

# Year 6 Annual Report

## Massachusetts Small MS4 General Permit

### Reporting Period: July 1, 2023-June 30, 2024

**\*\*Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form. Also ensure any websites included on this form are to publicly accessible sites\*\***

*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, 2023 and June 30, 2024 unless otherwise requested.*

### Part I: Contact Information

Name of Municipality or Organization: Town of Ludlow

EPA NPDES Permit Number: MAR041014

#### Primary MS4 Program Manager Contact Information

Name: James Goodreau

Title: Assistant Town Engineer

Street Address Line 1: 198 Sportsmen's Road

Street Address Line 2: N/A

City: Ludlow

State: MA

Zip Code: 01056

Email: jgoodreau@ludlow.ma.us

Phone Number: (413) 583-5625

#### Stormwater Management Program (SWMP) Information

SWMP Location (publicly available web address): <https://www.ludlow.ma.us/DocumentCenter/View/835/Stormwater-Management-Plan-PDF?bidId=>

Date SWMP was Last Updated: Sep 30, 2024

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

N/A

## 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.

### 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 publicly available website:

- ☒ Updated system map due in year 10 with information from completed catchment investigations  
☒ 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:

SWMP has been posted online; however, the Town did not receive any comments from the public.

### **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
- ☐ This is not applicable because there are no septic systems present

*\* 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:

### **Nitrogen** (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) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release 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)

*Structural BMPs*

- ☐ Installed a structural BMP as a demonstration project within the drainage area of the water quality limited water or its tributaries. The type of BMP installed is (*e.g. biofiltration*):

Any structural BMPs listed in Attachment 3 to Appendix F already existing or installed in the regulated area by the permittee or its agents was tracked and the nitrogen 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 nitrogen removed in mass per year by the BMP were documented.

- ☐ No BMPs were installed
- ☒ The above referenced BMP information is attached to the email submission
- ☐ The above referenced BMP information can be found at the following publicly available website:

Total estimated nitrogen removed in lbs/year from the installed BMPs:

*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:

The Town is a member community of the Connecticut River Stormwater Committee, which works to meet annual requirements for stormwater education and research. As noted in the Connecticut River Stormwater Committee report titled "MS4 Permit Year 6 Annual Report for Public Education and Outreach," the committee was unable to distribute an annual message in the fall encouraging the proper disposal of leaf litter due to the notice regarding administrative continuance of the existing MS4 permit not being posted in time for Pioneer Valley Planning Commission staff to assist with this requirement. The committee notes in the above referenced report that this requirement was exceeded in past years and will be exceeded in Year 7 to compensate. Please note, a document that encourages the proper disposal of leaf litter is active on the Town website year-round.

Roads in high traffic areas and Minechoag Pond Watershed were swept at least twice within the reporting year, but not all municipal owned streets and parking lots were swept twice.

A semi-structural BMP was completed during the Year 6 reporting period in June 2024 at 486 Chapin Street. Although this property does not fall within a high loading catchment area, the reduction to impervious area at this site is significant. Approximately 2.3 acres of impervious area was converted to pervious area, removing an estimated 23.6 lb/yr of nitrogen.



Below, calculate your current phosphorus export rate by first filling out the individual phosphorus loading components (labeled [A], [B], [C], and [D]) and then computing your current phosphorus export rate using the equation provided.

Baseline phosphorus export rate from LPCP Area (lbs/year) [A]:	100.47
Total phosphorus reduction from all nonstructural controls this reporting period (lbs/year) [B]:	2.25
Total phosphorus reduction from all structural controls installed this reporting period and all previous years (lbs/year) [C]:	2.09
Phosphorus load increase due to development incurred since baseline loading was calculated in lbs/year [D]:	0

Current phosphorus export rate from the LPCP Area in lbs/year [=A-(B+C)+D from above]: 96.13

I certify under penalty of law that all source control and treatment Best Management Practices being claimed for phosphorus reduction credit have been inspected, maintained and repaired in accordance  
☒ with manufacturer or design specification. I certify that, to the best of my knowledge, all Best Management Practices being claimed for a phosphorus reduction credit are performing as originally designed.

