Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Phillip Eng, Interim MassDOT Secretary

massDOT
Massachusetts Department of Transportation

May 1, 2026

Glenda Velez
U.S. Environmental Protection Agency – Region 1
5 Post Office Square – OEP06-01
Boston, MA 02109-3912

**RE: NPDES PHASE II Small MS4 General Permit**
**EPA Permit Number MA043025**
**Massachusetts Department of Transportation Permit Year 23 Annual Report**

Dear Ms. Velez,

Please find enclosed the Permit Year 23 Annual Report, signed by the Administrator Jonathan L. Gulliver. The annual report summarizes the Massachusetts Department of Transportation's (MassDOT's) activities between April 2025 and March 2026 towards meeting the measurable goals outlined in MassDOT's most recent revision of the SWMP, submitted to EPA on April 30th, 2024. MassDOT continues to be authorized to discharge stormwater under the 2003 Municipal Separate Storm Sewer system (MS4) permit, while the Environmental Protection Agency (EPA) prepares a transportation specific individual permit for MassDOT. Please feel free to contact Maria Briones, Supervisor of Stormwater Management, at (857) 275-7253 or maria.b.briones@dot.state.ma.us if you have any questions or require further information.

Sincerely,

Samantha Dolabany
Director of Environmental Services
MassDOT Highway Division

Enclosures: NPDES Phase II Small MS4 General Permit Annual Report – Year 23

**Municipality/Organization: MassDOT - Highway Division**

**EPA NPDES Permit Number: MA043025**

**MassDEP Transmittal Number: W-040919**

**Annual Report Number & Reporting Period: No. 23, April 2025 - March 2026**

# NPDES Phase II Small MS4 General Permit Annual Report

## Part I. General Information

Contact Person: Maria Briones
Title: Supervisor of Stormwater Management Unit
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Email: maria.b.briones@dot.state.ma.us

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, 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.

Signature:

Printed Name: Jonathan L. Gulliver

Title: Undersecretary & Highway Administrator – MassDOT, Highway Division

Date: 4-28-2026

## List of Acronyms

| Abbreviation | Definition |
|---|---|
| ACEC | American Council of Engineering Companies |
| BMP | Best Management Practice |
| CGP | Construction General Permit |
| CLF | Conservation Law Foundation |
| CRU | Cultural Resources Unit |
| DHD | District Highway Director |
| DOT | Department of Transportation |
| EBC | Environmental Business Council |
| EEA | Executive Office of Energy and Environmental Affairs |
| EPA | Environmental Protection Agency |
| ERC | Environmental Review Checklist |
| ESPR | Environmental Status and Planning Report |
| FHWA | Federal Highway Administration |
| GIS | Geographical Information Systems |
| IDDE | Illicit Discharge Detection and Elimination |
| IWP | Impaired Waters Program |
| MCM | Minimum Control Measure |
| MEPA | Massachusetts Environmental Policy Act |
| MESA | Massachusetts Endangered Species Act |
| MS4 | Municipal Separate Storm Sewer Systems |
| NEPA | National Environmental Policy Act |
| NHESP | Natural Heritage & Endangered Species Program |
| NOI | Notice of Intent |
| NOT | Notice of Termination |
| NPDES | National Pollutant Discharge Elimination System |
| PDDG | Project Development and Design Guide |

| Abbreviation | Definition |
|---|---|
| POMP | Programmatic Operations and Maintenance Program |
| PY | Permit Year |
| RE | Resident Engineer |
| RWIS | Road Weather Information System |
| SCM | Stormwater Control Measure |
| SDG | Stormwater Design Guide |
| SOP | Standard Operating Procedure |
| SWMP | Stormwater Management Plan |
| SWPPP | Stormwater Pollution Prevention Plan |
| TMDL | Total Maximum Daily Load |
| USFWS | U.S. Fish and Wildlife Service |
| WPA | Wetlands Protection Act |
| WQDF | Water Quality Data Form |
| WSI | Winter Severity Index |

## Part II. SELF-ASSESSMENT

The Massachusetts Department of Transportation – Highway Division (MassDOT) has completed the required self-assessment of compliance with the conditions of the *2003 United States Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4),* as described in this annual report. MassDOT has spent significant time, effort, and funds focusing on the potential impacts of stormwater from its roads and properties this year. MassDOT advanced our stormwater program in Permit Year (PY) 23 through continued implementation of the Impaired Waters Program (IWP), preparing updates to the Water Quality Data Form (WQDF), educating staff on stormwater design reviews, performing good housekeeping measures including catch basin inspection and cleaning, following up on potential illicit discharges, and continuing the mapping of MassDOT drainage infrastructure. The MassDOT Environmental Services Stormwater Management Unit (the Stormwater Management Unit) presently includes one senior environmental analyst focused on stormwater management across the Commonwealth and two additional environmental analyst support staff who assist in development and maintenance of stormwater management programs. The Stormwater Management Unit at MassDOT is responsible for the stormwater oversight of projects and operations to ensure MassDOT meets federal and state stormwater regulations. This includes establishing and implementing procedures and guidance for environmental reviews of proposed drainage improvements to ensure effective stormwater management systems and stormwater control measures (SCMs) are designed.

The Stormwater Management Unit participates in the Statewide Stormwater Coalition and New England DOT Stormwater Coalition and shares experiences and technical transfer. This permit year, MassDOT's Stormwater Management Unit attended New England DOT Stormwater Coalition meetings on April 17, 2025, November 17, 2025, and March 24, 2026. MassDOT's stormwater program continues to be at the forefront of stormwater management for regional state DOTs, and presentations from MassDOT are sought out by conference organizers in the area. The current MassDOT Stormwater Management Unit Supervisor is also a member of two National Cooperative Highway Research Program (NCHRP) research panels, including DOT Budgetary Practices for MS4 Permit Programs and State DOT Training Programs to Comply with NPDES Stormwater Permit Requirements.

MassDOT continued to maintain and update its Stormwater Management Unit webpage this past year with links to resources such as previous annual report submissions, the updated Stormwater Management Plan (SWMP), and updates to the WQDF.

MassDOT continues to follow up on potential illicit discharges identified within its stormwater systems. MassDOT closed six potential illicit issues where follow up field investigations by MassDOT staff indicated that the potential illicit connections or discharges to MassDOT's stormwater system had been addressed. MassDOT continues to train District Staff annually to look for potential illicit connections and report them for follow up.

