

# 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: Department of Conservation and Recreation

EPA NPDES Permit Number: MAR043001

#### Primary MS4 Program Manager Contact Information

Name: Robert Lowell

Title: Deputy Chief Engineer

Street Address Line 1: 251 Causeway St

Street Address Line 2:

City: Boston

State: MA

Zip Code: 02114

Email: robert.lowell@mass.gov

Phone Number: (508) 509-1757

#### Stormwater Management Program (SWMP) Information

SWMP Location (web address): <https://www.mass.gov/doc/stormwater-management-plan/download>

Date SWMP was Last Updated: 6/30/2022

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:

Varying dates from fiscal year 22 through 24. See optional text box below for details.

- 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:

See optional text box below for details.

- ☒ 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:

Street Design and Parking Lot Guideline Assessment recommendations and completion dates: Finalize the DCR Stormwater Handbook: FY22; Post Handbook on website, train staff and consultants: FY23; Review success of promoting LID measures as part of projects annually: FY 22, 23, 24

**Green Infrastructure Assessment:** While the report assessing local regulations for green infrastructure was not required since DCR is a non-traditional MS4 (Permit Section 5.1.3) , DCR completed this evaluation in parallel with the evaluation of street design and parking lot guidelines to review if there were improvements DCR can make to best support green infrastructure. DCR's Stormwater Handbook includes an initial review of green infrastructure that can be incorporated into designs.

### 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:  

<https://www.mass.gov/doc/illicit-discharge-detection-and-elimination-idde-plan/download>
- ☒ 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:

DCR has developed a schedule for regular BMP inspections and is committed to inspecting all BMPs in Permit Year 5 and after. While DCR did not inspect all BMPs in Permit Year 4, BMPs are regularly maintained by facility staff as defined in DCR's O+M Plan.  
DCR completed inspections of all BMPs for Permit Year 5 in Summer 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:

Check box 3 (septic systems) is not applicable to DCR as a non-traditional MS4. DCR does not have privately-owned septic systems.

**Chloride**

- ☒ Completed the Salt Reduction Plan due in Year 3, updated if necessary
  - ☒ The Salt Reduction Plan is attached to the email submission
  - ☐ The Salt Reduction Plan can be found at the following website:

Annual Requirements*Public Education and Outreach*

- ☐ Included an annual message in November/ December to private road salt applicators and commercial industrial site owners on the proper storage and application rates of winter deicing material, along with the steps that can be taken to minimize salt use and protect local waterbodies

*Please fill out the following information on salt usage over Year 4 of the permit. Be sure to include units for amount of salt:*

Type(s) of salt applied:

Amount of salt applied:

*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:

Public education messages are not applicable. DCR does not use private salt applicators at our facilities and the facilities are not leased by commercial/industrial site owners. DCR does provide annual training of our winter maintenance operators which covers these items, as discussed in our O&M Plan.

DCR's salt application was lower than the 1,713 tons that were delivered to the DCR salt storage facilities, as there was salt left over at the salt storage facilities at the end of the winter season. DCR will develop a plan to better track the amount of salt actually applied to the roadways during Permit Year 5 to allow for more accurate reporting moving forward.

**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)

*Nitrogen Source Identification Report*

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

*Potential structural BMPs*

- Any structural BMPs listed in Table 3 of Attachment 1 to Appendix H 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 1 to Appendix H. 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.

- ☐ 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:

Per Appendix H requirements for discharges to nitrogen-impaired waterbodies and discussion with EPA during the annual report webinar on 8/16/2022, DCR will report on the tracking and estimate of nitrogen removal for existing structural BMPs in the regulated area by the permit deadline of the end of Permit Year 5. We understand that the Potential structural BMPs box above was included in this annual report to allow permittees to include removal information if they already have calculated it for some BMPs this year. DCR has worked to track information that will help develop these estimates, such as BMP type and design storage volume over PY3 and PY4, but has not completed the estimates. DCR developed a record keeping process and automated tool to estimate BMP nitrogen removal and will complete this process for existing or installed BMPs in PY5.

