	Municipal Vacant	0.5093
<b>38 NORWOOD ST</b>	F_741226_2872478	Municipal Vacant	0.5093
<b>83R BELCHER ST</b>	F_747911_2872776	Municipal Vacant	0.5093
<b>265 NORTH MAIN ST</b>	F_747279_2873534	Municipal Vacant	0.5093
<b>93R MANSFIELD ST</b>	F_741492_2853044	Municipal Vacant	0.4761
<b>R MANSFIELD ST</b>	F_741463_2853082	Municipal Vacant	0.4761
<b>93R MANSFIELD ST</b>	F_741392_2853176	Municipal Vacant	0.4761
<b>000 SOUTH WALPOLE ST</b>	F_730223_2862001	Municipal Vacant	0.4761
<b>17 COMMERCIAL ST</b>	F_727640_2866647	Municipal Vacant	0.4733
<b>428 EAST FOXBORO ST</b>	F_739858_2856503	Municipal Vacant	0.4686
<b>315 EAST FOXBORO ST</b>	F_740328_2857660	Municipal Vacant	0.4686
<b>000 RR R/W #35</b>	F_742257_2871624	Municipal Vacant	0.4686
<b>438 MASSAPOAG AVE</b>	F_745464_2854784	Municipal Vacant	0.4491
<b>2 KING PHILIP RD</b>	F_739826_2856186	Municipal Vacant	0.4491
<b>000 RR R/W</b>	F_739468_2862952	Municipal Vacant	0.4491
<b>63 HARDING ST</b>	F_741791_2863913	Municipal Vacant	0.4491
<b>12 CEDAR PARK RD</b>	F_740733_2864527		0.4491
<b>211-215 SOUTH MAIN ST</b>	F_740626_2866882	Municipal, Federal, or State	0.4491

100 COTTAGE ST	F_745366_2867130	Municipal Vacant	0.4491
	F_740321_2867729		0.4491
421 EAST FOXBORO ST	F_739283_2856866	Municipal Vacant	0.3905
45R MOHAWK ST	F_739494_2861338	Municipal Vacant	0.3905
00N EDGE HILL RD	F_741337_2883417	Municipal Vacant	0.3905
32 BLUEBERRY LN	F_739343_2877865	Municipal Vacant	0.3873
0 MOOSE HILL ST	F_740358_2868870	Municipal Vacant	0.3670
000 FURNACE ST	F_733791_2857073	Municipal Vacant	0.3452
4 DRY POND RD	F_755908_2862923	Municipal Vacant	0.3452
21R MOHAWK ST	F_739826_2862024	Municipal Vacant	0.3452
192R BILLINGS ST	F_747569_2869668	Municipal Vacant	0.3452
17 HAMPSHIRE AVE	F_737594_2865195	Municipal Vacant	0.3231
175 POND ST	F_743832_2867003	Municipal Vacant	0.3118
7 COW HILL RD	F_741937_2854578	Municipal Vacant	0.2902
4 CANOE RIVER RD	F_740756_2856470	Municipal Vacant	0.2902
000 FURNACE ST	F_733994_2857288	Municipal Vacant	0.2902
000 SOUTH MAIN ST	F_737236_2860624	Municipal Vacant	0.2902
000 SOUTH MAIN ST	F_737277_2860683	Municipal Vacant	0.2902
72 UPLAND RD	F_740335_2871365	Municipal Vacant	0.2902
0 MOOSE HILL ST	F_734343_2867027	Municipal Vacant	0.2667
181 POND ST	F_743482_2866485	Municipal, Federal, or State	0.2667
31 BEACH ST	F_744100_2865803	Municipal Vacant	0.2667
000 HIXSON FARM RD	F_748823_2874491	Municipal, Federal, or State	0.2446
10 STATION ST	F_742792_2869750	Municipal Vacant	0.2434
28 MOHAWK ST	F_739925_2860992	Municipal Vacant	0.2072
000 SOUTH MAIN ST	F_738974_2861786	Municipal Vacant	0.1918
12 BURNT BRIDGE RD	F_738703_2856324	Municipal Vacant	0.1804
9A PILGRIM DR	F_741170_2860607	Municipal Vacant	0.1804
3 HAMPSHIRE AVE	F_738025_2864859	Municipal Vacant	0.1804
90 SOUTH MAIN ST	F_742949_2869110		0.1554
75 AMES ST	F_744597_2866799	Municipal Vacant	0.1374
51R MANSFIELD ST	F_744070_2853471	Municipal Vacant	0.1369
139R EAST FOXBORO ST	F_740028_2862568	Municipal Vacant	0.1369
R LEE RD	F_737411_2861853	Municipal Vacant	0.1369
154R WOLOMOLOPOAG ST	F_736502_2859897	Municipal Vacant	0.1336
100 WOLOMOLOPOAG ST	F_735709_2860358	Municipal Vacant	0.1336
36A WILSHIRE DR	F_751124_2867569	Municipal Vacant	0.1336
80 SOUTH MAIN ST	F_742939_2869320	Municipal Vacant	0.1336
18 BILLINGS ST	F_743682_2870149	Municipal Vacant	0.1336
11 NORTH MAIN ST	F_743449_2870424		0.1336

<b>16 HIGH ST</b>	F_743761_2870497		0.1336
<b>1 SCHOOL ST</b>	F_743498_2871060	Municipal, Federal, or State	0.1336
<b>135R UPLAND RD</b>	F_738814_2871348	Municipal Vacant	0.1336
	F_745669_2860341		0.1336
<b>15 FORGE RD</b>	F_735397_2853345	Municipal Vacant	0.0637
<b>72A FURNACE ST</b>	F_735802_2857451	Municipal Vacant	0.0637
<b>21 GAVINS POND RD</b>	F_732527_2858913	Municipal Vacant	0.0637
<b>810 SOUTH MAIN ST</b>	F_731696_2859461	Municipal Vacant	0.0637
<b>10 GAVINS POND RD</b>	F_732779_2859651	Municipal Vacant	0.0637
<b>355A EAST FOXBORO ST</b>	F_741050_2857206	Municipal Vacant	0.0637
<b>0 CHESTNUT ST</b>	F_741969_2870583	Municipal Vacant	0.0637
<b>6 UPLAND RD</b>	F_741739_2870791	Municipal Vacant	0.0637
<b>11 WOODS WAY</b>	F_741818_2871917	Municipal Vacant	0.0637
<b>7R ROB'S LN</b>	F_747897_2870157	Municipal Vacant	0.0059
<b>000 LEE RD</b>	F_737352_2862717	Municipal Vacant	0.0049
<b>000 SOUTH MAIN ST</b>	F_738949_2862464	Municipal Vacant	0.0046
<b>129 EAST FOXBORO ST</b>	F_740172_2863295	Municipal Vacant	0.0046
<b>0 EDGE HILL RD</b>	F_741488_2882968	Municipal Vacant	0.0046
<b>0 EDGE HILL RD</b>	F_741677_2883220	Municipal Vacant	0.0046
<b>00R EDGE HILL RD</b>	F_741827_2883671	Municipal Vacant	0.0046
<b>260R NORTH MAIN ST</b>	F_746441_2875983	Municipal Vacant	0.0046
<b>25R MOHAWK ST</b>	F_739050_2862674	Municipal Vacant	0.0035
<b>000 SOUTH MAIN ST</b>	F_739182_2863031	Municipal Vacant	0.0035
<b>36R NORFOLK PL</b>	F_738982_2862191	Municipal Vacant	0.0035
<b>6 CANOE RIVER RD</b>	F_740452_2856406	Municipal Vacant	0.0030
<b>1 CANOE RIVER RD</b>	F_740063_2856360	Municipal Vacant	0.0030
<b>255R EAST FOXBORO ST</b>	F_739867_2858954	Municipal Vacant	0.0030
<b>2 NAUSET RD</b>	F_738170_2859236	Municipal Vacant	0.0030
<b>33R COLBURN DR</b>	F_739903_2859919	Municipal Vacant	0.0030
<b>000 SOUTH MAIN ST</b>	F_737300_2860107	Municipal Vacant	0.0030
<b>000 SOUTH MAIN ST</b>	F_737054_2860418	Municipal Vacant	0.0030
<b>154R WOLOMOLOPOAG ST</b>	F_737084_2860469	Municipal Vacant	0.0030
<b>100R WOLOMOLOPOAG ST</b>	F_736146_2860863	Municipal Vacant	0.0030
<b>000 SOUTH MAIN ST</b>	F_736355_2861192	Municipal Vacant	0.0030
<b>000 SOUTH MAIN ST</b>	F_737349_2860990	Municipal Vacant	0.0030
<b>00N EDGE HILL RD</b>	F_743316_2883467	Municipal Vacant	0.0030
<b>30 OSPREY RD</b>	F_739888_2858122	Municipal Vacant	0.0003