During construction of Stormwater Control Measures (SCMs), MassDOT continues to require contractors to implement erosion controls in accordance with site plans to protect receiving waters and wetlands from sedimentation. MassDOT, in conjunction with its consultants, performs site

visits when needed to observe contractors' progress on SCM construction and provide recommendations as necessary. Some of MassDOT's projects meet the disturbance threshold for requiring coverage to discharge under the NPDES Construction General Permit (CGP). MassDOT includes filing for coverage and development of Stormwater Pollution Prevention Plans (SWPPPs) in the bid documents for these projects and monitors that permits are filed both by the contractor as the operator and MassDOT as the owner. MassDOT ensures SWPPPs are developed and reviewed and that all protocols are followed during the project for compliance with the permit.

MassDOT continues to promote pollution prevention and good housekeeping initiatives for its roads and facilities. During this permit year, MassDOT completed inspection and cleaning activities at approximately 18,000 catch basins.

MassDOT submitted its Snow and Ice Control Program Annual Report for the FY25 Winter Season (2024-2025) in January 2026. The Annual Report demonstrated that the 2024-25 winter was slightly cooler than normal but was generally another mild winter for much of the state. MassDOT used approximately 31% less road salt than the long-term average usage, with FY25 salt usage being the sixth lowest in the last 25 years. The Annual Report looks at a Winter Severity Index (WSI) to compare yearly differences in salt use while taking into account the relative severity of winter weather. When the report reviewed similar warmer winters to last year from the time period before key significant equipment and policy upgrades were made, MassDOT used less salt per mile in the 2024-2025 winter. MassDOT is also currently preparing for the development of the 2027 Snow and Ice Control Environmental Status and Planning Report (ESPR), which is complete every 5 years. MassDOT continues to see improvements in reduced salt usage through the measures being implemented.

MassDOT, with consultant support, continued to implement the IWP to address discharges of highway runoff to impaired waters. Through the Retrofit Initiative of the IWP, MassDOT has completed construction of approximately 99% of retrofit projects. Only three retrofit projects remain, all of which are in the construction phase. The completion of these projects will fulfill the commitments required by the Conservation Law Foundation (CLF) et al. vs MassHighway lawsuit and the related EPA enforcement order. This enforcement order initiated the addition of the IWP to MassDOT's Stormwater Management Program.

MassDOT continues to incorporate SCMs into programmed highway projects, which have the advantage of being more holistically integrated into highway drainage systems, often providing more effective stormwater management. To alert designers that the project may potentially impact impaired waters, and to capture information regarding stormwater improvements incorporated into highway designs, MassDOT uses the WQDF submitted by design consultants at key design stages (e.g., 25%, 75%) and the Stormwater Design Guide (SDG) to provide additional guidance for SCMs that work in the highway environment. Sensitive site design elements for these projects are documented and include measures such as preserving existing vegetation, natural drainage patterns, and riparian buffers; minimizing disturbance to wetland resource areas; promoting sheet flow to vegetated areas; and reducing existing impervious cover. Based on the WQDFs submitted in PY23, MassDOT proposed a total of 92 SCMs, including 25 pavement disconnection areas and 67 structural SCMs.

MassDOT continues to use the WQDF to provide a consistent SCM accounting protocol that uses

EPA's treatment curve methodology for calculating and tracking SCM treatment credits based on the latest research. The WQDF also provides guidance to designers on treatment requirements for impaired waters and watersheds with Total Maximum Daily Loads (TMDLs) early in the design schedule and assists MassDOT in tracking pollutant reduction. MassDOT continues to update the WQDF to meet its current needs. During PY23, MassDOT released version 3.0 in April 2025, which improved data collection and enabled identification of existing or previously proposed SCMs at a location. Following this major update, MassDOT released WQDF Version 3.1 in June 2025, which included minor refinements while maintaining the core functionality and enhancements introduced in Version 3.0. The WQDF Reference Map was also updated in December 2025.

MassDOT also advanced prioritization of SCMs in Total Maximum Daily Load (TMDL) watersheds through two initiatives: (1) a data gap analysis of existing SCMs to ensure completeness and accuracy of treatment data, and (2) project review for SCM inclusion.

The Stormwater Asset Database is an integral part of MassDOT's Asset Management Initiative to collect and maintain location and condition data on all assets statewide. This year, MassDOT continued to expand on its statewide drainage mapping effort to improve the completeness, accuracy, and consistency of stormwater assets through the mapping of MassDOT's stormwater system infrastructure. This mapping effort fills in data gaps and refines drainage infrastructure data so that MassDOT can continue to maintain a properly functioning system while operating a successful stormwater program to minimize environmental impacts and support the safety of the Commonwealth.

## Part III. Summary of Minimum Control Measures

The BMPs included in MassDOT's 2024 SWMP are summarized in each of the Minimum Control Measure sections below.