☒ All municipally owned and maintained turf grass areas are being managed in accordance with Massachusetts Regulation 331 CMR 31.00 pertaining to proper use of fertilizers on turf grasses

☐ Implemented all nonstructural control measures **during this reporting period** and documented the measures and their phosphorus reduction. The nonstructural control measure information:

- ☒ is attached to the email submission
- ☐ can be found at the following publicly available website:

☐ Documented the structural control measures implemented during **this reporting period and all previous years**, including location, phosphorus reduction in weight/year, and date of last completed maintenance and inspection for each control. The structural control measure information:

- ☐ is not applicable; no structural control measures were implemented
- ☒ is attached to the email submission
- ☐ can be found at the following publicly available website:

The LPCP: (select one of the following options. If you submitted your LPCP last year and have an updated website, please include the website below)

- ☒ was submitted in the Year 5 Annual Report
- ☐ is attached to the email submission
- ☐ can be found at the following publicly available 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:

A written performance evaluation estimating the reduction in phosphorus associated with the non-structural controls implemented in Year 6 and the structural controls implemented in Year 6 and in all previous years has been completed. This performance evaluation was completed after the close of the Year 6 reporting period but prior to the submission of this Annual Report. The performance evaluation has been included as an attachment to the email submission of the Annual Report.

*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:

Five additional existing outfalls that had not previously been shown in GIS mapping were identified during site investigations and document review. The corresponding catchment areas for these outfalls were drawn in and the nearby catchment areas were re-delineated. The outfall list and catchment areas were redrawn after the Year 6 reporting period had ended but prior to submission of the Year 6 annual report.

Prior to the Year 6 Annual Report, previous changes include:

1. Adding E. Coli and Water Chestnut as impairments for Chicopee River (MA36-24) based on updates made to the 303d list.
2. Three additional existing outfalls and corresponding catchments that had not previously been reported were identified and added. (One outfall was added in Year 4; two outfalls were added in Year 5.)

## 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:Pollution Prevention for Businesses**

Message Description and Distribution Method:

Pollution prevention document for businesses is posted on the town website. Provides an overview of pollution prevention and information on source reduction, reuse/recycling, and energy recovery as three methods of accomplishing pollution prevention.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Pollution Prevention Businesses"

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:

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#### **BMP:Stormwater Management for Developers**

Message Description and Distribution Method:

Stormwater management document for developers is posted on the Town website. The document encourages wise site selection, careful development, and the use of Low Impact Development (LID) practices. The document also addresses perceived barriers of cost, cold weather impacts, drinking water quality, and public safety.

Targeted Audience:

Responsible Department/Parties:

## Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Developers"

Message Date(s): June 2019 - 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:

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**BMP:Construction Stormwater Tips**

## Message Description and Distribution Method:

Construction Stormwater Tips document is posted on the Town website. The document includes a diagram that portrays various methods of preventing pollution and reducing stormwater runoff during construction.

Targeted Audience: Developers (construction)

Responsible Department/Parties: DPW Operations

## Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Construction"

Message Date(s): June 2019 - 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:

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**BMP:Stormwater Pollution Prevention for Industrial Sites**

## Message Description and Distribution Method:

Stormwater Pollution Prevention document for industrial sites is posted on the Town website. This document addresses erosion prevention, sediment control, and runoff management; dust control; and eliminating unauthorized non-stormwater discharges. It also describes the need for a Stormwater Pollution Prevention Plan, a spill prevention and response procedure, employee training, and proper salt storage.