**Appendix E: Town-Owned Parcels Sorted by the NSP  
BMP Tool's Nitrogen Priority Ranking**

Table E-1. Town-Owned Parcels Sorted by BMP Tool Priority Score for Nitrogen Removal

Address	Parloc_ID	Use Description	BMP Tool Priority Score (Max Score = 1)
219 MASSAPOAG AVE	F_744820_2859540	Municipal, Federal, or State	0.9997
195 GAVINS POND RD	F_734467_2855143	Municipal, Federal, or State	0.9985
000 HIXSON FARM RD	F_748823_2874491	Municipal, Federal, or State	0.9922
181 POND ST	F_743482_2866485	Municipal, Federal, or State	0.9864
75 MOUNTAIN ST	F_746802_2864140	Municipal, Federal, or State	0.9864
82 GUNHOUSE ST	F_743435_2865718	Municipal, Federal, or State	0.9864
263 SOUTH WALPOLE ST	F_728628_2864611	Single family residence	0.9756
35 QUINCY ST	F_744701_2866134		0.9655
71 CHESTNUT ST	F_741093_2868324	Condominium	0.9655
2601 BAY RD	F_754005_2851972	Municipal, Federal, or State	0.8623
69 AZALEA RD	F_749205_2863988	Single family residence	0.8623
90 SOUTH MAIN ST	F_742949_2869110		0.6987
13 DRAKE CIR	F_745406_2848188		0.6349
21 SOUTH PLEASANT ST	F_742480_2869932	Municipal, Federal, or State	0.6349
154 WOLOMOLOPOAG ST	F_736036_2859279	Single family residence	0.6224
211-215 SOUTH MAIN ST	F_740626_2866882	Municipal, Federal, or State	0.6077
	F_740321_2867729		0.6077

<b>12 CEDAR PARK RD</b>	F_740733_2864527		0.4271
<b>4 BRAMBLE LN</b>	F_745793_2854932		0.4163
<b>000 EAST FOXBORO ST</b>	F_739255_2856827		0.4163
<b>11 NORTH MAIN ST</b>	F_743449_2870424		0.4163
<b>16R HIGH ST</b>	F_743810_2870593		0.4163
<b>1 SCHOOL ST</b>	F_743498_2871060	Municipal, Federal, or State	0.4163
	F_745669_2860341		0.4163
<b>000 SOUTH MAIN ST</b>	F_738949_2862464	Municipal Vacant	0.1197
<b>139R EAST FOXBORO ST</b>	F_740028_2862568	Municipal Vacant	0.1197
<b>129 EAST FOXBORO ST</b>	F_740172_2863295	Municipal Vacant	0.1197
<b>000 SOUTH MAIN ST</b>	F_738974_2861786	Municipal Vacant	0.1197
<b>7R ROB'S LN</b>	F_747897_2870157	Municipal Vacant	0.1197
<b>0 EDGE HILL RD</b>	F_741488_2882968	Municipal Vacant	0.1197
<b>0 EDGE HILL RD</b>	F_741677_2883220	Municipal Vacant	0.1197
<b>00R EDGE HILL RD</b>	F_741827_2883671	Municipal Vacant	0.1197
<b>260R NORTH MAIN ST</b>	F_746441_2875983	Municipal Vacant	0.1197
<b>000 FURNACE ST</b>	F_733791_2857073	Municipal Vacant	0.1173
<b>R ESSEX RD</b>	F_739216_2863473	Municipal Vacant	0.1173
<b>25R MOHAWK ST</b>	F_739801_2861684	Municipal Vacant	0.1173
<b>21R MOHAWK ST</b>	F_739826_2862024	Municipal Vacant	0.1173
<b>26 STURGES RD</b>	F_741116_2862289	Municipal Vacant	0.1173
<b>60 CEDAR ST</b>	F_741506_2864923	Municipal Vacant	0.1173
<b>192R BILLINGS ST</b>	F_747569_2869668	Municipal Vacant	0.1173
<b>00N EDGE HILL RD</b>	F_741337_2883417	Municipal Vacant	0.1173
<b>265 NORTH MAIN ST</b>	F_747279_2873534	Municipal Vacant	0.1173
<b>15 CANTON ST</b>	F_747505_2875862	Municipal Vacant	0.1173
<b>179R MORSE ST</b>	F_744829_2858764	Municipal Vacant	0.1153
<b>135 EAST FOXBORO ST</b>	F_739881_2863100	Municipal Vacant	0.1153
<b>73 ASPEN RD</b>	F_752234_2863585	Municipal Vacant	0.1153
<b>284R NORTH MAIN ST</b>	F_747254_2875439	Municipal Vacant	0.1153
<b>276 NORTH MAIN ST</b>	F_746857_2875396	Municipal Vacant	0.1153

<b>80 GUNHOUSE ST</b>	F_742637_2865969	Municipal Vacant	0.1153
<b>000 MINUTE MAN RD</b>	F_745432_2865931	Municipal Vacant	0.1153
<b>161 BILLINGS ST</b>	F_746019_2867966	Municipal Vacant	0.1153
<b>000 BILLINGS ST</b>	F_747992_2869967	Municipal Vacant	0.1153
<b>000 CREST RD WAY</b>	F_747311_2871703	Municipal Vacant	0.1153
<b>83R BELCHER ST</b>	F_747911_2872776	Municipal Vacant	0.1153
<b>R GREENWOOD RD</b>	F_743534_2872846	Municipal Vacant	0.1153
<b>00N EDGE HILL RD</b>	F_740956_2883132	Municipal Vacant	0.1153
<b>81R MANSFIELD ST</b>	F_741592_2854073	Municipal Vacant	0.1125
<b>71R MANSFIELD ST</b>	F_741266_2854534	Municipal Vacant	0.1125
<b>R R BRIAR HILL RD</b>	F_746684_2854982	Municipal Vacant	0.1125
<b>100 GAVINS POND RD</b>	F_734526_2856547	Municipal Vacant	0.1125
<b>30 GAVINS POND RD</b>	F_732640_2858205	Municipal Vacant	0.1125
<b>231 MASSAPOAG AVE</b>	F_745642_2859866	Municipal Vacant	0.1125
<b>226 HAMPTON RD</b>	F_749728_2860097	Municipal Vacant	0.1125
<b>68R MOHAWK ST</b>	F_739391_2859128	Municipal Vacant	0.1125
<b>66A R MASSAPOAG AVE</b>	F_745879_2864293	Municipal Vacant	0.1125
<b>11 CEDAR PARK RD</b>	F_740605_2864444	Municipal Vacant	0.1125
<b>146 EAST FOXBORO ST</b>	F_741235_2862628	Municipal Vacant	0.1125
<b>223 HAMPTON RD</b>	F_749533_2860729	Municipal Vacant	0.1125
<b>64 EISENHOWER DR</b>	F_753139_2861284	Municipal Vacant	0.1125
<b>299R EAST ST</b>	F_748990_2868701	Municipal Vacant	0.1125
<b>100A HAMPTON RD</b>	F_751405_2864880	Municipal Vacant	0.1125
<b>171 AMES ST</b>	F_746237_2866814	Municipal Vacant	0.1125
<b>74 ASPEN RD</b>	F_751646_2863863	Municipal Vacant	0.1125
<b>25 BEACH ST</b>	F_742819_2865729	Municipal Vacant	0.1125
<b>26 OAK HILL DR</b>	F_750386_2865809	Municipal Vacant	0.1125
<b>192 BILLINGS ST</b>	F_747452_2869425	Municipal Vacant	0.1125
<b>154A BILLINGS ST</b>	F_746720_2869914	Municipal Vacant	0.1125
<b>83 BELCHER ST</b>	F_748158_2872421	Municipal Vacant	0.1125
<b>249 NORTH MAIN ST</b>	F_746191_2874642	Municipal Vacant	0.1125
<b>000 CANTON ST</b>	F_747089_2877054	Municipal Vacant	0.1125