**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:

Per Appendix H requirements for discharges to phosphorus-impaired waterbodies and discussion with EPA during the annual report webinar on 8/16/2022, DCR will report on the tracking and estimate of phosphorus removal for existing structural BMPs in the regulated area by the permit deadline of Permit Year 5. We understand that the Potential structural BMPs box above was included in this annual report to allow permittees to include removal information if the permittee had already completed these calculations for some BMPs. DCR has worked to track information that will help develop these estimates, such as BMP type and design storage volume, over PY3 and PY4, but has not completed the estimates. DCR developed a record keeping process and automated tool to estimate BMP phosphorus removal and will complete this process for existing or installed BMPs in PY5. DCR also has been working with EPA to develop phosphorus removal crediting methods for BMPs that are not currently listed as creditable in Appendix F to fully reflect the pollutant



removal provided on DCR sites.

## **Solids, Oil and Grease (Hydrocarbons), or Metals**

### Annual Requirements

#### *Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

- ☒ Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads
- ☐ The street sweeping schedule is attached to the email submission
  - ☒ The street sweeping schedule can be found at the following website:

<https://www.mass.gov/guides/dcr-street-sweeping>

- ☒ Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Cleaned catch basins more frequently if inspection and maintenance activities indicated excessive sediment or debris loadings

*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:

DCR developed a ranking system to prioritize catch basin inspections and cleaning to ensure no sump is more than 50 percent full. The rankings recalculate based on new inspections records. DCR created a ArcGIS dashboard and map to show the catch basins that require cleaning and suggested cleaning frequency. This process has allowed DCR field staff to focus efforts on catch basins that need immediate attention and plan out cleaning schedules.

## **Charles River Watershed Phosphorus TMDL**

- ☒ Defined the scope of the Phosphorus Control Plan (PCP). *Please select one of the following:*
- ☐ The PCP scope is the entire area within our jurisdiction within the Charles River Watershed
  - ☒ The PCP scope is the urbanized area portion of our jurisdiction within the Charles River Watershed

*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:

Documents entitled "Phosphorus Control Plan Permit Year 4 Deliverable (Charles River/ Lakes and Ponds)" and "Methods for PCP & NSIR Development" will be attached to the email submission of this report. As explained in these documents, DCR has chosen to implement the PCP within the urbanized area and has reviewed DCR properties within this area to identify those which are considered regulated. The approach to this facility property review is explained in depth in the latter document. DCR is also submitting a geodatabase that includes a layer named "DCR\_PCP\_Areas," which shows DCR's facilities within the Charles River watershed and which parts are considered part of the MS4.

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*NON-TRADITIONAL AND TRANSPORTATION MS4s ONLY- municipalities please skip this section:*

- Estimated the current impervious area of permittee owned property, determined the Land Use information for permittee owned property, calculated the phosphorus removal in pounds per year for any structural BMP owned by the permittee in accordance with Appendix F Attachment 3, and recorded the date of last maintenance activity for all structural BMPs for which phosphorus removal is calculated

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

DCR is submitting a geodatabase as an attachment to the annual report submittal email that includes calculated phosphorus removal (lbs/yr) for existing structural BMPs in the Charles River watershed and the most recent date of maintenance for DCR's existing BMPs within the Charles River watershed. The land use and impervious area information for DCR's property within the Charles River watershed is included in the attached Phosphorus Control Plan Permit Year 4 Deliverable document.

### Lake and Pond Phosphorus TMDL

- ☒ Defined the scope of the Lake Phosphorus Control Plan (LPCP). *Please select one of the following:*
- ☐ The PCP scope is the entire area within our jurisdiction discharging to the impaired waterbody
  - ☒ The PCP scope is the urbanized area portion of our jurisdiction discharging to the impaired waterbody
- ☒ Calculated baseline phosphorus, allowable phosphorus load, and phosphorus reduction requirement

*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:

Documents entitled "Phosphorus Control Plan Permit Year 4 Deliverable (Charles River/ Lakes and Ponds)" and "Methods for PCP & NSIR Development" will be attached to the email submission of this report. As explained in these documents, DCR has chosen to implement the PCP within the urbanized area and has reviewed DCR properties within this area to identify those which are considered regulated. The approach to this facility property review is explained in depth in the latter document.

DCR is developing a schedule for BMP maintenance that will track regular maintenance and inspection of BMPs each year.

Baseline phosphorus loads, allowable phosphorus loads, and phosphorus reduction requirements are included in the "Phosphorus Control Plan Permit Year 4 Deliverable (Charles River/ Lakes and Ponds)" for all Lake and Pond PCPs.