### 1. Public Education and Outreach

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 1A | Annual Winter Environmental Training | Environmental | MassDOT will facilitate one training per year, per District. | MassDOT facilitated six (6) annual winter environmental trainings in Permit Year 23. Due to scheduling constraints, two of the trainings will be conducted after the end of PY23 but will still cover this permit year's training requirements. The trainings covered topics such as construction compliance, IDDE, construction hazmat, erosion and sedimentation control as well as landscape. | MassDOT will continue to facilitate one training per District in the upcoming permit year. |
| 1B | Environmental Awareness Education | Environmental | Provide educational materials and training to MassDOT maintenance facility personnel and subcontractors as needed. | MassDOT continued to provide educational materials and training to MassDOT maintenance facility personnel and subcontractors, as needed. | MassDOT will maintain the provision of educational materials and facilitation of trainings for MassDOT maintenance facility personnel and subcontractors, as needed. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 1C | Snow and Ice Program Training | Highway Operations | Provide annual training to MassDOT supervisors and subcontractors on the latest on snow and ice removal. | MassDOT held approximately 20 classes throughout the permit year providing training on snow and ice operations and source pollution reduction. Attendees included state winter operations personnel and hired snow and ice contractors. There were approximately 808 attendees in total. Topics covered included:<br>• Material usage and conservation techniques<br>• Anti-icing<br>• Department operation<br>• Salt and environmental considerations<br>In addition, 805 MassDOT employees received an invitation to an online training about snow and ice program policies and procedures, as well as environmental considerations. Many of these employees were also in attendance at Tailgate Trainings where operational and environmental considerations were discussed with 808 contracted vendors who handle de-icing materials at MassDOT. | MassDOT will continue to provide training and focus on snow and ice related operational efficiency and effectiveness. Topics to discuss may include material usage data, snow and ice operations technology, associated salt use impacts, and environmentally sensitive areas. |
| 1D | Baystate Roads Program | Baystate Roads | Baystate Roads will provide one training program related to stormwater and/or related topics (e.g., pollution prevention, hazardous waste). | Baystate Roads held in person and virtual classes during this past permit year. Stormwater related trainings covered topics such as:<br>• Snow and Ice Operations<br>• Drainage Roadway Maintenance<br>• Drainage Roadway Reconstruction<br>• Hydrologic Analysis and Design | MassDOT will provide at least one training program related to stormwater and/or similar topics. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 1E | MassDOT Stormwater Management Unit Webpage | IT/Environmental | 1) Maintain a link for contacting the Highway Division via e-mail. Review and direct emails received to the appropriate group.<br>2) Evaluate the MassDOT Stormwater Management Unit webpage annually and revise as necessary. | 1) A link is available on MassDOT's Stormwater Management Unit webpage for contacting MassDOT Environmental.<br>2) MassDOT has continued to update the Stormwater Management Unit webpage to provide the public access to related information on the MassDOT stormwater program. Updates include links to the PY22 annual report and to the WQDF (version 3.1). | 1) MassDOT will continue to maintain a link for contacting the Highway Division via e-mail and direct emails received to the appropriate group.<br>2) MassDOT will evaluate the stormwater webpage and update as necessary to reflect the current status and most recent documents. MassDOT will add the PY23 annual report and continue to post updates to the WQDF and other associated documents. |
| 1F | Post Contact Names for Municipal Drainage Concerns on MassDOT Webpage | IT/Environmental | Post and maintain DHD contact information for each District on the MassDOT webpage. | DHD contact names were continuously updated on the webpage in PY23. Go to: https://www.mass.gov/info-details/find-your-highway-district-office | MassDOT will continue to maintain contact names. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 1G | Coordination with Local Groups | Environmental | Report on the coordination activities and collaboration efforts with local groups related to stormwater. | MassDOT participates in a New England DOT stormwater forum that meets quarterly. The meetings are attended by stormwater management personnel from all six New England DOTs, and focus on sharing "lessons learned," best practices, Federal permit compliance, and case studies. The group met three times this permit year: 4/17/25, 11/17/25, and 3/24/26.<br><br>MassDOT also participated in three meetings for the Massachusetts Municipal Stormwater Coalition on 4/17/25, 10/30/25, and 1/15/26.<br><br>MassDOT has taken several opportunities to share information on MassDOT's statewide drainage mapping efforts and MassDOT's Drainage Mapping Guide this permit year. Pertaining to this topic, MassDOT participated in the following meetings/events:<br>• Charles River Municipal collaborative meeting on 08/14/25 (virtual presentation)<br>• Massachusetts Municipal Stormwater Coalition meeting on 10/30/25 (virtual presentation)<br>• MassDOT 2025 GIS Day on 11/19/25 (in-person booth)<br>• Mass Rivers Alliance on 3/15/26 (in-person presentation) | MassDOT will continue to participate in collaboration efforts with local groups related to stormwater such as the New England DOT stormwater forum and others. |

## 2. Public Involvement and Participation

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 2A | SWMP Posting | IT/Environmental | 1) Post the latest version of the SWMP on the MassDOT stormwater webpage.<br>2) Provide contact information for public feedback. | 1) The updated SWMP from April 2024 has been posted to MassDOT's stormwater webpage.<br>2) MassDOT continued to update the Environmental Contact information on the MassDOT stormwater webpage in PY23. | 1) MassDOT will maintain the most updated SWMP on the MassDOT stormwater webpage.<br>2) MassDOT will continue to provide contact information for public feedback. |
| 2B | Annual Report Posting | IT/Environmental | 1) Post the latest annual report on the MassDOT stormwater webpage.<br>2) Provide contact information for public feedback. | 1) MassDOT posted the PY22 annual report to the MassDOT stormwater webpage.<br>2) MassDOT continued to update the Environmental Contact information on the MassDOT stormwater webpage in PY23. | 1) MassDOT will maintain the latest annual report on the stormwater webpage.<br>2) MassDOT will continue to provide contact information for public feedback. |