<b>28R KING PHILIP RD</b>	F_741134_2853987	Municipal Vacant	0.1083
<b>13 KING PHILIP RD</b>	F_740402_2855017	Municipal Vacant	0.1083
<b>61 GAVINS POND RD</b>	F_732830_2856195	Municipal Vacant	0.1083
<b>12 MINK TRAP LN</b>	F_735015_2856905	Municipal Vacant	0.1083
<b>165 MORSE ST</b>	F_745138_2858440	Municipal Vacant	0.1083
<b>276 MOUNTAIN ST</b>	F_750375_2859573	Municipal Vacant	0.1083
<b>8R LU STUBBS LN</b>	F_748734_2867686	Municipal Vacant	0.1083
<b>45 SANDY RIDGE CIR</b>	F_737416_2865984	Municipal Vacant	0.1083
<b>368R NORTH MAIN ST</b>	F_748831_2875924	Municipal Vacant	0.1048
<b>51R MANSFIELD ST</b>	F_744070_2853471	Municipal Vacant	0.1048
<b>81R MANSFIELD ST</b>	F_742301_2853663	Municipal Vacant	0.1048
<b>17R OLD WOLOMOLOPOAG ST</b>	F_737558_2854803	Municipal Vacant	0.1048
<b>6 CANOE RIVER RD</b>	F_740452_2856406	Municipal Vacant	0.1048
<b>1 CANOE RIVER RD</b>	F_740063_2856360	Municipal Vacant	0.1048
<b>49 KNOB HILL ST</b>	F_744803_2850440	Municipal Vacant	0.1048
<b>169R MANSFIELD ST</b>	F_740971_2852149	Municipal Vacant	0.1048
<b>1969R BAY RD</b>	F_752925_2857431	Municipal Vacant	0.1048
<b>255R EAST FOXBORO ST</b>	F_739867_2858954	Municipal Vacant	0.1048
<b>2 NAUSET RD</b>	F_738170_2859236	Municipal Vacant	0.1048
<b>33R COLBURN DR</b>	F_739903_2859919	Municipal Vacant	0.1048
<b>000 SOUTH MAIN ST</b>	F_737300_2860107	Municipal Vacant	0.1048
<b>154R WOLOMOLOPOAG ST</b>	F_736502_2859897	Municipal Vacant	0.1048
<b>000 SOUTH MAIN ST</b>	F_737054_2860418	Municipal Vacant	0.1048
<b>154R WOLOMOLOPOAG ST</b>	F_737084_2860469	Municipal Vacant	0.1048
<b>000 LEE RD</b>	F_737352_2862717	Municipal Vacant	0.1048
<b>100 WOLOMOLOPOAG ST</b>	F_735709_2860358	Municipal Vacant	0.1048
<b>100R WOLOMOLOPOAG ST</b>	F_736146_2860863	Municipal Vacant	0.1048

<b>000 SOUTH MAIN ST</b>	F_736355_2861192	Municipal Vacant	0.1048
<b>000 SOUTH MAIN ST</b>	F_737349_2860990	Municipal Vacant	0.1048
<b>R LEE RD</b>	F_737411_2861853	Municipal Vacant	0.1048
<b>252R MOUNTAIN ST</b>	F_752436_2861779	Municipal Vacant	0.1048
<b>30 EAST FOXBORO ST</b>	F_741450_2865494	Municipal Vacant	0.1048
<b>00N EDGE HILL RD</b>	F_743316_2883467	Municipal Vacant	0.1048
<b>1 HIXSON FARM RD</b>	F_749010_2873826	Municipal Vacant	0.1048
<b>368R NORTH MAIN ST</b>	F_748831_2875924	Municipal Vacant	0.1048
<b>7 COW HILL RD</b>	F_741937_2854578	Municipal Vacant	0.0947
<b>4 CANOE RIVER RD</b>	F_740756_2856470	Municipal Vacant	0.0947
<b>000 FURNACE ST</b>	F_733994_2857288	Municipal Vacant	0.0947
<b>3R PRESCOTT RD</b>	F_740047_2859513	Municipal Vacant	0.0947
<b>000 SOUTH MAIN ST</b>	F_737236_2860624	Municipal Vacant	0.0947
<b>000 SOUTH MAIN ST</b>	F_737277_2860683	Municipal Vacant	0.0947
<b>000 SOUTH MAIN ST</b>	F_736621_2861304	Municipal Vacant	0.0947
<b>154 BROOK RD</b>	F_748211_2870585	Municipal Vacant	0.0947
<b>72 UPLAND RD</b>	F_740335_2871365	Municipal Vacant	0.0947
<b>428 EAST FOXBORO ST</b>	F_739858_2856503	Municipal Vacant	0.0923
<b>315 EAST FOXBORO ST</b>	F_740328_2857660	Municipal Vacant	0.0923
<b>93R MANSFIELD ST</b>	F_741519_2852418	Municipal Vacant	0.0912
<b>15 RED FOX RUN</b>	F_741633_2850899	Municipal Vacant	0.0912
<b>25R CONDOR RD</b>	F_741769_2856068	Municipal Vacant	0.0912
<b>000 EDGE HILL RD</b>	F_742705_2884731	Municipal Vacant	0.0907
<b>000 RR R/W #36</b>	F_743185_2873239	Municipal Vacant	0.0907
<b>000 EDGE HILL RD</b>	F_742705_2884731	Municipal Vacant	0.0907
<b>2 KING PHILIP RD</b>	F_739826_2856186	Municipal Vacant	0.0898
<b>400 EAST FOXBORO ST</b>	F_740508_2856795	Municipal Vacant	0.0898
<b>000 RR R/W</b>	F_739468_2862952	Municipal Vacant	0.0898
<b>36R NORFOLK PL</b>	F_738283_2863101	Municipal Vacant	0.0898
<b>12-17 FARNHAM RD</b>	F_739433_2867371	Municipal Vacant	0.0898
<b>11 COMMERCIAL ST</b>	F_727836_2866320	Municipal Vacant	0.0898
<b>48R BELCHER ST</b>	F_750521_2872993	Municipal Vacant	0.0898

<b>000 EDGE HILL RD</b>	F_742029_2882379	Municipal Vacant	0.0898
<b>17 DRAKE CIR</b>	F_745173_2848221	Municipal Vacant	0.0878
<b>9 KNOB HILL ST</b>	F_745163_2849356	Municipal Vacant	0.0878
<b>229 LAKEVIEW ST</b>	F_743509_2856005	Municipal Vacant	0.0878
<b>14 MATTAKESETT CIR</b>	F_745085_2850000	Municipal Vacant	0.0871
<b>20 MASSASOIT RD</b>	F_744033_2849555	Municipal Vacant	0.0865
<b>2 CANOE RIVER RD</b>	F_740337_2856607	Municipal Vacant	0.0865
<b>7R HOLLY LN</b>	F_733362_2857603	Municipal Vacant	0.0865
<b>10 SAMOSET LN</b>	F_734878_2858644	Municipal Vacant	0.0865
<b>21R GAVINS POND RD</b>	F_732166_2858853	Municipal Vacant	0.0865
<b>247 SOUTH WALPOLE ST</b>	F_728638_2864060	Municipal Vacant	0.0865
<b>36R NORFOLK PL</b>	F_738097_2862400	Municipal Vacant	0.0865
<b>115 OLD POST RD</b>	F_731859_2861629	Municipal Vacant	0.0865
<b>32 COMMERCIAL ST</b>	F_728590_2866020	Municipal Vacant	0.0865
<b>90 MASKWONICUT ST</b>	F_742493_2873615	Municipal Vacant	0.0865
<b>157 EDGE HILL RD</b>	F_740514_2879086	Municipal Vacant	0.0865
<b>1 KING PHILIP RD</b>	F_739527_2856020	Municipal Vacant	0.0831
<b>200 GAVINS POND RD</b>	F_735061_2855974	Municipal Vacant	0.0831
<b>340R MANSFIELD ST</b>	F_744279_2847005	Municipal Vacant	0.0831
<b>25 OAK HILL DR</b>	F_749774_2866963	Municipal Vacant	0.0831
<b>62R UPLAND RD</b>	F_740632_2871135	Municipal Vacant	0.0831
<b>000 CREST RD WAY</b>	F_747703_2871001	Municipal Vacant	0.0831
<b>13 GINGER WAY</b>	F_750782_2873234	Municipal Vacant	0.0831
<b>27 PHEASANT WOOD RD</b>	F_739866_2877027	Municipal Vacant	0.0831
<b>10 BRAMBLE LN</b>	F_746574_2854692	Municipal Vacant	0.0804
<b>30 COBBLESTONE RD</b>	F_736551_2854717	Municipal Vacant	0.0804
<b>235R WOLOMOLOPOAG ST</b>	F_737072_2857582	Municipal Vacant	0.0804
<b>250 EAST FOXBORO ST</b>	F_741304_2859546	Municipal Vacant	0.0804
<b>25R MOHAWK ST</b>	F_739050_2862674	Municipal Vacant	0.0804