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

Since DCR owns facilities statewide with a variety of uses, defining the DCR owned facilities which are subject to the MS4 permit has taken significant effort over the last few years. DCR has developed a geodatabase with this information and will be able to use the data to prioritize where there is potential for installation of structural BMPs to provide pollutant removal.



DCR's development of a Stormwater Handbook which guides designers to meet MS4 post-construction water quality requirements, or stricter requirements if WPA regulations require it, this year will help drive maximizing construction of treatment as part of programmed projects. The Handbook requires designers to maximize treatment in Priority Watersheds which extend beyond those in the current MS4 to include others that are likely to be included in future MS4 permits (e.g. Mystic River).

DCR's implementation of the Green Docket process for review of site plans, permitting plans and construction documents this year will allow the DCR Stormwater Group to continue to make sure that MS4 requirements are met within each design including construction, post-construction and good housekeeping requirements.

### 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:

Since submitting the NOI, we completed a GIS analysis of DCR-owned and maintained properties in Year 1 and have further refined the list of regulated facilities in Permit Years 2, 3, and 4 as DCR's GIS drainage mapping is refined and facilities are evaluated more closely in support of the development of PCPs and NSIRs. The receiving waterbody impairments were updated in Permit Year 4 to reflect the updated 2018/2020 303d list. The refined Permit Year 4 regulated facility list available online at: <https://vhb.maps.arcgis.com/apps/webappviewer/index.html?id=1ffa8d7b9e144e793dcffb0445846e2>  
A list documenting the changes to the regulated facilities in Permit Year 4 is included as an attachment to this report.

## 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: 1-1: Social Media Public Service Messages**

Message Description and Distribution Method:

All messages are shared and viewable on DCR's Twitter and Instagram feeds @MassDCR  
 Fall message about leaf litter pollution and proper collection  
 Spring message about managing grass clippings and fertilizers  
 Summer message about dog waste management  
 SWMP posting message noting updated SWMP and encouraging public's review

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

@MassDCR Twitter account has 24,500 followers  
 @MASSDCR Instagram has 8,211 followers  
 Fall message - 2 retweets/4 likes/1 comment  
 Spring message - Twitter: grass clippings: 3 retweets/2 likes, fertilizer: 3 retweets/8 likes  
 Spring message - Instagram: grass clippings: 85 likes; fertilizer: 112 likes  
 Summer message - Twitter: 2 retweet/3 like; Instagram: 74 likes  
 SWMP message - 2 retweets/3 likes

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:

Social media public service messages have replaced the 'Downstream Newsletter' which is no longer being published. The increased use of Twitter and Instagram has allowed DCR to share stormwater messages with a larger audience and better track engagement. DCR's SWMP has been updated to reflect this BMP 1-1.

#### **BMP: 1-2: Signs about Not Feeding Gulls**

Message Description and Distribution Method:

DCR continued to post and maintain signs around Wachusett Reservoir and the Wachusett Reservoir

watershed informing public not to feed seagulls, as part of an ongoing water quality protection program.

Targeted Audience: Visitors, General Public, Staff

Responsible Department/Parties: Division of Water Supply Protection, Office of Watershed Management

Measurable Goal(s):

Signs are posted in 3 locations in Leominster, 1 in Shrewsbury, 1 in Northborough, 2 in Clinton, 4 in Worcester, 1 in Hudson, 1 in Marlborough, 2 in Fitchburg, 1 in Medway, 1 in Framingham, 1 in Charlton, 1 in Dorchester.

Message Date(s): 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: 1-3: Stormwater Posters and Brochures**

Message Description and Distribution Method:

DCR displays educational signage and distributed brochures about water quality and stormwater pollution prevention. Brochures include information about water supply watershed protection, surface water quality, stormwater pollution and proper disposal of pharmaceuticals. Brochures are available at various Water Supply/Reservoir facilities and are distributed to town halls, businesses, car wash fundraisers, firefighters, and others as applicable in water supply watersheds.