## 3. Illicit Discharge Detection and Elimination

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 3A | Storm Sewer System Map | Environmental/ Asset Management | 1) Develop a storm sewer map which shows the location of all regulated outfalls.<br>2) Summarize status actions taken that year of storm sewer system mapping in annual report. | 1) MassDOT's outfall inventory was initially completed in PY5, and the most current data layer is available on GeoDOT's Open Data Portal. GeoDOT's Open Data Portal is a platform for users to download Open Datasets for spatial analysis and web integration.<br>2) MassDOT continued the mapping effort to update the Stormwater Assets Database which includes mapping outfalls and other drainage components. MassDOT internal staff performed mapping and were trained to perform QA/QC of mapped areas. MassDOT updated its Drainage Mapping Guide (October 2025) to provide additional information to continue to expand on the mapping effort.<br>In addition to data related to stormwater assets, MassDOT continues to map potential interconnections between MassDOT and non-MassDOT stormwater networks.<br>MassDOT recently contracted four consultant teams to map drainage across 33 towns/cities. | 1) MassDOT will continue to maintain its outfall inventory on GeoDOT's Open Data Portal.<br>2) MassDOT will work towards collecting additional data on drainage assets through its expanded MassDOT Drainage Mapping effort. The mapping program will continue to utilize internal MassDOT staff and start utilizing four consultant teams to map drainage across 33 towns/cities. |
| 3B | Illicit Discharge Detection and Elimination Plan | Environmental/ Districts | 1) Develop IDDE Plan.<br>2) Post plan to MassDOT stormwater webpage. | 1) MassDOT continues to maintain its IDDE Plan.<br>2) The IDDE Plan is posted on the stormwater webpage as Attachment E to the SWMP. | 1) MassDOT will follow the protocols formalized in the IDDE plan.<br>2) MassDOT will continue to maintain the most up-to-date IDDE plan on the stormwater webpage. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 3C | Outfall Review for Potential IDDE | Environmental/ Districts | 1) Perform field review of complaints/potential illicit discharges.<br>2) Maintain tracking database of IDDE suspect flows in annual report. | 1) MassDOT actively addressed complaints/potential IDDE discharges identified by District personnel and responded to requests from municipalities or the public throughout the year. Activities performed to address complaints included desktop review, field investigations, and follow-up with local municipalities and adjacent property owners.<br>2) MassDOT continued to update its internal tracking database in GIS, which includes a summary of potential illicit flow, attachments associated with the investigation, and a history of the actions performed.<br>Appendix A of this report provides a summary of this year's activity. | 1) MassDOT will continue to follow up on remaining potential IDDE issues and proactively address complaints/potential IDDE discharges.<br>2) MassDOT will continue to track these potential IDDE flows in a database and provide a summary of IDDE activity in the annual report. |
| 3D | Potential Illicit Discharges Follow up Actions | Environmental/ Districts | 1) Perform follow up actions and maintain schedule of potential illicit discharges.<br>2) Maintain tracking database of follow up actions and summarize in annual report. | 1) MassDOT followed up on several potential illicit discharges. As part of this follow-up, MassDOT opened one new IDDE investigation and closed out six IDDE investigations. A summary of follow-up actions is included in Appendix A of this report. It should be noted that in previous permit years, three connections to one structure (454 Patriots Rd #1, 454 Patriots Rd #2, and 458 Patriots Rd) were treated as one connection and counted as one IDDE case. For the current permit year, Appendix A has been revised to clarify that there are three distinct potential connections to a single structure located in front of 454 Patriots Road.<br>2) MassDOT continued to update follow-up actions and their associated schedules in its GIS tracking database. | 1) MassDOT will continue to follow up on actions and maintain schedule of potential illicit discharges.<br>2) MassDOT will continue to track and summarize this information in the annual report. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 3E | Drainage Connection Policy Directive No. P-06-002 | Environmental/ Districts | 1) Issue Drainage Connection Policy Directive.<br>2) Post copy of policy on MassDOT webpage.<br>3) Enforce the provisions through referrals to the Attorney General.<br>4) Summarize enforcement actions taken in annual report. | 1) The MassDOT Drainage Connection Policy was issued on June 26, 2006, by the Chief Engineer.<br>2) The MassDOT Drainage Connection Policy is posted at:https://www.mass.gov/doc/massachusetts-highway-department-drainage-connection-policy/download<br>3) and 4) See Appendix A for potential illicit connection/discharge issues and actions during this permit year. | 1) No further action required.<br>2) MassDOT will continue to maintain the Drainage Connection Policy on the MassDOT webpage.<br>3) and 4) MassDOT will continue to implement the Drainage Connection Policy, as necessary, and summarize enforcement actions taken in the annual report. |
| 3F | Connection or Discharge to any MassDOT Drainage System Standard Operating Practice (SOP) | Environmental/ Legal | 1) Issue SOP for connections or discharges to MassDOT drainage system.<br>2) Administer the SOP at the District level. | 1) The Drainage Tie-In SOP was officially issued on March 19, 2012.<br>2) MassDOT continued to administer the SOP at District level for use with tie-in issues and procedures in PY23. | 1) No further action required.<br>2) MassDOT will continue to administer the Drainage Tie-In SOP for tie-in issues and procedures. |
| BMPs 1A and 1E fulfill some Minimum Control Measure 3 requirements also, as described in the SWMP. Please refer to updates for those BMPs in this annual report. | | | | | |