<b>000 SOUTH MAIN ST</b>	F_739182_2863031	Municipal Vacant	0.0804
<b>1571 BAY RD</b>	F_753988_2860878	Municipal Vacant	0.0804
<b>36R NORFOLK PL</b>	F_738982_2862191	Municipal Vacant	0.0804
<b>50R BRADFORD AVE</b>	F_742921_2867873	Municipal Vacant	0.0804
<b>56R COTTAGE ST</b>	F_745542_2868042	Municipal Vacant	0.0804
<b>0 MOOSE HILL ST</b>	F_734343_2867027	Municipal Vacant	0.0804
<b>31 BEACH ST</b>	F_744100_2865803	Municipal Vacant	0.0804
<b>000 CREST RD WAY</b>	F_746557_2871261	Municipal Vacant	0.0804
<b>149 EDGE HILL RD</b>	F_740260_2879024	Municipal Vacant	0.0804
<b>1300 GENERAL EDWARDS HWY</b>	F_727425_2866053	Municipal Vacant	0.0804
<b>0 MONT FERN AVE</b>	F_741609_2876784	Municipal Vacant	0.0804
<b>R EDGE HILL RD</b>	F_742120_2877786	Municipal Vacant	0.0804
<b>203 EDGE HILL RD</b>	F_742288_2878572	Municipal Vacant	0.0804
<b>207 EDGE HILL RD</b>	F_742487_2878677	Municipal Vacant	0.0804
<b>356 MANSFIELD ST</b>	F_744004_2846512	Municipal Vacant	0.0726
<b>60R FURNACE ST</b>	F_736379_2857770	Municipal Vacant	0.0726
<b>147 BEACH ST</b>	F_741262_2863765	Municipal Vacant	0.0721
<b>5 MANOR LN</b>	F_745941_2863767	Municipal Vacant	0.0721
<b>24 CASTLE DR</b>	F_754609_2861990	Municipal Vacant	0.0721
<b>59 EISENHOWER DR</b>	F_753087_2862449	Municipal Vacant	0.0721
<b>R HUNTERS RIDGE RD</b>	F_746970_2872539	Municipal Vacant	0.0721
<b>6 BRAMBLE LN</b>	F_746016_2855046	Municipal Vacant	0.0709
<b>19 TRACEY LN</b>	F_744039_2850654	Municipal Vacant	0.0709
<b>15 HICKORY WAY</b>	F_749665_2865190	Municipal Vacant	0.0709
<b>9R LU STUBBS LN</b>	F_748291_2867821	Municipal Vacant	0.0709
<b>37R MASKWONICUT ST</b>	F_743968_2874214	Municipal Vacant	0.0709
<b>000 MANSFIELD ST</b>	F_742894_2854303	Municipal Vacant	0.0688
<b>438 MASSAPOAG AVE</b>	F_745464_2854784	Municipal Vacant	0.0688
<b>29 BRIAR HILL RD</b>	F_746081_2855285	Municipal Vacant	0.0688
<b>348 MANSFIELD ST</b>	F_743933_2846651	Municipal Vacant	0.0688
<b>340 MANSFIELD ST</b>	F_743861_2846782	Municipal Vacant	0.0688

<b>202 MORSE ST</b>	F_744619_2857143	Municipal Vacant	0.0688
<b>195 WOLOMOLOPOAG ST</b>	F_736897_2858103	Municipal Vacant	0.0688
<b>110 LAKEVIEW ST</b>	F_742746_2860263	Municipal Vacant	0.0688
<b>R LAKEVIEW ST</b>	F_742912_2860383	Municipal Vacant	0.0688
<b>000 CHESSMAN DR</b>	F_753287_2864013	Municipal Vacant	0.0688
<b>156 OAK HILL DR EXT</b>	F_751853_2864443	Municipal Vacant	0.0688
<b>5 KINGS RD</b>	F_753636_2862792	Municipal Vacant	0.0688
<b>156 MOUNTAIN ST</b>	F_748693_2862642	Municipal Vacant	0.0688
<b>5 PINE ST</b>	F_729367_2867164	Municipal Vacant	0.0688
<b>35 HIGH PLAIN ST</b>	F_736193_2877857	Municipal Vacant	0.0688
<b>89 OAK HILL DR</b>	F_749999_2865226	Municipal Vacant	0.0688
<b>20 CEDAR ST</b>	F_742250_2865173	Municipal Vacant	0.0688
<b>000 FARNHAM RD</b>	F_739762_2866417	Municipal Vacant	0.0688
<b>301 HAMPTON RD</b>	F_749007_2863857	Municipal Vacant	0.0688
<b>57 OAK HILL DR</b>	F_749477_2865823	Municipal Vacant	0.0688
<b>25 EAST FOXBORO ST</b>	F_740099_2865370	Municipal Vacant	0.0688
<b>22 OAK HILL DR</b>	F_750786_2866174	Municipal Vacant	0.0688
<b>36 MONT FERN AVE</b>	F_741016_2877403	Municipal Vacant	0.0688
<b>288R NORTH MAIN ST</b>	F_747363_2875384	Municipal Vacant	0.0688
<b>411 EAST FOXBORO ST</b>	F_739584_2857473	Municipal Vacant	0.0598
<b>10 CHESSMAN DR</b>	F_755336_2864058	Municipal Vacant	0.0595
<b>424 EAST FOXBORO ST</b>	F_739970_2856587	Municipal Vacant	0.0592
<b>161 EDGE HILL RD</b>	F_740738_2879041	Municipal Vacant	0.0592
<b>2589 BAY RD</b>	F_753939_2852348	Municipal Vacant	0.0589
<b>148 BROOK RD</b>	F_748090_2870746	Municipal Vacant	0.0589
<b>75 AMES ST</b>	F_744597_2866799	Municipal Vacant	0.0584
<b>51 LAKEVIEW ST</b>	F_742053_2860670	Municipal Vacant	0.0576
<b>175 POND ST</b>	F_743832_2867003	Municipal Vacant	0.0576
<b>28 RICHARDS AVE</b>	F_743385_2874854	Municipal Vacant	0.0576
<b>164 FURNACE ST</b>	F_735286_2854594	Municipal Vacant	0.0555
<b>10 HILLSIDE AVE</b>	F_742480_2870789	Municipal Vacant	0.0555

<b>11 RHODES AVE</b>	F_744572_2874129	Municipal Vacant	0.0555
<b>9R MATTAKESETT CIR</b>	F_745316_2849585	Municipal Vacant	0.0547
<b>409 EAST FOXBORO ST</b>	F_740416_2857003	Municipal Vacant	0.0547
<b>110 FURNACE ST</b>	F_735676_2855563	Municipal Vacant	0.0535
<b>2 MASSASOIT RD</b>	F_743240_2849628	Municipal Vacant	0.0535
<b>40 GAVINS POND RD</b>	F_732420_2858438	Municipal Vacant	0.0535
<b>150 LAKEVIEW ST</b>	F_743319_2859123	Municipal Vacant	0.0535
<b>9R FALCON RD</b>	F_740144_2859207	Municipal Vacant	0.0535
<b>9 CHIPPEWA LN</b>	F_736885_2859553	Municipal Vacant	0.0535
<b>45 BLAIR CIR</b>	F_728089_2865306	Municipal Vacant	0.0535
<b>303 SOUTH WALPOLE ST</b>	F_727390_2864731	Municipal Vacant	0.0535
<b>45R BLAIR CIR</b>	F_727189_2865910	Municipal Vacant	0.0535
<b>12 UPLAND RD</b>	F_741646_2870888	Municipal Vacant	0.0535
<b>279 NORTH MAIN ST</b>	F_746998_2874831	Municipal Vacant	0.0535
<b>55 RICHARDS AVE</b>	F_744073_2874831	Municipal Vacant	0.0535
<b>000 HILLSIDE AVE</b>	F_742323_2871110	Municipal Vacant	0.0462
<b>25 MANOMET RD</b>	F_738432_2859436	Municipal Vacant	0.0461
<b>63 HARDING ST</b>	F_741791_2863913	Municipal Vacant	0.0457
<b>100 COTTAGE ST</b>	F_745366_2867130	Municipal Vacant	0.0457
<b>15 ATHERTON LN</b>	F_732469_2856557	Municipal Vacant	0.0448
<b>16 BAREFOOT HILL RD</b>	F_735565_2859051	Municipal Vacant	0.0447
<b>14 HARDING ST</b>	F_740903_2864341	Municipal Vacant	0.0447
<b>18 CASTLE DR</b>	F_754762_2861537	Municipal Vacant	0.0447
<b>20R PLEASANT ST</b>	F_742480_2871096	Municipal Vacant	0.0447
<b>R CHERYL DR</b>	F_746555_2873493	Municipal Vacant	0.0447
<b>7 POND VIEW CIR</b>	F_746480_2874181	Municipal Vacant	0.0447
<b>0 EDGE HILL RD</b>	F_741047_2881390	Municipal Vacant	0.0447
<b>233 FURNACE ST</b>	F_734950_2853769	Municipal Vacant	0.0418
<b>000 MASSAPOAG AVE</b>	F_745551_2850205	Municipal Vacant	0.0418
<b>5 GROVE AVE</b>	F_741142_2863748	Municipal Vacant	0.0418
<b>000 MASSAPOAG AVE</b>	F_744490_2865079	Municipal Vacant	0.0418

