

**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:

June 30, 2023

- 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:

June 30, 2023

- 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:

LID, GI, and Impervious Cover Regulatory Review - Members of the Greenscapes North Shore Coalition reviewed all municipal regulations related to impervious cover creation. The Greenscapes team used the MA Audubon bylaw review tool to evaluate all of the regulations in the context of green infrastructure feasibility and compiled a detailed report of their findings, which also includes recommended improvements for each

regulation reviewed. With guidance and input from municipal staff, timelines for implementation of recommended language were established on a case-by-case basis. In connection with the bylaw review efforts conducted by the Greenscapes Coalition, two educational webinars were also conducted. The first webinar was held at the onset of the review process and introduced the project scope while detailing the value of encouraging LID practices in municipal codes. This webinar yielded 70 attendees. The second webinar, held following the completion of the review process, was hosted by EPA's Soak Up the Rain and discussed the project results and lessons learned. This webinar had approximately 300 attendees. The full report and community specific recommendations can be found here: [https://greenscapes.org/wp-content/uploads/2022/08/MS4-Grant-Report-FINAL\\_reduced.pdf](https://greenscapes.org/wp-content/uploads/2022/08/MS4-Grant-Report-FINAL_reduced.pdf)

**Permittee-Owned Property BMP Retrofits** - The Town recently hired a consultant to assist with completing a comprehensive assessment of town-owned properties and develop recommendations for BMP improvements. Work is expected to be completed by the end of December, 2022.

### 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:

Training - Training was not completed in Permit Year 4, however, a consultant has been hired to provide a training session. It is expected that this will occur by the end of December, 2022.

SWPPPs - At this time, it does not appear that any SWPPPs are required, as the Highway Garage is located outside the regulated urbanized area. The Town is not aware of any other town-owned regulated facilities.

Operation and Maintenance Plan - A consultant has been hired to prepare an O&M Plan for town-owned facilities. It is expected that this will occur by the end of December, 2022.

BMP Inspections - A consultant has been hired to inspect town-owned structural stormwater BMPs. It is expected that this will occur by the end of December, 2022.

## **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:

*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:

The Town has determined it is subject to the following additional TMDL and Impaired Waters requirements:

Fish Brook (MA92-14) bacteria impaired waters requirements. (Appendix H, Part III)

## 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:** 10

*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: Elementary School Program - Keeping Water Clean**

Message Description and Distribution Method:

Program engages 5th grade students in several activities designed to raise their stormwater and water conservation awareness. Students learn about what a watershed is, what stormwater, groundwater and wastewater are, how they can negatively or positively impact these water systems, along with more details about each system and how it should be protected/maintained.

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

2166 students  
370 teachers and parents  
30 schools

Message Date(s): September 2021 - June 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:

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#### **BMP: Video - "Fowl Water"**

Message Description and Distribution Method:

The Think Blue Massachusetts "Fowl Water" video defines stormwater and explains the impact that pollution like trash, oil, cigarettes and dog poop can have on stormwater and our waterways. Video available at <https://www.thinkbluemassachusetts.org/>, [www.greenscapes.org/resources-videos/](http://www.greenscapes.org/resources-videos/) and spread as an advertisement on Facebook, Instagram, & YouTube

Targeted Audience: Residents +

Responsible Department/Parties: Think Blue MA, Greenscapes Coalition

## Measurable Goal(s):

237,249 impressions on Facebook/Instagram  
351,249 impressions on YouTube

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

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**BMP: Workshop - Planning Tools to Promote Natural Resource Stewardship**

## Message Description and Distribution Method:

Hosted by members of the PIE-Rivers Partnership, this free virtual workshop discussed the latest trends in promoting LID and other forms of Green Infrastructure in North Shore communities.

Targeted Audience: Residents +

Responsible Department/Parties: PIE Rivers Partnership, Greenscapes Coalition

## Measurable Goal(s):

82 Participants

Message Date(s): November 9, 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:

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**BMP: Print Material/Rack Card - Storm Drain Info**

## Message Description and Distribution Method:

The Greenscapes storm drain rack card, originally printed in 2016 was modified for easy office printing and distribution. The original can be found here: <https://greenscapes.org/wp-content/uploads/2017/01/Greenscapes-Rack-Card-2014-final.pdf>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition, Municipal Staff

Measurable Goal(s):

Message Date(s): Sent to Greenscapes network January 24th, 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:

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### **BMP: Public Lecture - Coastal Communities Talk Water**

Message Description and Distribution Method:

This free community event at the Cabot Theater in Beverly MA, featured guest speakers from Salem Sound Coastwatch, the Ipswich River Watershed Association, Green Beverly, Sustainable Marblehead and the EPA, who covered various topics related to water quality, water quantity and general watershed stewardship. Printed materials were also being passed out by Greenscapes personnel.