Targeted Audience: Industrial facilities

Responsible Department/Parties: DPW Operations

## Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Stormwater Pollution Prevention for Industrial Sites"

Message Date(s): June 2019 - 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:

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**BMP:Going Green with Stormwater - Rain Gardens**

## Message Description and Distribution Method:

Going Green with Stormwater - Rain Gardens document is posted on the Town website. This document includes information about the benefits of a rain gardens and how to create them.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

## Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Going Green Rain Gardens"

Message Date(s): August 2022 - 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:

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**BMP:Builder's Guide to Low Impact Development**

## Message Description and Distribution Method:

Builder's Guide to Low Impact Development is posted on the the Town website. This document provides information about Low Impact Development (LID) and LID site planning and design concepts.

Targeted Audience: Developers (construction)

Responsible Department/Parties: DPW Operations

## Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Builders Guide Low Impact Development"

Message Date(s): August 2022 - 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:

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**BMP:Stormwater Pollution Prevention for Homeowners**

## Message Description and Distribution Method:

Stormwater Pollution Prevention guide for homeowners is posted on the Town website. This document highlights ways homeowners can reduce stormwater pollution, including picking up after their dogs and using proper practices and materials when: working on the lawn and garden, using chemicals and salts, washing cars and boats, repairing automotives, and maintaining swimming pools and hot tubs.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

## Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Stormwater Pollution Prevention for Homeowners"

Message Date(s): June 2019 - 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:

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**BMP:Education for Residents on Lawn Fertilizing**

## Message Description and Distribution Method:

Fertilizing the Lawn document posted on the Town website notes the impact lawn fertilizers can have on the environment and provides tips for the proper use of fertilizers to reduce this impact. Distributed an annual message in the Spring (April/May) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Fertilizers". The website message is available year round, and the local cable access station runs the message in the Spring.

Message Date(s): June 2019 - 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:

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### **BMP:Dog Waste and Surface Water Quality**

Message Description and Distribution Method:

Dog Waste and Surface Water Quality document is posted on the Town website that raises awareness of the pollution pet waste can cause to waterways and detail proper disposal of pet waste. The message will remain on the Town website and will be available throughout the year. The message encourages the proper management of pet waste. Educational material on pet waste and surface water quality is provided to dog owners at the time of issuance and renewal of dog licenses.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Pet Waste". The message will remain on the Town DPW website year-round to encourage the proper management of pet waste. The Town Clerk has educational materials on pet waste and surface water quality available to dog owners at time of issuance and renewal of dog licenses.

Message Date(s): June 2019 - 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:

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### **BMP:EPA & DEP General Stormwater Information**

Message Description and Distribution Method:

Links to EPA and DEP General Stormwater Information are posted on the town website.



Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

The EPA and DEP links have been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information.

Message Date(s): June 2019 - 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:

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### **BMP:Safe Hazardous Waste Disposal**

Message Description and Distribution Method:

The Town is to provide information and resources to residents seeking to safely dispose of hazardous waste.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

The Town directed residents to nearby facilities to encourage residents to dispose of hazardous waste properly. A link to the DEP's website on safely managing hazardous household products has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information.

Message Date(s): June 2018 - 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:

The previous BMP included an in-person hazardous waste collection day. Since this event is no longer being held, this was updated in Year 5 to say that the Town will direct residents to nearby facilities to properly dispose of hazardous waste.

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### **BMP:Maintenance of Septic Systems in Impaired Water Body Catchment**

Message Description and Distribution Method:

Provide information on proper maintenance to owners of septic systems within any catchment that discharges to the Chicopee River (MA36-24), which has a fecal coliform impairment. A document is posted on the Town website and includes a diagram that provides guidelines for the proper use and maintenance of a septic system.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Septic Smart"

Message Date(s): June 2019 - 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:

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### **BMP:Annual Leaf Litter Disposal Message**

Message Description and Distribution Method:

A document is posted on the Town website that encourages mulching, composting, and proper local disposal of leaf litter to reduce contamination of waterways.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Leaf Litter".

Message Date(s): June 2019 - 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:

As noted above on Page 4 of the Annual Report, the Connecticut River Stormwater Committee was not able to distribute an annual message in the fall encouraging the proper disposal of leaf litter. However, the Town maintains a document that encourages the proper disposal of leaf litter on the Town website year-round. An attempt will be made to post a public service announcement that encourages the proper disposal of leaf litter in August, September or October of 2024.