<b>19 QUINCY ST</b>	F_745089_2866519	Municipal Vacant	0.0418
<b>360 MANSFIELD ST</b>	F_743571_2846158	Municipal Vacant	0.0390
<b>25 BLACK ELK RD</b>	F_737624_2855229	Municipal Vacant	0.0390
<b>80R CANNON BALL RD</b>	F_735715_2855887	Municipal Vacant	0.0390
<b>2 HORIZONS RD</b>	F_744701_2856117	Municipal Vacant	0.0390
<b>50 CONDOR RD</b>	F_742594_2856213	Municipal Vacant	0.0390
<b>20 TRACEY LN</b>	F_743761_2851072	Municipal Vacant	0.0390
<b>30 OSPREY RD</b>	F_739888_2858122	Municipal Vacant	0.0390
<b>135 BEACH ST</b>	F_741679_2864027	Municipal Vacant	0.0390
<b>141 EAST FOXBORO ST</b>	F_740454_2862892	Municipal Vacant	0.0390
<b>117 EAST FOXBORO ST</b>	F_740938_2863390	Municipal Vacant	0.0390
<b>43 CASTLE DR</b>	F_753793_2863469	Municipal Vacant	0.0390
<b>19 CATTAIL LN</b>	F_752558_2863570	Municipal Vacant	0.0390
<b>28 MOHAWK ST</b>	F_739925_2860992	Municipal Vacant	0.0390
<b>45 MOHAWK ST</b>	F_739641_2861069	Municipal Vacant	0.0390
<b>205 EAST FOXBORO ST</b>	F_740564_2860990	Municipal Vacant	0.0390
<b>25 MOHAWK ST</b>	F_740126_2861414	Municipal Vacant	0.0390
<b>00 LOTHROP WAY</b>	F_747091_2868142	Municipal Vacant	0.0390
<b>00 LOTHROP WAY</b>	F_746759_2868279	Municipal Vacant	0.0390
<b>200R EAST ST</b>	F_747365_2868222	Municipal Vacant	0.0390
<b>000 BIRCHWOOD CIR</b>	F_750716_2866835	Municipal Vacant	0.0390
<b>32 BLUEBERRY LN</b>	F_739343_2877865	Municipal Vacant	0.0390
<b>2 MASSAPOAG AVE</b>	F_744279_2865480	Municipal Vacant	0.0390
<b>36A WILSHIRE DR</b>	F_751124_2867569	Municipal Vacant	0.0390
<b>000 SHEILA RD</b>	F_753171_2865631	Municipal Vacant	0.0390
<b>000 TAMARACK WAY</b>	F_749502_2866314	Municipal Vacant	0.0390
<b>80 SOUTH MAIN ST</b>	F_742939_2869320	Municipal Vacant	0.0390
<b>10 STATION ST</b>	F_742792_2869750	Municipal Vacant	0.0390
<b>18 BILLINGS ST</b>	F_743682_2870149	Municipal Vacant	0.0390
<b>16 HIGH ST</b>	F_743761_2870497		0.0390
<b>138 BROOK RD</b>	F_747769_2870808	Municipal Vacant	0.0390
<b>135R UPLAND RD</b>	F_738814_2871348	Municipal Vacant	0.0390

<b>60 HUNTINGTON AVE</b>	F_746322_2872336	Municipal Vacant	0.0390
<b>16 BELLA RD</b>	F_745713_2872954	Municipal Vacant	0.0390
<b>26 POND VIEW CIR</b>	F_746555_2874710	Municipal Vacant	0.0390
<b>263 NORTH MAIN ST</b>	F_746679_2874720	Municipal Vacant	0.0390
<b>9 PHEASANT WOOD RD</b>	F_739043_2877221	Municipal Vacant	0.0390
<b>45R MOHAWK ST</b>	F_739494_2861338	Municipal Vacant	0.0180
<b>0 MOOSE HILL ST</b>	F_740358_2868870	Municipal Vacant	0.0178
<b>000 MANSFIELD ST</b>	F_744182_2846473	Municipal Vacant	0.0175
<b>000 MASSAPOAG AVE</b>	F_745373_2849853	Municipal Vacant	0.0174
<b>93R MANSFIELD ST</b>	F_741398_2853001	Municipal Vacant	0.0174
<b>25 CONDOR RD</b>	F_741995_2856539	Municipal Vacant	0.0174
<b>38 GUNHOUSE ST</b>	F_741346_2866035	Municipal Vacant	0.0174
<b>50R GAVINS POND RD</b>	F_733458_2858246	Municipal Vacant	0.0162
<b>49 CONDOR RD</b>	F_742365_2856009	Municipal Vacant	0.0160
<b>11 MATTAKESETT CIR</b>	F_745156_2849803	Municipal Vacant	0.0160
<b>93R MANSFIELD ST</b>	F_741384_2853059	Municipal Vacant	0.0160
<b>80 RICHARDS AVE</b>	F_744140_2876092	Municipal Vacant	0.0160
<b>17 COMMERCIAL ST</b>	F_727640_2866647	Municipal Vacant	0.0154
<b>93R MANSFIELD ST</b>	F_741492_2853044	Municipal Vacant	0.0149
<b>R MANSFIELD ST</b>	F_741463_2853082	Municipal Vacant	0.0149
<b>93R MANSFIELD ST</b>	F_741392_2853176	Municipal Vacant	0.0149
<b>000 SOUTH WALPOLE ST</b>	F_730223_2862001	Municipal Vacant	0.0149
<b>27 IRON HOLLOW RD</b>	F_733366_2855446	Municipal Vacant	0.0139
<b>80 CANNON BALL RD</b>	F_735889_2855971	Municipal Vacant	0.0139
<b>12 BURNT BRIDGE RD</b>	F_738703_2856324	Municipal Vacant	0.0139
<b>22A HOWARD FARM RD</b>	F_744728_2851488	Municipal Vacant	0.0139
<b>000 FURNACE ST</b>	F_735153_2853359	Municipal Vacant	0.0139
<b>177 FURNACE ST</b>	F_735035_2853597	Municipal Vacant	0.0139
<b>15 FORGE RD</b>	F_735397_2853345	Municipal Vacant	0.0139
<b>0000 UNKNOWN</b>	F_732023_2857050	Municipal Vacant	0.0139
<b>72A FURNACE ST</b>	F_735802_2857451	Municipal Vacant	0.0139

<b>30 FURNACE ST</b>	F_735907_2858392	Municipal Vacant	0.0139
<b>37 FURNACE ST</b>	F_735798_2858456	Municipal Vacant	0.0139
<b>20 FURNACE ST</b>	F_736054_2858554	Municipal Vacant	0.0139
<b>950 SOUTH MAIN ST</b>	F_730833_2858647	Municipal Vacant	0.0139
<b>25 FURNACE ST</b>	F_735997_2858640	Municipal Vacant	0.0139
<b>21 GAVINS POND RD</b>	F_732527_2858913	Municipal Vacant	0.0139
<b>810 SOUTH MAIN ST</b>	F_731696_2859461	Municipal Vacant	0.0139
<b>16 GAVINS POND RD</b>	F_733031_2859405	Municipal Vacant	0.0139
<b>121 WOLOMOLOPOAG ST</b>	F_735535_2859521	Municipal Vacant	0.0139
<b>115 WOLOMOLOPOAG ST</b>	F_735374_2859661	Municipal Vacant	0.0139
<b>10 GAVINS POND RD</b>	F_732779_2859651	Municipal Vacant	0.0139
<b>9A PILGRIM DR</b>	F_741170_2860607	Municipal Vacant	0.0139
<b>000 LEE RD</b>	F_737354_2862870	Municipal Vacant	0.0139
<b>21 LAKEVIEW ST</b>	F_741155_2861057	Municipal Vacant	0.0139
<b>000 SOUTH WALPOLE ST</b>	F_730138_2862382	Municipal Vacant	0.0139
<b>R OLD POST RD</b>	F_730043_2862492	Municipal Vacant	0.0139
<b>17 HAMPSHIRE AVE</b>	F_737594_2865195	Municipal Vacant	0.0139
<b>000 RR R/W #26</b>	F_740019_2866612	Municipal Vacant	0.0139
<b>3 HAMPSHIRE AVE</b>	F_738025_2864859	Municipal Vacant	0.0139
<b>000 HAMPSHIRE AVE</b>	F_737634_2865147	Municipal Vacant	0.0139
<b>355A EAST FOXBORO ST</b>	F_741050_2857206	Municipal Vacant	0.0139
<b>000 FARNHAM RD</b>	F_739611_2866200	Municipal Vacant	0.0139
<b>000 FARNHAM RD</b>	F_739646_2866383	Municipal Vacant	0.0139
<b>17 SANDY RIDGE CIR</b>	F_739087_2866377	Municipal Vacant	0.0139
<b>19 FLINTLOCK RD</b>	F_740153_2866702	Municipal Vacant	0.0139
<b>0 CHESTNUT ST</b>	F_741969_2870583	Municipal Vacant	0.0139
<b>6 UPLAND RD</b>	F_741739_2870791	Municipal Vacant	0.0139
<b>11 WOODS WAY</b>	F_741818_2871917	Municipal Vacant	0.0139
<b>38 NORWOOD ST</b>	F_741226_2872478	Municipal Vacant	0.0139