## 4. Construction Site Stormwater Runoff Control

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 4A | Site Plan Review Procedure | Environmental | MassDOT will implement and maintain the site plan review procedure and discuss any changes or updates to the procedure in the annual report. | MassDOT continued to perform site plan reviews at various prescribed stages of design in PY23. This year the Stormwater Management Unit provided one Stormwater review training to MassDOT Environmental Analysts on reviewing plan sets, analyzing drainage systems, and selecting SCM types, which included a site visit to evaluate existing SCMs. Additionally, the Stormwater Management Unit also presented on the SDG to District personnel at two in-person trainings held on 9/4/25 and 9/16/25. The Stormwater Management Unit continues to hold a weekly office hour for analysts to ask questions on stormwater topics. Environmental Staff complete the Environmental Review Checklists during project scoping. | MassDOT will continue to implement and maintain the site plan review procedure and discuss changes in the annual report. |
| 4B | NPDES SWPPP Specification (Item 756) | Construction | 1) Include Item 756 CGP SWPPP specification and erosion control items in bid packages for projects which meet CGP requirements.<br>2) Report on updates to the specification in the annual report. | 1) By PY4, the SWPPP bid item was added to contracts as standard practice, where applicable. The SWPPP bid item, which includes an Erosion Control Plan, is included in all contracts with over one acre of soil disturbance.<br>2) The specification for Item 756 was updated on 2/27/2025 during PY22 to require a Flood Contingency Plan. No updates to the specifications for Item 756 were made during PY23. | 1) MassDOT will continue to include Item 756 CGP SWPPP specification for projects which meet CGP requirements.<br>2) MassDOT will report on any updates to Item 756 CGP SWPPP specification in the next permit year. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 4C | MassDOT Standard Specifications for Highways and Bridges – Prevention of Water Pollution | Environmental/ Construction/ Project Management | Include standard specifications, including Prevention of Water Pollution, in all construction contracts. | Per MassDOT's standard practice, Prevention of Water Pollution (Section 7.02 of MassDOT's Standard Specifications), which establishes general requirements for erosion control and protection of water quality, was included in all construction contracts issued by MassDOT this permit year. | MassDOT will continue to include Prevention of Water Pollution related controls in construction contracts. |
| 4D | Preconstruction Kickoff Meeting | Construction | Hold kickoff meetings for projects once awarded and include discussion of CGP requirements on each relevant project. | MassDOT has held kickoff meetings for all projects in PY23. CGP requirements were consistently discussed for all relevant projects. | MassDOT will continue to hold kickoff meetings for all projects and discuss CGP requirements when relevant. |
| 4E | File and Track NPDES CGP Notice of Intents | Construction | 1) MassDOT will document the number of projects where the contractor has filed a NOI for authorization to discharge under the CGP as the site operator each permit year in the annual report.<br>2) MassDOT will document the number of projects which MassDOT has filed for coverage under CGP as the owner each permit year in the annual report. | 1) MassDOT Districts reported a total of 31 projects where the contractor has filed a NOI for authorization to discharge under the CGP as the site operator during PY23. The projects are listed in Appendix B.<br>2) MassDOT Districts reported a total of 30 projects where MassDOT has filed a NOI for authorization to discharge under the CGP as the owner during PY23. The projects are listed in Appendix B. | 1) MassDOT will continue to track the filing of NOIs for new projects by contractors and summarize them in the annual report for the upcoming permit year.<br>2) MassDOT will continue to track the filing of NOIs for new projects by MassDOT and summarize them in the annual report for the upcoming permit year. |
| 4F | Submittal and Review of NPDES CGP SWPPP | Construction | MassDOT will document the projects that filed for CGP coverage and have submitted SWPPPs for review by District personnel during each permit year in the annual report. | This permit year, 31 new projects filed for CGP coverage. The project contractor submitted SWPPPs that were reviewed and approved by District personnel for all 31 SWPPPs. | MassDOT will continue to document new projects that filed for CGP coverage this permit year and if the contractor submitted a SWPPP for review. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 4G | Contractor Inspector Training | Construction | Continue to maintain the SWPPP Item to require proof of completion of a sedimentation and erosion control training class current to the requirements of the latest CGP. | SWPPP Item 756 requires that the contractor's Qualified Inspectors meet the training requirements criteria in the CGP. MassDOT requires proof of completion of a 4-hour minimum sedimentation and erosion control training class current to the latest CGP. This individual can be, but is not limited to, someone that is either a certified inspector, certified professional, or certified stormwater inspector. The documentation is included as an appendix in the SWPPP. The MassDOT engineer, typically the Resident Engineer (RE), must approve the contractor's inspector. | MassDOT will continue to add this item to relevant contracts and check certifications are included in the SWPPP. |
| 4H | NPDES CGP SWPPP Inspections | Construction/ Contracts | 1) MassDOT REs will perform erosion control inspections and document findings in daily reports.<br>2) The MassDOT RE will review the contractor's SWPPP inspection logs and follow up on the contractor performing corrective actions in accordance with the SWPPP timelines. | 1) MassDOT REs performed erosion control inspections and documented findings in daily reports for all projects in PY23. Inspections included questions regarding the stabilization of areas with disturbed soil, repair quality and function of erosion and sedimentation controls, status of debris on local roadways, and whether stockpiles are covered.<br>2) MassDOT REs reviewed the contractor's SWPPP inspection logs and followed up with the contractor in accordance with the SWPPP timelines. | 1) MassDOT REs will continue to perform erosion control inspections and document findings in daily reports.<br>2) MassDOT REs will continue to review SWPPP inspection logs and follow up on the contractor performing corrective actions in accordance with the SWPPP timelines. |
| 4I | File and Track NPDES CGP Notice of Termination | Construction | 1) Summarize the number of projects that include the CGP and SWPPP Specification (Item 756) and that the contractor has filed a NOT for, during each permit year in annual report.<br>2) Summarize the number of these projects that MassDOT has filed a NOT for as owner. | 1) Contractors filed NOTs for 16 projects this permit year.<br>2) MassDOT filed NOTs for 14 projects this permit year as the owner. | 1) MassDOT will continue to track the filing of NOTs for projects by contractors and summarize them in the annual report for the upcoming permit year.<br>2) MassDOT will continue to track the filing of NOTs for projects by MassDOT as owner and summarize them in the annual report for the upcoming permit year. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 4J | Annual Erosion Prevention/ Sediment Control Training | Environmental | 1) Conduct annual erosion prevention/sediment control training for MassDOT construction personnel.<br>2) Summarize the number of trainings and topics covered in the annual report. | 1) and 2) MassDOT Districts have the following trainings planned to cover the requirements for this permit year:<br>District 1 – In-person/Virtual Training on 2/3/26<br>District 2 – In-person/Virtual Training on 3/18/26<br>District 3 – In-person/Virtual Training on 4/9/26<br>District 4 – In-person/Virtual Training on 2/4/26<br>District 5 – In-person/Virtual Training on 3/11/26<br>District 6 – In-person/Virtual Training on 4/1/26<br>These trainings cover: roles and responsibilities, NPDES permitting and amendments, erosion and sediment control, dust, landscape, hazardous materials.<br>Due to scheduling constraints, the District 3 and District 6 trainings were scheduled for after the end of PY23 but will still cover this permit year's training requirements. | 1) MassDOT will continue Erosion Prevention and Sediment Control trainings.<br>2) MassDOT will continue to summarize the number of trainings and topics covered in the annual report. |
| 4K | Project Related Public Notice and Public Participation Requirements | Environmental/ Districts | Continue compliance with federal and state notification requirements including, but not limited to, Wetlands Protection Act, Clean Water Act 401 Water Quality Certification, Army Corps of Engineers 404 Permit, and MEPA/NEPA. | MassDOT maintained compliance with all federal and state notification requirements including Wetlands Protection Act, Clean Water Act 401 Water Quality Certification, Army Corps of Engineers 404 Permit, and MEPA/NEPA. | MassDOT will continue to comply with federal and state notification requirements, as is standard practice. |

## 5. Post-Construction Stormwater Management in New Development and Redevelopment

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 5A | MassDOT Stormwater Design Guide | Environmental/ Construction/ Project Management | 1) Post the 2023 MassDOT SDG on its webpage.<br>2) Implement and maintain the MassDOT SDG. | 1) MassDOT finalized and posted the SDG in PY21, which replaced the former MassHighway Storm Water Handbook. The SDG is composed of four chapters which include discussion of stormwater and regulatory framework, the concept of Integrated Site Design, and design guidance on structural SCMs. The SDG is for designers to reference and use as part of the SCM design process on MassDOT highway projects.<br>2) MassDOT continued to maintain the Engineering Directive E-23-003 which directs designers to use the SDG for all stormwater design on MassDOT projects. | 1) No further action required.<br>2) MassDOT will continue to maintain the SDG and associated Engineering Directive and include it on the MassDOT stormwater webpage. |
| 5B | MassDOT Project Development and Design Guide | Environmental/ Construction/ Project Management | Continue to implement and maintain the content of Chapter 8 of the PDDG to provide guidance on design of drainage systems and erosion and sediment controls for MassDOT roadways. | MassDOT projects continued to be designed in compliance with the erosion and sediment control requirements in the PDDG. Chapter 8 – Drainage and Erosion Control, was last updated and posted to the MassDOT webpage on 12/31/2024. | All MassDOT projects will continue to be designed in compliance with Chapter 8 of the most current version of the PDDG available. |
| BMP 6C fulfills some Minimum Control Measure 5 requirements also, as described in the SWMP. Please refer to updates for this BMP in this annual report. | | | | | |