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### **BMP:Stormwater Management for Small Businesses**

**Message Description and Distribution Method:**

A stormwater management document for small businesses is posted on the Town website highlighting low impact development practices that collect, slow down, spread out, and filter stormwater into the soil.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

**Measurable Goal(s):**

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Slow the flow"

Message Date(s): September 2020 - 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:

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**BMP:Anti-icing BMPs****Message Description and Distribution Method:**

An anti-icing BMP document is posted on the Town website. This document includes proper mixing and treatment methods for anti-icing.

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: DPW Construction

**Measurable Goal(s):**

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Anti-Icing"

Message Date(s): 2021- 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:

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**BMP:Stormwater Pollution Prevention for Small Residential Construction Sites**

**Message Description and Distribution Method:**

A stormwater pollution prevention document has been posted on the Town website for small residential construction sites. This documents includes a diagram with 10 steps to prevent stormwater pollution on a small residential construction site, as well as information regarding the EPA's Construction General Permit (CGP) Small Residential Lot Stormwater Pollution Prevention Plan (SWPPP) Template.

Targeted Audience: Developers (construction)

Responsible Department/Parties: DPW Operations

**Measurable Goal(s):**

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Pollution Prevention-Small Construction Sites"

Message Date(s): 2021 - 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:

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**BMP:Oil Spills From Your Vehicle****Message Description and Distribution Method:**

A document has been posted on the Town website highlighting the importance of checking for oil leaks in vehicles, containing spills when working on vehicles, and proper disposal of motor oil.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

**Measurable Goal(s):**

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Oil Spills"

Message Date(s): 2021 - 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:

Reducing water pollution from motor oil is pertinent to the Town of Ludlow's overall Stormwater Management Plan, and specific messaging related to proper vehicle maintenance and repair practices, and disposal of used oil was determined to be an important supplement to the public education and outreach originally outlined in the NOI.

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**BMP:Put Waste in its Place for Clean Water**

## Message Description and Distribution Method:

A waste management document for businesses has been posted on the Town website providing a list of practices for properly storing and disposing of trash in a manner that will reduce pollution to waterways.

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: DPW Operations

## Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Put Waste In Its Place"

Message Date(s): 2021 - 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:

Waste management for businesses is pertinent to the Town of Ludlow's overall Stormwater Management Plan, and specific messaging related to proper storage and disposal of trash was determined to be an important supplement to the public education and outreach originally outlined in the NOI.

**BMP:Maintaining BMPs at Industrial Facilities**

## Message Description and Distribution Method:

Post Maintaining your BMPs document on Town website.

Targeted Audience: Industrial facilities

Responsible Department/Parties: DPW Operations

## Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Spill Prevention Industrial"

Message Date(s): 2019 - 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:

**BMP:Washing your Car**

Message Description and Distribution Method:

A document has been posted on the Town website highlighting practices to reduce water pollution when washing vehicles.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

This document has been posted on the Town of Ludlow website, under the Department of Public Works Stormwater Management Information: "Wash Car"

Message Date(s): 2021 - 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:

Reducing water pollution caused by car washing is pertinent to the Town of Ludlow's overall Stormwater Management Plan, and specific messaging related to car washing practices that reduce water pollution was determined to be an important supplement to the public education and outreach originally outlined in the NOI.