Brochures, signage and educational videos are also available at:

<https://www.mass.gov/service-details/brochures-fact-sheets-posters-and-reports>

The Lakes and Ponds Program has an educational guide available at:

<https://www.mass.gov/doc/lakes-ponds-guide-0/download>

Targeted Audience: Visitors, Staff

Responsible Department/Parties: External Affairs

Measurable Goal(s):

Educational Signage:

2 signs at Wachusett Reservoir about Direct Discharge Elimination

2 signs at Longfellow Bridge/Charles River Reservation about Clean Water/Green Infrastructure

5 signs at Magazine Beach/Charles River Reservation about watersheds

1 sign at Bajko Rink about the subsurface infiltration system under the parking lot

Brochures:

10 DCR Stormwater brochures were distributed at the Leominster EarthFest in March 2022

Stormwater brochures were available at Dam Day in May 2022

13 types of brochures are available at various Water Supply/Reservoir facilities and are distributed to businesses, car wash fundraisers, firefighters, and others in water supply watersheds. There are also 3 Quabbin Reservoir specific brochures

Message Date(s): 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: 1-4: Dog Waste Management**

Message Description and Distribution Method:

Continued to post signs at DCR properties about dog waste management. Provided mutt mitt stations at high-use dog walking areas. Initiated commercial dogwalker permit program. Maintained website with educational materials about dog waste management.

Targeted Audience: Visitors

Responsible Department/Parties: External Affairs/Operations

Measurable Goal(s):

Maintained Dog Waste Signage at Quabbin Reservoir available at:  
<https://www.mass.gov/doc/quabbin-reservoir-dog-brochure/download>  
Maintained Dog Waste Signage at Watershed Protection Areas: Ware River/Wachusett Reservoir/Sudbury Reservoir Facilities -  
<https://www.mass.gov/doc/dog-waste-and-surface-water-quality-0/download>  
Maintained mutt-mutt stations and signage at various park facilities (including Lake and Pond watershed locations) - mutt-mitt stations/dogwalking permit information  
Commercial Dog Walker Permits with brochures - 64 permits  
Commercial Dog Walker Application available at:  
<https://www.mass.gov/how-to/apply-for-a-commercial-dog-walking-permit>  
DCR Parks Dog Rules and Regulations: <https://www.mass.gov/guides/dogs-in-dcr-parks>

Message Date(s): Watershed Protection Facilities signage - ongoing  
Park Facility mutt mitt stations/ dog walking permit information - Ongoing  
All website locations - Ongoing  
Dog Walking Permit Information - permits issued annually

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: 1-5: Stormwater Management Website**

Message Description and Distribution Method:

Posted permit documents to DCR Stormwater Management website

<https://www.mass.gov/service-details/dcr-stormwater-management>

Targeted Audience: Staff, Visitors, General Public, Designers/Contractors

Responsible Department/Parties: Engineering/External Affairs

Measurable Goal(s):

Number of SWMP Page Views - 710 views

SWMP document downloads - 148 downloads

Message Date(s): 8/2/2021, Permit Year 4 version updated 6/30/22, posted 7/15/22

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:1-6 Project Kick-off Meeting**

Message Description and Distribution Method:

DCR will discuss relevant stormwater and permitting requirements at project kick-off meetings with contractors to inform them about relevant stormwater issues. These meetings will highlight expectations related to Illicit Discharge Detection and Elimination (MCM 3), Construction Site Stormwater Runoff Control (MCM 4), and Post-Construction Stormwater Management (MCM 5).

Targeted Audience: Contractors

Responsible Department/Parties: Design and Engineering

Measurable Goal(s):

Number of kick-offs held in permit year: 17

Message Date(s): various dates based on project start dates

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:1-7 Project Manager Training**

Message Description and Distribution Method:

Once the DCR completes its updated Stormwater Handbook, DCR will train DCR project managers on the Handbook and its applicability to their projects. Project managers will, in turn, convey that information to



design consultants and contractors on their projects (see BMP 1-6). Trainings will provide guidance in the development of cost-effective stormwater management strategies for proposed highway and facility projects to comply with the MS4 Permit, Massachusetts Stormwater Standards/Handbook, and NPDES Construction General Permit.

Targeted Audience: DCR Staff

Responsible Department/Parties: Design and Engineering

Measurable Goal(s):

Training event date(s) and number of participants: These trainings are planned to start in Permit Year 5

Message Date(s): Will be completed in Permit Year 5

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:**

DCR posted the Permit Year 3 version of the SWMP online on 8/2/2021 and the Permit Year 4 version was updated 6/30/2022 and replaced the previous version on the website on 7/15/2022 at:

<https://www.mass.gov/service-details/dcr-stormwater-management>.