## 6. Pollution Prevention and Good Housekeeping in Community/Facility Operations

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 6A | Maintenance/Material Storage Yards – Maintenance Program | Districts | Continue to use the developed protocols to perform maintenance activities at maintenance/ material storage yards to maintain environmental compliance. | MassDOT continued to perform maintenance activities at maintenance facilities as outlined in MassDOT's Facility Environmental Handbook.<br><br>MassDOT Environmental personnel were also trained on environmental compliance and awareness issues and completed depot inspections to ensure facility compliance.<br><br>No updates were issued to the Facility Environmental Handbook during this permit year. | MassDOT will continue to implement maintenance outlined in its Facility Environmental Handbook.<br><br>Updates to the established protocols or guidance will be posted to the public webpage. |
| 6B | Road and Roadway Facility – Maintenance Programs | Districts | Continue District-based maintenance schedules and inspection procedures. | MassDOT continued to maintain the highway drainage system through catch basin cleaning contracts and performed street sweeping and regular drainage system maintenance. The schedule for performing these activities is based on District knowledge and practices. District staff focus on known problem areas that impact safety and set standard reoccurring schedules for overall District inspection and cleaning by contractors. | MassDOT will continue to maintain the highway drainage system through catch basin cleaning contracts, street sweeping, and regular drainage system maintenance. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 6C | Programmatic Operations and Maintenance Plan | Environmental/ Districts | 1) Develop the POMP.<br><br>2) Once the POMP is developed, implement maintenance as outlined in POMP.<br><br>3) Provide summary of progress of implementation of POMP.<br><br>4) Continue to track and record inspection and cleaning data. | 1) MassDOT continued to develop a programmatic, asset-management based maintenance program to customize an approach to track the performance of its drainage assets, known as the POMP. The POMP will include draft inspection and maintenance schedules and SOPs for inspection and maintenance procedures for catch basins and SCMs. These schedules and SOPs will continue to be refined as the POMP development phase progresses.<br><br>2) This permit year, MassDOT recorded 18,010 catch basin inspections/cleaning.<br><br>3) MassDOT continues to progress the implementation of the POMP inspection and maintenance schedules and SOPs. The MassDOT Stormwater Management Unit is working with MassDOT District and Headquarters personnel to further refine proposed schedules and forecast budgetary needs and ramp-up over the course of the POMP timeline.<br><br>4) MassDOT continues to implement its GIS inspection and maintenance viewer dashboard. This dashboard will support maintenance staff in scheduling and tracking inspection and maintenance of drainage assets and responding to maintenance needs as they arise. MassDOT also performed updates to the Stormwater Assets Database and associated field maps and forms in GeoDOT to help streamline operations and maintenance work and data collection, both on desktop and in the field.<br><br>The development of the POMP and tracking of inspections and maintenance work is ongoing and will continue into future permit years. | 1) MassDOT will continue to develop the POMP and plans to incorporate updates based on future MassDEP and EPA actions.<br><br>2) MassDOT will continue to develop inspection and maintenance schedules and SOPs for inspection procedures. MassDOT will coordinate with Districts to refine schedules and implement maintenance as outlined in the POMP.<br><br>3) MassDOT will continue to summarize the progress of implementation of the POMP in the annual report.<br><br>4) MassDOT will continue to track and record inspection and cleaning data. MassDOT will also present the inspection and maintenance viewer to each District, gather feedback, and provide updates to dashboards to support streamlined operations. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 6D | Snow and Ice Operations | Highway Operations/ Districts | Continue to monitor trends in annual statewide salt usage relative to the winter weather severity as reported in the 5-year ESPR and related annual reports discussed below. | MassDOT's Snow and Ice Control Program Annual Report for the FY24 Winter Season (2023-2024) demonstrated that much like the past few winters, the 2023-24 winter was warmer than normal and had limited snowfall. Average annual statewide salt usage decreased by approximately 17.4% from Fiscal Year 2022 to Fiscal Year 2025, declining from 23.0 to 19.0 tons per line mile. The Annual Report looks at a Winter Severity Index (WSI) to compare yearly differences in salt use while taking into account the relative severity of winter weather. When the report reviewed similar warmer winters to last year from the time period before key significant equipment and policy upgrades were made, MassDOT used less salt per mile in the 2024-2025 winter.<br><br>MassDOT is now using approximately 119 slurry-spreaders to apply pre-wet road salt across the state, whereas 75 spreaders were in use five years ago. MassDOT continues to see improvements in reduced salt usage through the measures being implemented. | MassDOT Highway Operations and Districts will continue to monitor trends in annual salt usages taking into account fluctuations in winter severity on MassDOT-owned roadways and report in Snow and Ice annual reports.<br><br>MassDOT will also be preparing for the development of the 2027 Snow and Ice Control Environmental Status and Planning Report (ESPR). |
| 6E | Snow and Ice Control Program Environmental Status and Planning Report (ESPR) Review | Environmental/ Districts | Continue to monitor trends in annual salt usage relative to winter weather severity and previous usage which are reported in the ESPR and intervening annual reports, which are posted in the EEA Environmental Monitor portal every 5 years or at the end of each year, respectively. | MassDOT developed the most recent ESPR (2022) in March of 2023, which was posted in the EEA Environmental Monitor portal MEPA Environmental Monitor (state.ma.us).<br><br>MassDOT also began preparing initial data analyses to inform the next ESPR (to be submitted in 2027). These analyses include preliminary responses to new requests from the 2023 MEPA certificate on topics such as climate change, environmental justice, and elevated sodium and chloride levels in public water supplies. MassDOT has begun planning for development of the Draft Scope of Work, which will be informed by the results of these analyses. | MassDOT will continue to monitor trends in annual salt usages on MassDOT-owned roadways. MassDOT will continue to progress initial data gathering and analyses to inform the Draft Scope of Work and ultimately the 2027 Snow and Ice Control Program ESPR. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 6F | Annual Snow and Ice Summary Report | Environmental/ Districts | 1) Continue to monitor trends in annual salt usage relative to winter weather severity and previous usage which are reported in the ESPR and intervening annual reports.<br><br>2) Monitor progress and identify the latest technologies and best practices used in the snow and ice control program as discussed in the annual Snow and Ice Summary Report. | 1) MassDOT monitored trends in annual salt usage relative to winter weather and reported on this data as part of the most recent Fiscal Year 2025 Winter (2024-2025) Snow and Ice Annual Report.<br><br>2) This permit year, MassDOT developed the Fiscal Year 2025 Winter (2024-2025) Snow and Ice Annual Report. The report provides a comparison of deicing material usage relative to the winter weather severity and also documents changes in program operations and equipment that were implemented during this past winter. The report was submitted to EEA and posted on the EEA Environmental Monitor portal MEPA Environmental Monitor (state.ma.us). | 1) MassDOT will continue to monitor trends in annual salt usage relative to winter weather severity and previous usage, and report on this data in the ESPR and intervening annual reports.<br><br>2) MassDOT will continue to investigate latest technologies and best practices to use in the snow and ice control program and summarize in the annual report, which will be submitted to EEA and posted on the EEA Environmental Monitor portal MEPA Environmental Monitor (state.ma.us). |
| BMPs 1A, 1B, 1C, 1D, 4A, and 4G fulfill some of the Minimum Control Measure 6 section requirements also, as described in the SWMP. Please refer to updates for those BMPs in this annual report. | | | | | |