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**BMP:Think Blue Connecticut River Website**

Message Description and Distribution Method:

See annual reporting for education and outreach activities, Year 6 at: [www.thinkblueconnecticutriver.org/ms4-communities/](http://www.thinkblueconnecticutriver.org/ms4-communities/)

Targeted Audience: Residents, business/institutional/commercial, developers, and industrial

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

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:Proper Management of Pet Waste (during time of licensing)**

Message Description and Distribution Method:

See annual reporting for education and outreach activities, Year 6 at: [www.thinkblueconnecticutriver.org/ms4-communities/](http://www.thinkblueconnecticutriver.org/ms4-communities/)

Targeted Audience: Residents

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

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:

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**BMP:Proper Management of Pet Waste (during summer)**

Message Description and Distribution Method:

See annual reporting for education and outreach activities, Year 6 at: [www.thinkblueconnecticutriver.org/ms4-communities/](http://www.thinkblueconnecticutriver.org/ms4-communities/)

Targeted Audience: Residents

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

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:

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**BMP:Proper Septic System Care**

**Message Description and Distribution Method:**

See annual reporting for education and outreach activities, Year 6 at: [www.thinkblueconnecticutriver.org/ms4-communities/](http://www.thinkblueconnecticutriver.org/ms4-communities/)

Targeted Audience: Residents

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

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:

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**BMP:Proper Management of Geese****Message Description and Distribution Method:**

See annual reporting for education and outreach activities, Year 6 at: [www.thinkblueconnecticutriver.org/ms4-communities/](http://www.thinkblueconnecticutriver.org/ms4-communities/)

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

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:

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**BMP:Importance of Soil Test, Proper Use of Fertilizers, Disposal of Grass Clippings**



## Message Description and Distribution Method:

See annual reporting for education and outreach activities, Year 6 at: [www.thinkblueconnecticutriver.org/ms4-communities/](http://www.thinkblueconnecticutriver.org/ms4-communities/)

Targeted Audience: Residents

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

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:

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**BMP:Importance of Soil Test, Proper Use of Fertilizers, Disposal of Grass Clippings**

## Message Description and Distribution Method:

See annual reporting for education and outreach activities, Year 6 at: [www.thinkblueconnecticutriver.org/ms4-communities/](http://www.thinkblueconnecticutriver.org/ms4-communities/)

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: PVPC staff and Connecticut River Stormwater Committee members

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:

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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:**

The Stormwater Management Program (SWMP) has been posted to the Town's website. The Town will address any questions or comments from the public regarding the development and implementation of the SWMP.

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:**

Town-wide community cleanup days took place on April 15, 2024 and May 4, 2024.

## 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:

Number of SSOs removed:

### MS4 System Mapping

Percent of Phase II map complete:

*Optional: Provide additional status information regarding your map:*

Five additional outfalls that had not been previously shown on GIS mapping were identified and added to the map after the Year 6 reporting period but prior to the submission of this Annual Report. The corresponding catchment areas to these outfalls as well as the adjacent catchment areas were re-delineated. Minor adjustments to storm drain linework were made based on review of historic plans and site investigations.

### 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 above referenced outfall screening data is attached to the email submission
- ☐ The above referenced outfall screening data can be found at the following publicly available 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:*

Outfall screening has been marked above as complete for outfalls that were located and screened with any required dry weather sample testing conducted. Outfalls that require additional dry weather sample testing or were submerged at the time of screening have not been marked as complete; investigation and sampling to occur either at the outfall (if accessible) or at the first accessible upstream manhole or structure during the catchment investigations of these outfalls.

At the time of the Year 6 Annual Report submission, all of the known outfalls in the Town (excluding problem outfalls) have been visited or a visit has been attempted. Coordination is ongoing to locate the outfalls that were not located during attempted visits. Additional outfall screening was completed after the Year 6 reporting period but prior to the submission of this Annual Report. The results of these screenings have been included in the attached outfall screening data but have not been included in the metrics above given that they occurred after the Year 6 reporting period.

### **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 publicly available 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:

One catchment investigation was completed during the Year 6 reporting period and has been attached to the email submission of this report.

Wet weather testing was completed for an additional catchment investigation during the Year 6 reporting period; however, the associated report was completed after the close of the Year 6 reporting period but prior to the submission of this Annual Report. This catchment investigation memorandum has been attached to the email submission, but it will be credited in the Year 7 Annual Report.

11 additional catchment investigations are in progress, either requiring follow up in the form of wet weather testing or further investigation and therefore have not been recorded as completed in this reporting period.