<b>000 RR R/W #35</b>	F_742257_2871624	Municipal Vacant	0.0014
<b>000 UPLAND RD</b>	F_741907_2871259	Municipal Vacant	0.0011
<b>421 EAST FOXBORO ST</b>	F_739283_2856866	Municipal Vacant	0.0005
<b>15 TREE LN</b>	F_741781_2871438	Municipal Vacant	0.0003
<b>4 DRY POND RD</b>	F_755908_2862923	Municipal Vacant	0.0002

## **Appendix F: Town Outfall Screening Data**

Ammonia mg/L	E. coli CFU/100 mL	Phosphorus mg/L	Salinity g/L	Conductivity umhos/cm	Surfactants mg/L	Chlorine	pH	Temp (pH) C°	Smell (visual)	Color (visual)	Clarity (visual)	Turbidity (visual)	Red values are priority					
ND	<10	0.01	0.13	301	0.15		6.55	9.9	None	Colorless	Clear	None						
0.39	100	0.01	0.42	916	0.19		6.87	11.1	Rotten Eggs	Colorless	Clear	None	3					
ND	<10	0.01	ND	200	0.14		6.82	10.3	None	Colorless	Clear	None						
ND	<10	0.01	ND	196	0.19		6.95	10.1	None	Colorless	Clear	None						
0.14	<10	ND	0.19	428	ND		6.21	13.4	None	Colorless	Clear	None						
ND	<10	ND	0.17	402	0.13		6.21	13.4	None	Colorless	Clear	None						
0.22	<10	ND	ND	82.7	ND		5.85	23.2	None	Colorless	Clear	None						
ND	<10	0.03	0.16	368	0.15				None	Colorless	Clear	None						
0.26	<10	0.01	0.38	822	0.15		6.11	23.3	None	Colorless	Clear	None						
ND	<10	ND	ND	201	ND		6.59	9.9	None	Colorless	Clear	None						
ND	10	ND	0.31	682	0.19		5.98	11.7	None	Colorless	Clear	None						
									Musty	Colorless	Cloudy	Oily Sheen						
									Musty	Colorless	Cloudy	None						
ND	<10	ND	ND	207	ND		5.91	10.9	None	Colorless	Clear	None						
ND	<10	ND	ND	189	0.44		6.82	11.2	None	Colorless	Cloudy	None	2					
ND	270	0.02	0.11	267	0.27		6.79	10.3	Musty	Colorless	Clear	None	1					
									None	Rusty Orange	Opaque	Oily Sheen						
ND	<10	0.01	0.11	255	0.15				Musty	Colorless	Clear	None	4					
ND	<10	ND	ND	191	0.19		6.83	13.5	None	Colorless	Clear	None						
ND	<10	0.01	ND	174	0.13		5.65	11.8	None	Colorless	Clear	Other						
0.18	<10	ND	0.19	428	0.13				None	Colorless	Clear	None						
							5.4	7.7	None	Colorless	Clear	None						
									temperature outliers due to the duration of time between sampling and testing.					only ordered the outfalls that have been tested				

# **Nutrient Source Identification Report Addendum: Methods**

Prepared By: Neponset River Watershed Association  
June 10, 2021

This report is being submitted as a final grant deliverable for the MS4 Municipal Assistance Grant Program. This specific submission is not intended for regulatory compliance purposes.

## Acknowledgements

*This is one among twenty Nutrient Source Identification Reports prepared by the Neponset River Watershed Association (NepRWA) and the Pioneer Valley Planning Commission (PVPC). These reports are meant to provide MS4 permitted municipalities with documents they can finalize and submit to U.S. EPA as part of their Year 4 reporting requirements.*

*This work is made possible through a grant from the MassDEP Municipal Assistance Program. Project staff from NepRWA and PVPC appreciate the conversation and feedback provided by MassDEP and U.S. EPA staff in working through methodology to prepare these reports. Aside from producing nutrient source identification reports for 20 communities, this project also resulted in the following: lake-pond phosphorous control plan Year 4 submission requirements for two communities; documentation of approach and methods for use by other MS4 permittees across MA in meeting these Year 4 requirements; and setting of the stage for upgrading existing stormwater infrastructure in key high pollutant loading catchments.*

*NepRWA and PVPC staff are grateful also to the partner communities who joined them in this pilot project. Following is a list of cities and towns who participated in this project:*

<i>Agawam</i>	<i>Medfield</i>	<i>Southampton</i>
<i>Canton</i>	<i>Milton</i>	<i>Southwick</i>
<i>Dedham</i>	<i>Northampton</i>	<i>Stoughton</i>
<i>Foxborough</i>	<i>Quincy</i>	<i>Westfield</i>
<i>Granby</i>	<i>Randolph</i>	<i>Westwood</i>
<i>Longmeadow</i>	<i>Sharon</i>	<i>Wilbraham</i>
<i>Ludlow</i>	<i>South Hadley</i>	

## Introduction

This is an addendum to the Town’s Nutrient Source Identification Report. This document explains the methods followed to produce the information in the report. All actions described were performed using ArcMap 10.6.1.

The analysis requires 3 existing shapefiles. Information on each of these required shapefiles is provided in Table 1 below.

Table 1. Shapefiles Used in Analysis

Existing Data Set	Origin	Date Published/Updated	Link
<b>2016 Land Cover/Land Use</b>	MassGIS	May 2019	<a href="https://docs.digital.mass.gov/dataset/massgis-data-2016-land-coverland-use">https://docs.digital.mass.gov/dataset/massgis-data-2016-land-coverland-use</a>
<b>Soil Survey Geographic (SSURGO) Database for Norfolk and Suffolk Counties, Massachusetts</b>	USDA	June 2020	Downloaded through Web Soil Survey ( <a href="https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm">https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm</a> ).  Hydrologic soil groups extracted using Soil Data Viewer Version 6.1 ( <a href="https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrsc142p2053619">https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrsc142p2053619</a> )
<b>Town Catchments</b>	Town GIS Files	Current as of 6/10/21	N/A
<b>Massachusetts Land Parcel Database (Metro Boston Region)</b>	MAPC	May 2019	Used to locate SCM opportunities, this shapefile contains the “Parloc_ID” field used to identify parcels.  <a href="https://datacommon.mapc.org/browser/datasets/360">https://datacommon.mapc.org/browser/datasets/360</a>

## Creation of Base Shapefile

To support the analysis, a base shapefile containing pertinent information for land cover, land use, and soil types in the area of interest was created. This was completed by performing a “union” operation with two input shapefiles shown in Table 1 above: the 2016 Land Cover/Land Use shapefile and a shapefile containing the SSURGO soil hydrologic groups. Each record in the resulting shapefile represents areas with specific land cover, land use, and soil types.

Several fields were then added to the resulting shapefile to support later steps of this analysis. Table 2 below lists the added fields and provides a brief description of the data that was added. The complete shapefile is entitled “NSIRBaseShapefile” and is available in the files the Town received upon completion of this project.