DCR Twitter @MassDCR posted about the comment period on 7/15/2022. No comments were received during this period.

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:**

DCR hosted its 16th Annual Park Serve Day, welcoming more than 2,000 volunteers to 28 DCR properties statewide. Volunteers collectively worked over 4,200 hours, gathering 1,640 bags of trash and 39 tons of brush and leaves. In addition, trails were cleared, hundreds of flowers were planted, and structures were painted and repaired. Notable trash items include, a vacuum, 6 tires, 2 car bumpers, and skis.

DCR partnered with Coastal Zone Management (CZM) and various organizations. for the COASTSWEEP initiative to clean DCR beaches in Sept./Oct./Nov., 2021; approx. 710 volunteers worked at 25 locations.

Drinking Water Week's Wachusett Dam Day was held 5/7/22 and the top of the dam was used as a publicly accessible walkway with Watershed Rangers on hand to provide information about the agency's watershed protection program.

DCR provides interpretive services in several of our parks both seasonally and throughout the year. The Division of Water Supply Protection (DWSP) sponsors on-site watershed education programs for the Wachusett, Quabbin, and Sudbury Reservoirs. Stillwater Farm in Sterling is a dedicated environmental education facility that focuses on the safe public use of the land and water. DWSP staff also coordinate with local schools offering field trips, teacher workshops, and online resources including the "Water Science" family program in April 2022 at the Old Stone Church which included stormwater pollution prevention messaging. DCR staff visited the 5th Grade class at the Mayo School in Holden to share stormwater pollution prevention messaging. DCR provides additional interpretive support in partnership with the Waquoit Bay National Estuarine Research Reserve, training community in environmental literacy with a focus on coastal processes and estuarine ecology.

The Wachusett Educational Program has significantly increased online efforts to include new videos and stay at home activities, including an interactive trail brochure of Stillwater Farm that includes details on the hydrology and stormwater resources on the farm. We posted the Stay at Home Activities on our website: <https://www.mass.gov/info-details/wachusett-reservoir-watershed-education-programs>

DCR Stormwater staff participated in the MassDEP Stormwater Advisory Committee to guide new stormwater standard the Mystic River Watershed planning committee.

### **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**

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

DCR is continuously updating and refining our drainage infrastructure mapping in GIS as we conduct our infrastructure and maintenance program and IDDE investigation work.

#### **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:

<https://vhb.maps.arcgis.com/apps/webappviewer/index.html?id=87a35a2683aa4478a07ade7ffb7c1b2a>

*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:

The percentage of outfalls screened decreased from 100% in Permit Year 3 due to additional outfalls being mapped through drainage mapping field work and desktop review in PY4 leading to an increase in the number of regulated outfalls (including outgoing interconnections) that are applicable to the IDDE program. The number of outfalls will continually be updated as new outfalls are located and existing outfalls are further reviewed for ownership/maintenance responsibility, location, outlet discharge type, and drainage infrastructure mapping. DCR will continue to screen newly identified outfalls each year and will screen those that were not addressed in PY4 early in PY5 to try to maintain 100% 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:

<https://vhb.maps.arcgis.com/apps/webappviewer/index.html?id=87a35a2683aa4478a07ade7ffb7c1b2a>

*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:

DCR has focused on further refining catchment watersheds and identifying those where catchment investigations should be performed to prepare for more focused field work in PY5. DCR has also focused on field work and collaboration with adjacent municipalities for Problem Outfalls with potential non-stormwater flows.

### **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:

Summary of previously identified illicit discharges are summarized in the attached IDDE Summary Report

*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:

DCR has spent considerable time and consultant budget reviewing Problem Outfalls and other outfalls with potential illicit discharges including field work and collaboration with adjacent municipalities. As summarized in the IDDE report no illicit discharges have been identified in PY4 and identifying the source of the elevated sampling parameters is still on-going.

### **Employee Training**

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

DCR has provided Stormwater staff training to employees May 24, 2022 for IDDE investigations, GIS mapping, SWPPP inspections, and BMP inspections.

### **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: 0

Number of enforcement actions taken: 0

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

DCR ensures construction site erosion and sediment controls for stormwater management through compliance with the NPDES Construction General Permit (CGP). DCR includes special provisions in construction documents for projects which exceed the one-acre land disturbance threshold. The special provisions require preparation of a Stormwater Pollution Prevention Plan (SWPPP) and ongoing site inspections in accordance with the CGP.