## 7. Impaired Waters

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 7A | Water Quality Data Form - WQDF | Environmental | 1) Continue to implement (and update as needed) the WQDF for designers to promote and incorporate proper stormwater management into prescribed design submissions.<br><br>2) Summarize the number of WQDFs received by MassDOT in annual report. | 1) The WQDF is required for submittal to MassDOT at prescribed design submissions by internal designers and consultants. The form is used to promote treatment to address TMDLs and stormwater-related impairments. This past year, WQDF Version 3.0 (released April 2025) and Version 3.1 (released June 2025) were used by designers and consultants while more updates were completed on a newer version of the form. Version 3.2 (under Permit Year 24) is anticipated to be released in April 2026.<br><br>2) This year, MassDOT received 130 WQDFs. Based on the forms submitted, MassDOT proposed a total of 92 SCMs, including 25 pavement disconnection SCMs and 67 structural SCMs. MassDOT also proposed a total of 108 SCM accessories (e.g., oil and grit separators).<br><br>Additionally, the forms documented site sensitive design measures included in these projects. | 1) MassDOT will continue to require submittal of the most up-to-date WQDF at prescribed design submissions.<br><br>2) MassDOT will continue to summarize the number of WQDFs received in the annual report. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 7B | Review of Specific Sites for Water Quality Exceedance in Response to Conservation Law Foundation et al. Lawsuit | Environmental | 1) Analyze each of the three sites identified in the CLF lawsuit (Charles River crossings in Bellingham and Milford; and North Nashua River crossing in Lancaster). Develop summary report with modeling methodology and summary of results.<br>2) For the sites which are determined to contribute to the exceedance of water quality at the stream crossing, construct SCMs to address MassDOT related exceedances.<br>3) Submit a remedial plan to the court. | 1-3) MassDOT completed these measurable goals in PY8. Each of the crossings were analyzed and SCMs were constructed as determined necessary within the set schedule. The June 8, 2015, Final Submittal to court provided final documented compliance. | 1-3) No further action required. |
| 7U | Water Quality Impaired Waters Assessment and Mitigation Plan | Environmental | 1) Assess all Appendix L-1 waters using the process developed by MassDOT as part of the IWP.<br>2) Assess at least 25 water bodies (both TMDL and non-TMDL waters) within the first quarter (June 8, 2010 – September 8, 2010) of the IWP.<br>3) Submit quarterly progress reports to EPA during the first year of the IWP (June 8, 2010 – June 8, 2011.) and semi-annually thereafter (June 9, 2011 – June 8, 2015).<br>4) Report on design and construction progress of SCMs prioritized during the review in annual reports. | 1- 3) MassDOT submitted assessments to EPA as part of its semi-annual submittals for all waters listed in Appendix L-1 as of its final submission on June 8, 2015. The final submission fully met the schedule.<br>4) Appendix C provides an update on SCMs in design or construction. | 1-3) No further action required.<br>4) MassDOT will continue to develop designs for SCMs to address impaired waters under the IWP and summarize activities in the annual report. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 7C | SCM Data within Stormwater Assets Geodatabase | Environmental/ Asset Management | Continue to maintain SCM data within stormwater assets geodatabase and track stormwater treatment provided by SCMs. | MassDOT continued to maintain a statewide Stormwater Assets Geodatabase on GeoDOT. This year, the Stormwater Management Unit with the assistance of MassDOT staff have continued the effort to map all state-owned drainage assets throughout Massachusetts. MassDOT also uses the inputs from the WQDF to update the SCM database.<br><br>MassDOT is in the process of performing a gap analysis to gather missing treatment information on existing SCMs within the Stormwater Assets Geodatabase. MassDOT has reviewed all existing SCMs with missing treatment information within the Charles River, Mystic River, and Lakes and Ponds Watersheds. For SCMs where the design storage volume and catchment area were able to be identified, phosphorus treatment data was calculated. These calculations went through a QA/QC process and MassDOT updated the treatment data in the Stormwater Asset Geodatabase. As a result of this gap analysis, an additional 139 lbs of phosphorous per year was added to the total phosphorus removal value for the Charles River Watershed. The gap analysis for the SCMs within the Lakes & Ponds and Mystic River watersheds is ongoing. | MassDOT will continue to update its Stormwater Assets Geodatabase to accurately track SCM design and pollutant reduction data. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 7R | TMDL Watershed Review | Environmental | 1) Develop prioritized list of TMDL watersheds to assess based on pollutants and MassHighway (now known as "MassDOT") drainage outfalls.<br>2) Assess 20% of applicable watersheds with TMDLs. Summarize assessment and outcome, including implementation schedules for SCMs if determined necessary, in each annual report.<br>3) Report on design and construction progress of SCMs prioritized during the TMDL assessment in annual reports. | 1) and 2) MassDOT completed these measurable goals in PY8 to meet the prescribed schedule. The June 8, 2015, Final Submittal to the court provided final documented compliance.<br>3) Appendix C provides an update on SCMs in design or construction. | 1) and 2) No further action required.<br>3) MassDOT will continue to update status of SCMs in design or construction. |
| BMPs 6B and 6C also fulfill some of the requirements of Permit Part I.C and Part I.D as described in the SWMP. Please refer to updates for those BMPs in this annual report. | | | | | |