Table 2. Summary of Fields Added to “NSIRBaseShapefile”

Added Field	Description
<b>FIRST_PLCR</b>	The phosphorus loading category to which a record was assigned. See Table 1-2 in Attachment 1 of Appendix F of the 2016 Massachusetts Small MS4 General Permit for a full listing of loading categories and rates.
<b>FIRST_NLCR</b>	The nitrogen loading category to which a record was assigned. See Table 1 in Attachment 1 of Appendix H of the 2016 Massachusetts Small MS4 General Permit for a full listing of loading categories and rates
<b>MAX_PLER</b>	The numerical phosphorus loading rate assigned to a record. The value originates from Table 1-2 in Attachment 1 of Appendix F of the 2016 Massachusetts Small MS4 General Permit
<b>MAX_NLER</b>	The numerical nitrogen loading rate assigned to a record. The value originates from Table 1 in Attachment 1 of Appendix H of the 2016 Massachusetts Small MS4 General Permit
<b>MAX_DCIA_M</b>	The multiplier from the applicable Sutherland equation to estimate directly connected impervious area for a record. Note that entry is <Null> for all non-impervious records. For more detailed information about how these values were assigned, see the “DCIA Calculation” section below.
<b>MAX_DCIA_E</b>	The exponent from the applicable Sutherland equation to estimate directly connected impervious area for a record. Note that entry is <Null> for all non-impervious records. For more detailed information about how these values were assigned, see the “DCIA Calculation” section below.

In addition to these fields, other new fields were added as placeholders for later analysis. These fields are entitled “AreaAcre,” “ImpAreaAcr,” “ImpPercent,” “PercentOfC,” “DCIAPercen,” “DCIAAcre,” “PLoadLbYr,” and “NLoadLbYr.” Values for these fields are all “0” in the “NSIRBaseShapefile” and actual values were calculated later in the process as described in the “Summarized Analysis” section.

### *Preparation of Catchment Shapefile and Intersect with Base Shapefile*

To prepare the Town’s catchment shapefile for later analysis, a field entitled either “CatchAreaAcr” or “CatchAreaA” (depending on inherent limitations on field name size in the Town’s shapefile) was added to the attribute table. The “calculate geometry” function was used to populate this field for each record, measuring the total area of each catchment in acres.

Once the additional field was added, the “Intersect” tool was run with two input datasets: “NSIRBaseShapefile” (described in the last section) and the Town’s Catchment shapefile. The resulting shapefile was entitled “[TownName]Intersect” and is available in the files the Town received upon completion of this project.

This resulting shapefile limits the information contained in the broader “NSIRBaseShapefile” to what specifically occurs in each of the Town’s catchments, allowing further catchment-level analysis of several criteria.

### *Summarized Analysis*

Operations were then performed on the extra fields that were carried through from “NSIRBaseShapefile” for later analysis. Table 3 below lists the fields, the description of the data they contain, and shows the operations involved in calculating the applicable data. Further details about each calculation can be found in the individual sections below.

*Table 3. New Fields Added to "[TownName]Intersect" Shapefile*

<b>New Field</b>	<b>Description</b>	<b>Units</b>	<b>Function Used to Calculate</b>	<b>Calculation Method</b>
<b>AreaAcre</b>	The area of a record.	Acres	Calculate Geometry	Calculate the area in acres.
<b>ImpAreaAcr</b>	The area of impervious surfaces occupied by a record.	Acres	Calculate Geometry	Query only records with “Impervious” entry for CoverName, then calculate the area in acres. After removing the query, all non-impervious records will have a “0” listed for this field.
<b>ImpPercent</b>	The amount of impervious area in a record as a percentage of the overall	Percentage of the total catchment area	Field Calculator	$([ImpAreaAcr]/[CatchAreaAcr])*100$

	catchment area.			
<b>PercentOfC*</b>	The percentage of the catchment represented by a record.	Percentage of the total catchment area	Field Calculator	$([AreaAcre]/[CatchAreaAcr])*100$
<b>DCIAPercen</b>	An estimate of directly connected impervious area represented by a record	Percentage of the total catchment area.	Field Calculator	$([ImpPercent]^{[MAX\_DCIA\_E]}) * [MAX\_DCIA\_M]$
<b>DCIAAcre</b>	An estimate the amount of directly connected impervious area associated with a record.	Acres	Field Calculator	$([DCIAPercen]/100)*[CatchAreaAcr]$
<b>PLoadLbYr</b>	The estimated phosphorus load from a record	Lbs/Year	Field Calculator	$[AreaAcre]*[MAX\_PLER]$
<b>NLoadLbYr</b>	The estimated nitrogen load from a record	Lbs/Year	Field Calculator	$[AreaAcre]*[MAX\_NLER]$

\*PercentOfC was only used as a “check” field and is not described further in this document.

### **Impervious Calculation**

The “[TownName]Intersect” shapefile contains polygons of areas within each catchment with like land cover, land use, and soil type. To begin the analysis for impervious area, the “[TownName]Intersect” attribute table was queried so that only polygons with an entry of “Impervious” for the “CoverName” field were shown. Then, the Calculate Geometry tool was used in the “ImpAreaAcr” field on those queried records to display the area of each impervious polygon in acres. These results were eventually summed for overall catchment totals of impervious area as described in the “Final Preparation of Deliverable Shapefile” section below.

To further illustrate impervious cover statistics and for use in DCIA calculation, the impervious cover in each polygon was also calculated as a percentage of each catchment. For this measurement, the Field Calculator tool was used on the “ImpPercent” field to divide the impervious area of each polygon (“ImpAreaAcr”) by the total catchment size (“CatchAreaAcr” or “CatchAreaA”, created when preparing the catchment shapefile). This figure was then multiplied by 100 to obtain a percent.

### DCIA Calculation

DCIA estimates were based on the Sutherland equations and an EPA guidance document entitled “Estimating Change in Impervious Area (IA) and Directly Connected Impervious Areas (DCIA) for Massachusetts Small MS4 Permit” (Revised April 2014). Table 4 below shows the relation between various land uses in the watershed, the chosen “connectedness” category, and the associated Sutherland equation used in the DCIA estimate.

Table 4. "Connectedness" Category and Sutherland DCIA Equation Assignments for All Land Uses. NOTE: DCIA and IA are both percentages.

USEGENNAME	"Connectedness" Category	Sutherland Equation
<b>Agriculture</b>	Mostly Disconnected	$DCIA = 0.01(IA)^2$
<b>Commercial</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Forest</b>	Mostly Disconnected	$DCIA = 0.01(IA)^2$
<b>Industrial</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Mixed use, other</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Mixed use, primarily commercial</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Mixed use, primarily residential</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Open land</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Recreation</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Residential - multi-family</b>	Highly Connected	$DCIA = 0.4(IA)^{1.2}$
<b>Residential - other</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Residential - single family</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Right-of-way</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Tax exempt</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Unknown</b>	Average	$DCIA = 0.1(IA)^{1.5}$
<b>Water</b>	Average	$DCIA = 0.1(IA)^{1.5}$

In these equations, the percentage of impervious cover for a given area is used to determine the percentage of DCIA in the same area. Thus, DCIA percent was calculated in the “DCIAPercen” field using Field Calculator. In this calculation, the impervious percentage of the catchment represented by the polygon (“ImpPercent”) was raised to the power shown in the appropriate equation (already entered in the “MAX\_DCIA\_E” field when preparing the base shapefile) and multiplied by the factor shown (already entered in the “MAX\_DCIA\_M” field when preparing the base shapefile). Essentially, the Field Calculator equation was “DCIAPercen” = (“ImpPercent” ^ “MAX\_DCIA\_E”) \* “MAX\_DCIA\_M”. These results were eventually summed for overall catchment totals of impervious area as described in the “Final Preparation of Deliverable Shapefile” section below.

Finally, the estimated acreage of DCIA for each polygon was calculated in the “DCIAAcre” field using Field Calculator. In this calculation, “DCIAPercen” was divided by 100 and multiplied by the overall catchment size (“CatchAreaAcr” or “CatchAreaA”).

Note that, by default, any records with a “0” in the “ImpPercent” field (such as records with non-impervious land cover) also resulted in an entry of “0” for “DCIAPercen” and “DCIAAcre”, as DCIA only exists where impervious area exists.

Also, please note that, for catchments located in the Charles River Watershed, DCIA calculations, were not calculated using the exact same method as what was used in the Charles River Phosphorus TMDL. The TMDL used a similar method but adjusted the model in some instances. Thus, the results in the DCIA and phosphorus loading estimates in the TMDL and the results from this report may differ somewhat.

### *Phosphorus Load Calculation*

Phosphorus loads were calculated for each record in the “[TownName]Intersect” shapefile by multiplying the area of each polygon (“AreaAcre”) by the phosphorus loading rate assigned to the record’s specific land cover/land use/soil type combination (the “MAX\_PLER” field, which was entered during the creation of the base shapefile). The Field Calculator tool was used to complete this calculation in the “PLoadLbYr” field. As the name suggests, the units for the loading estimates are pounds/year. These results are eventually summed for overall catchment totals of impervious area as described in the “Final Preparation of Deliverable Shapefile” section below.