### **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 publicly available 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:

Wet weather testing conducted towards the end of the Year 6 reporting period indicated possible contaminants at two outfalls. The catchment investigation of one of these outfalls is complete, the other is ongoing. The source of the possible contaminants has not been identified at either outfall as of the submission of the Year 6 Annual Report. Efforts towards identifying and removing any potential illicit discharges that may be occurring at these two outfalls to continue.

**Employee Training**

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

Staff attended Illicit Discharge Detection and Elimination training held by VHB on February 29, 2024. Staff conducts regular discussions on the maintenance of stormwater infrastructure with employees.

**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: 7

Number of inspections completed: 7

Number of enforcement actions taken: 0

*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): The bylaw has proposed language as of 2021, which is under review but has not yet been adopted.

Website of ordinance or regulatory mechanism:

<https://www.ludlow.ma.us/DocumentCenter/Index/70>

**As-built Drawings**

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

Number of as-built drawings received: 1

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

### **Street Design and Parking Lots Report**

Below, describe any changes made or planned to be made to local regulations and guidelines based on the report completed in Year 4:

Recommendations were made for changes to local regulations and guidelines in the Ludlow Street Design Parking Lot and GI Assessment Memo completed in Year 4 that are under review but have not yet been adopted.

### **Green Infrastructure Report**

Below, describe progress towards making green infrastructure practices allowable based on the report completed in Year 4:

Recommendations were made for changes to local regulations and guidelines in the Ludlow Street Design Parking Lot and GI Assessment Memo completed in Year 4 that are under review but have not yet been adopted.

### **Retrofit Properties Inventory**

Below, list remaining permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas (must maintain a minimum of 5 sites in inventory until less than 5 sites remain):

24 Center Street - Hubbard Memorial Library  
167 Howard Street - Whitney Park  
211 Highland Avenue - John F. Thompson Memorial Swimming Pool  
499 Center Street - Island Pond Cemetery  
13 Watt Avenue - Electric Park

Below, list all properties that have been modified or retrofitted with BMPs to mitigate impervious area that were inventoried as part of 2.3.6.d of the permit and the type of BMP(s) implemented. Non-MS4 owned properties that have been modified or retrofitted with BMPs to mitigate impervious area may also be listed, but must be indicated as non-MS4.

A list of the properties inventoried as part of 2.3.6.d of the permit has been included as an attachment to the email submission of the Annual Report. This list includes both MS4 owned and Non-MS4 owned properties. The MS4 owned properties are located on the DPW Yard, which has been noted in the "Location" column.

## 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:

Town has not encountered catch basin sumps more than 50% full during two consecutive cleanings.

### 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:

### **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 publicly available 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**

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.



**Year 7****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 7 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

- Complete investigations of catchments associated with Problem Outfalls
- Complete investigations of catchments where any information gathered on the outfall/interconnection identifies sewer input

#### 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 7 below:

## Part V: Certification of Small MS4 Annual Report 2024

### 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.

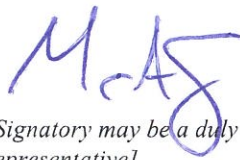
Name:

Marc Strange

Title:

Town Administrator

Signature:



Date:

9-17-24

*[Signatory may be a duly authorized representative]*

*Note: When prompted during signing, save the document under a new file name.*

### **Annual Report Submission**

*Please submit the form electronically via email to both EPA and MassDEP by clicking on one of the links below or using the email addresses listed below. Please ensure that all required attachments are included in the email and not attached to this PDF.*

EPA: [stormwater.reports@epa.gov](mailto:stormwater.reports@epa.gov)

MassDEP: [Stormwater.DEP@mass.gov](mailto:Stormwater.DEP@mass.gov)

### **Paper Signature:**

*If you did not sign electronically above, you can print the signature page by clicking the button below.*

*Optional: If you did not sign electronically above, you may lock the form by clicking the "Lock Form" button below which will prompt you to save the locked version of the form. Save this locked version under a new file name.*