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

150 Attendees

Message Date(s): March 10th, 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:

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### **BMP: Printed Material (Magazine) - Greenscapes Guide**

Message Description and Distribution Method:

The Greenscapes Guide, a 26 page magazine that covers sustainable landscaping tips, DIY stormwater management for homeowners and more, was distributed at every school program that Greenscapes conducted this school year.

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

3,000 guides distributed throughout the North Shore

Message Date(s): Various dates between September 2021 - June 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:

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### **BMP: In-Person Exhibit - Culture House**

Message Description and Distribution Method:

Salem Sound Coastwatch, a contributing partner to the Greenscapes Coalition, was a resident exhibitor at Salem Culture House, a pilot project that created a community space in Salem's Old Town Hall. At the exhibit, SSCW staff ran two hands on activities that taught visitors about their connection to their watershed. Greenscapes materials were on display and passed out.

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition, Municipal Staff

Measurable Goal(s):

924 Attendees

Message Date(s): April 20th - April 23rd, 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:

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### **BMP: Miscellaneous Social Media**

Message Description and Distribution Method:

Social media content related to stormwater management, wastewater and groundwater protection, water conservation, pet waste, septic system maintenance and sustainable lawn care are always available on the Greenscapes social media pages and on the Greenscapes website. <https://greenscapes.org/resources-socialmedia/>

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

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: Miscellaneous Tabling Events**

Message Description and Distribution Method:

Events attended by Greenscapes personnel where printed materials were passed out: Middleton Earth Day, Tri-Town Spring Expo, Boxford Applefest, Topsfield Strawberry Fest, Ipswich STEAM Showcase, Beverly Earth Day, Salem Farmer's Market, Earth Week at the Peabody Essex Museum

Targeted Audience: Residents +

Responsible Department/Parties: Greenscapes Coalition

Measurable Goal(s):

Message Date(s): Various dates between September 2021 - June 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: Flyers Available at Town Hall**

Message Description and Distribution Method:

Flyer for dog owners to pick up after their dog available at the Town Hall

Targeted Audience: Residents +

Responsible Department/Parties: Town Manager / Mayor's Office

## Measurable Goal(s):

Make seasonal messages available at the Town Hall for residents to pick up.

Message Date(s): Continuous / Ongoing

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:

[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**:

SWMP Plan for Download - The Town has posted the SWMP Plan and other relevant information on Town website along with contact information to allow for public comment.

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**:

## 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: 0

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

Percent of outfalls screened: 100

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

No new outfalls were screened during this reporting period. All mapped outfalls were previously screened during Permit Year 3.

### **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: 0

*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:*

### **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:
- 

*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:*

### **Employee Training**

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

Training - Training was not completed in Permit Year 4, however, a consultant has been hired to provide a training session. It is expected that this will occur by the end of December, 2022.

## MCM4: Construction Site Stormwater Runoff Control

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

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

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

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

### Ordinance or Regulatory Mechanism

Date update was completed (due in year 3):

### As-built Drawings

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

Number of as-built drawings received:

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

### Retrofit Properties Inventory

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

The Town recently hired a consultant to assist with completing a comprehensive assessment of town-owned properties and develop recommendations for BMP improvements. Work is expected to be completed by the end of December, 2022.

## 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:  [Select Units]

*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:  [Select Units]

Weight of material removed:  tons

### **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:

At this time, it does not appear that any SWPPPs are required, as the Highway Garage is located outside the regulated urbanized area. The Town is not aware of any other town-owned regulated facilities.

## 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:

The Merrimack Valley Stormwater Collaborative and Greenscapes North Shore Coalition are seeking funding to spearhead proactive stormwater compliance and mitigation efforts. The focal point of this project will be the

production of an interactive web-based resource which facilitates the assemblage and dissemination of MS4 relevant model code language specific to community characteristics and needs. This will aid in the completion of section 2.3.6 (c) of the MS4 permit, which requires that all year 4 code review recommendations be implemented, in accordance with schedules, as contained in the assessment report.

Additionally, section 2.3.6 (d) of the MS4 permit requires communities to continuously identify and update additional permittee owned sites which could be retrofitted such that the permittee maintains a minimum of 5 BMP retrofit sites within their inventory. Currently, the Merrimack Valley's year 4 identified BMP retrofit sites reside on a dynamic "Low Impact Development" GIS viewer available on the Greenscapes North Shore Coalition webpage, which allows for the easy tracking of retrofit location and status. To build the viewer's capacity to track LID project implementation on a regional and state level, this work will utilize MVPC's ArcGIS-based platform to develop an updated, survey-based interface with new ERSI "survey123" technology which permits direct municipal input to the viewer.

## 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.

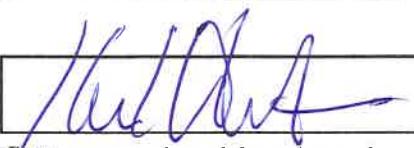
Name:

Kevin Huntington

Title:

Town Administrator

Signature:



Date:

9/16/22

*[Signatory may be a duly authorized  
representative]*