For reference, the phosphorus loading category into which each record is assigned is recorded in the “FIRST\_PLCR” field, which stands for Phosphorus Load Crosswalk. The entries in this field correspond to the land uses and phosphorus load export rates shown in Table 1-2 of Attachment 1 to Appendix F of the 2016 Massachusetts Small MS4 General Permit. An abbreviated crosswalk is shown in Table 5 below.

Note that the “CoverName” field was also consulted when assigning phosphorus loading rates. If the polygon was identified as “Impervious,” it was given the loading rates for Directly Connected Impervious for a given land use shown in Table 1-2 of Attachment 1 to Appendix F of the 2016 Massachusetts Small MS4 General Permit. If the polygon was identified as non-impervious, it was given the loading rates for Pervious cover for a given land use shown in the same table. The pervious loading rates often rely on the records’ soil type, so the “HSG\_P” field was consulted as necessary when assigning phosphorus loading rates to pervious records.

Also note that in most cases, land use categories were descriptive enough to assign the polygon to a particular phosphorus loading category. However, in the case of some more general land uses (such as “Unknown”), the “CoverName” field was consulted to assign the polygon to an appropriate category.

Table 5. Crosswalk Linking Land Use and Land Cover to the Phosphorus Source Categories Shown in Table 1-2 of Attachment 1 to Appendix F of the 2016 Massachusetts Small MS4 General Permit

USEGENNAME	Phosphorus Source Category
<b>Agriculture</b>	Agriculture (Ag)
<b>Commercial</b>	Commercial/Industrial (Com-Ind)
<b>Forest</b>	Forest (For)
<b>Industrial</b>	Commercial/Industrial (Com-Ind)
<b>Mixed use, other</b>	Varied based on land cover
<b>Mixed use, primarily commercial</b>	Commercial/Industrial (Com-Ind)
<b>Mixed use, primarily residential</b>	Medium-Density Residential (MDR)
<b>Open land</b>	Varied based on land cover
<b>Recreation</b>	Varied based on land cover
<b>Residential - multi-family</b>	Multi-Family and High-Density Residential (MFR-HDR)
<b>Residential - other</b>	Medium-Density Residential (MDR)
<b>Residential - single family</b>	Medium-Density Residential (MDR)
<b>Right-of-way</b>	Varied based on land cover
<b>Tax exempt</b>	Varied based on land cover
<b>Unknown</b>	Varied based on land cover
<b>Water</b>	Varied based on land cover

### ***N Load Calculation***

Nitrogen loads were calculated for each record in the “[TownName]Intersect” shapefile by multiplying the area of each polygon (“AreaAcre”) by the nitrogen loading rate assigned to the record’s specific land cover/land use/soil type combination (the “MAX\_NLER” field, which was entered during the creation of the base shapefile). The Field Calculator tool was used to complete this calculation in the “NLoadLbYr” field. As the name suggests, the units for the loading rates are pounds/year. These results are eventually summed for overall catchment totals of impervious area as described in the “Final Preparation of Deliverable Shapefile” section below.

For reference, the nitrogen loading category into which each record is assigned is recorded in the “FIRST\_NLCR” field, which stands for Nitrogen Load Crosswalk. The entries in this field correspond to the Nitrogen Source Categories and nitrogen load export rates shown in Table 1 of Attachment 1 to Appendix H of the 2016 Massachusetts Small MS4 General Permit. An abbreviated crosswalk is shown in Table 6 below. Note that this crosswalk only considers the land cover of the record (the “CoverName” field) and, where necessary, the soil type of the record (the “HSG\_N” field).

Table 6. Crosswalk Linking Land Cover and Soil Type to the Nitrogen Loading Categories Shown in Table 1 of Attachment 1 to Appendix H of the 2016 Massachusetts Small MS4 General Permit

Land Cover	Soil Type	Nitrogen Source Category
<b>Impervious</b>	All	All Impervious Cover
<b>Non-Impervious</b>	A	Developed Land Pervious (DevPERV)-HSG A
<b>Non-Impervious</b>	B	Developed Land Pervious (DevPERV)-HSG B
<b>Non-Impervious</b>	C	Developed Land Pervious (DevPERV)-HSG C
<b>Non-Impervious</b>	D	Developed Land Pervious (DevPERV)-HSG D
<b>Non-Impervious</b>	A/D	Developed Land Pervious (DevPERV)-HSG A
<b>Non-Impervious</b>	B/D	Developed Land Pervious (DevPERV)-HSG B
<b>Non-Impervious</b>	C/D	Developed Land Pervious (DevPERV)-HSG C/D

### *Final Preparation of Deliverable Shapefile*

Once all calculations were made as described above, the “[TownName]Intersect” shapefile was condensed using the Dissolve tool. The “Dissolve\_Field” was defined as the field containing catchment identifiers and the following fields were defined as “Statistics Fields” with a “Statistic Type” of “Sum”: “AreaAcre,” “ImpAreaAcr,” “ImpPercent,” “DCIAAcre,” “DCIAPercen,” “PLoadLbYr,” and “NLoadLbYr.”

The resulting layer was named “[TownName]Final” and was provided with all other deliverables from this project. This shapefile displays the Town’s catchment and contains totals of each catchment’s area, impervious area, estimated DCIA, impervious percentage, estimated DCIA percentage, estimated phosphorus load, and estimated nitrogen load.

### *Selection of SCM/BMP Sites*

To select sites for future evaluation for SCM/BMP retrofits, the NSP BMP Tool was used. Town-owned sites were identified as the most desirable parcels to inspect first, since they typically do not require use agreements or other considerations. A .csv file was exported from the tool that contained records for all Town-owned properties and the Tool’s priority score for each property relative to both phosphorus and nitrogen. To obtain this score, the tool considers multiple factors such as pollutant loading rate, soil type, location of stormwater infrastructure, and various confounding factors. The closer the score is to 1, the better it is expected to be for a retrofit targeting the selected pollutant.

This .csv file was imported into ArcGIS and joined with an existing parcel layer from the Metropolitan Area Planning Council (MAPC), which also contained a “parloc\_id” field to allow the records from the .csv to be spatially referenced.

The display of the catchments was changed to make the highest-loading catchments stand out. The display of the BMP Tool results was changed to make the parcels with the highest priority score stand out. The map was then examined and any high-score parcels in high-loading catchments were noted. In cases where there weren’t enough, lower-scoring parcels in mid-loading catchments or mid-scoring parcels in high-loading catchments were chosen.

The top-5 of these chosen parcels were included in the body of the report, while the longer list of all Town-owned properties was included in an Appendix. As all of these properties are evaluated in the future, the Town may re-run the above analysis focusing on non-Town-owned properties.

If a municipality does not have access to a resource like the NSP BMP Tool, this analysis could be completed in ArcGIS by using the “Intersect” tool with the input datasets of “NSIRBaseShapefile” (the base shapefile) and any parcel layer the municipality has access to. Then, the series of nutrient loading calculations described in the above sections could be reproduced and the completed layer could be dissolved using the parcel identifiers as a “Dissolve\_Field.” The resulting shapefile would display the highest-loading parcels throughout the municipality. This could be used along with the catchment loading shapefile as a prioritization tool in determining which parcels to assess first. It would also be recommended that a field identifying an owner of each parcel be preserved during this process, as Town-owned parcels are often more desirable opportunities.

### *Final Deliverables*

Along with the final report and this methods addendum, the Town was provided with copies of three ArcGIS shapefiles that were used in or products of the analysis. Table 7 below gives a brief description of each shapefile.

*Table 7. Descriptions of Shapefiles Provided as Deliverables of this Project*

Shapefile Name	Description
<b>NSIRBaseShapefile</b>	A shapefile containing polygons with like land cover, land use, soil type, and pertinent loading rates, multipliers, etc. for Neponset towns.
<b>[TownName] Intersect</b>	The product of an intersect operation between the base shapefile above and the Town’s stormwater catchment shapefile. This shapefile specifically shows only the information from the base shapefile that is pertinent to the Town’s catchments. Calculations for impervious area, directly connected impervious area, and pollutant loads were made within this shapefile’s attribute table.
<b>[TownName] Final</b>	This shapefile is the final product of the analysis. It contains the following for each catchment within the Town: total area (acres), total impervious area (acres), percent of catchment that is impervious, total estimated directly connected impervious area (acres), estimated percent of catchment that is directly connected impervious area, estimated phosphorus load from catchment (lb/year), estimated nitrogen load from catchment (lb/year)