DCR staff was trained on the updated CGP requirements on 6/17/22. The training presentation was made available to all DCR staff via our internal SharePoint site.

DCR has began incorporating site plan reviews into our overall project review process - DCR's Green Docket process. This process flags when a project is subject the CGP requirements and that appropriate staff has reviewed the site plans for appropriate controls.

DCR requires contractor's to perform site inspections as required by the CGP. Inspections and corrective actions are conducted in accordance with the Construction GP and SWPPP.

No enforcement actions were required from the site inspections performed this year.

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

### **Ordinance or Regulatory Mechanism**

Date update was completed (due in year 3):

Stormwater Handbook draft completed 6/30/2021, updated 6/30/2022  
DCR plans to implement the Handbook to all DCR staff in Permit Year 5 including training

### **As-built Drawings**

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

Number of as-built drawings received: 5

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

DCR's general construction specifications requires as-built drawings at the completion of a project. DCR has not instituted a central location for housing these as-builts and the Engineering group has been developing a procedure to gather the submitted as-builts and add new or re-constructed drainage infrastructure and treatment to the MS4 GIS database. DCR will work on building out this procedure during PY5.

### **Retrofit Properties Inventory**

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

1. Marsh Post Trail Connection - 5 Greenough Blvd, Cambridge
2. Nantasket Beach - Hull
3. Quincy Shore Drive - Quincy
4. Christian A. Herter Park - 1255 Soldiers Field Rd, Boston
5. Memorial Drive Phase 3 - Cambridge
6. Horgan Skating Arena - 403 Oxford Street, North Auburn

### **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:

DCR developed a ranking system to prioritize catch basin inspections and cleaning to ensure no sump is more than 50 percent full. The rankings recalculate when new inspections records are recorded in GIS. DCR created a ArcGIS dashboard and map to show the catch basins that require cleaning and the frequency at which they need to be cleaned. This process has allowed DCR field staff to focus efforts on catch basins that need immediate attention. If a catch basin sump has been reported as more than 50% full after two annual inspection/cleaning visits, notation will be made to inspect/clean twice a year.

#### **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:

DCR has drafted SWPPP reports for all our regulated labor yards. DCR completed two rounds of quarterly inspections at each of the 13 regulated facilities - Q3 and Q4 of 2022 in Permit Year 4. Four of these inspections were in wet weather conditions. DCR will conduct the inspections in all quarters in PY5 including 1 wet weather per facility. DCR has developed an ArcGIS dashboard to summarize the activities that require follow-up or maintenance to help staff see how many quarterly inspections have been completed in the permit year and what actions are needed.

**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:

N/A

**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:

DCR has continued to improve upon our GIS mapped drainage data in PY4, confirming accurate mapping

through site inspections, CCTV investigations and collaborating with adjacent municipalities to identify interconnections. DCR had worked with more than 6 municipalities to share mapped drainage and sewer data, confirm ownership of structures and identify interconnections. DCR will continue to work with neighboring municipalities throughout the state to share GIS and eliminate illicit discharges.

DCR stormwater staff has encouraged design projects to incorporate stormwater treatment practices to go above those required for the project in an effort to reduce pollutants from DCR properties, especially in TMDL watersheds like the Charles River.

DCR updated the receiving outfalls list of waterbody impairments to align with the 2018/2020 303d list and is updating the related IDDE monitoring parameters to ensure the proper samples are collected for all IDDE sampling that occurs moving forward.

DCR has completed a Stormwater Handbook to provide guidance on implementing MS4 and Wetland Protection Act stormwater treatment requirements for DCR projects. DCR is currently developing associated checklists and training for project design and review staff.

### **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:

The COVID-19 pandemic has caused a triple digit increase in DCR parks usage throughout the state. Increased park and facility usage has lead to increased need for support by all DCR staff. Nevertheless, DCR staff has continued to work toward meeting all permit requirements.

### **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:

DCR plans to continue meeting the annual requirements of the permit, continue on the progress made in Permit Year 4, and expand the MS4 program to meet Permit Year 5 requirements, as documented in DCR's SWMP.

## 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:

Douglas Rice

Title:

Commissioner

Signature:

*Douglas Rice*

Date:

9/28/22

*[Signatory may be a duly authorized  
representative]*