## 8. Additional Requirements

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 8A | Environmental Review Checklist | Environmental | Continue to implement the MassDOT ERC as part of project submissions. | MassDOT issued a new version of the ERC on January 14, 2026, with updated stormwater questions. The new questions ask Environmental Analysts and the designer to confirm a WQDF is provided in the Pre-25% submission, that the project will require compliance with the Stormwater Standards, and if the project proposes a significant increase in impervious area. These questions will help MassDOT evaluate the impacts of a project and if the designer should incorporate SCMs in the project design at 25%. Environmental staff and consultants continued to populate the ERC at various scoping and design project stages to identify permitting requirements early in the design process and streamline environmental review. | MassDOT will continue to update and implement the ERC as part of project submissions. |

| BMP ID # | BMP Description | Responsible Party | Measurable Goal(s) | Progress on Goal(s) – PY23 | Planned Activities – 2026 / 2027 |
|---|---|---|---|---|---|
| 8B | Wetlands Protection Act Compliance | Environmental | MassDOT projects will comply with the WPA and Massachusetts Endangered Species Act (MESA), if applicable. | For projects that require compliance with the WPA and MESA, MassDOT staff continues to coordinate with the Massachusetts National Heritage and Endangered Species Program (NHESP) during the permitting process. | MassDOT will continue to comply with requirements of the WPA and MESA. |
| 8C | 401 Water Quality Certification | Environmental | MassDOT projects will comply with Massachusetts 401 Water Quality certification requirements (which include review of the project by NHESP and USFWS if endangered species habitat is mapped in the project vicinity) whenever they are applicable. | MassDOT continues to comply with Massachusetts 401 Water Quality Certification Regulations. | MassDOT will continue to comply with Massachusetts 401 Water Quality Certification Regulations. |
| 8D | Cultural Resources Review | Environmental | Continue to review projects for impacts and archaeological properties and work to avoid, minimize, and/or mitigate adverse effects. | Projects were reviewed for impacts to historic properties or archaeological resources. None of the projects reviewed had stormwater impacts to significant archaeological or historic resources. Thus, none of these projects required any SCM design alterations based on cultural resource concerns. | MassDOT will continue to review projects for any stormwater impacts to historic resources. |
| BMPs 3A, 4C, 5A, and 7A also fulfill some of the requirements of Permit Part V and IX.D as described in the SWMP. Please refer to updates for those BMPs in this annual report. | | | | | |

## Part IV. Summary of Information Collected and Analyzed

All information collected and analyzed this year is summarized in the proceeding tables and narrative.

## Part V. Program Outputs & Accomplishments (OPTIONAL)

MassDOT's accomplishments during this permit year are summarized in Part 1- 3 of this annual report.

# List of Appendices

# Appendix A: IDDE Status Table

# IDDE Status Table

| Original Date Issued Identified | Date of Most Recent Field Visit/ Sampling | Address | Source Identification | Sampling Results | Description of Potential Issue and Background | Description of 2025 - 2026 Actions | Investigation Status | Next Steps for 2026 - 2027 | District |
|---|---|---|---|---|---|---|---|---|---|
| 2011 | 3/19/2026 | 454 Patriots Road, Templeton (#1), MA | Maintenance Observation | N/A | District 2 observed a small flexible plastic pipe exiting the basement of this property during a maintenance visit. The pipe drains overland and is directed toward a MassDOT inlet. MassDOT reviewed the Non-Vehicular Access Permit Application records for authorized connections and no permit was found. MassDOT sent a Notice of Violation (NOV) letter in 2012 and called the property owner in 2013 with no response. MassDOT's consultant performed a site visit on 4/7/2021 and observed the plastic pipe but no visual indicators of illicit flow and the pipe did not have flow. | On 3/19/2026, MassDOT performed a site visit and observed that the overland pipe coming from the basement has not been removed. MassDOT is in the process of working with the MassDOT legal team to determine next steps, including requesting the home owner to apply for a Drainage Tie-In permit which requires documenting the source of the connection. | MassDOT requesting Tie-in Permit application or Remove Discharge Pipe | MassDOT will continue to work with MassDOT legal to require the property owner to remove the potential illicit connection. A Tie-in permit will only be issued if the property owner can document that the connection only discharges stormwater. | 2 |
| 2012 | 1/8/2026 | 469 Taunton Ave, Seekonk, MA | Visual Inspection | N/A | A potential illicit connection to the MassDOT drainage system on Taunton Ave (Route 44) was identified during an impaired waters assessment site visit. MassDOT's consultant (Jacobs) performed a site visit on 4/20/2021. One MassDOT catch basin located on Taunton Ave was opened to reveal a PVC pipe connected into the structure coming from the direction of 469 Taunton Ave. The pipe wasn't flowing when it was observed, but there appeared to be remnants of grease in the pipe. Jacobs also observed a sheen on top of the water in the structure, as well as some debris floating in the water. MassDOT sent a NOV letter to the property owner in 2022. | On 9/3/2025, District 5 staff contacted the property owner who had recently purchased the property and were not aware of the previous NOV letter sent. On 11/5/2025, MassDOT received a letter from the owner confirming the illicit connection into the state drainage system has been severed and capped. District 5 performed a field visit on 1/8/2026 to the catch basin and verified that the pipe had been cut and capped. MassDOT has documented the cut and cap and this case has been closed. | Closed | No further action needed. | 5 |
| 2015 | 10/22/2025 | 164 Boston Road, Groton, MA (SWIN 243401) | Visual Inspection | Flow was clear and no odor was present. Results for chlorine, surfactants, ammonia, and bacteria did not exceed permit thresholds. | Maintenance staff identified a flowing concrete pipe, located directly outside Johnson's Restaurant and Dairy Bar, discharging into a MassDOT inlet structure (SWIN-243401) along Boston Road (Route 225). During a site visit performed on 4/7/2021, MassDOT's consultant confirmed the presence of the concrete pipe connection. MassDOT reviewed the Non-Vehicular Access Permit Application records for authorized connections and no permit was found. MassDOT performed CCTV of the pipe in 2024 which captured 66 feet of pipe but could go no further and was not able to verify the source of the pipes flow. | On 4/17/2025, MassDOT's consultant performed dry weather sampling of the concrete pipe discharging into the MassDOT catch basin. Sampling results did not exceed permit sewer input thresholds. On 10/22/2025, the consultant performed dye testing as a follow-up to previous CCTV and sampling to determine the source of the flow. Results from the dye testing indicated a connection from the men's and women's restrooms in Johnson's Restaurant and Dairy Bar to the MassDOT catch basin. MassDOT sent a NOV letter on 11/6/2025 to the property owner. While the owner verbally agreed to disconnect from MassDOT's catch basin, the disconnection has not been completed and therefore MassDOT is now in the process of working with the MassDOT legal team to determine next steps. | Investigation On-Going | MassDOT will continue to work with MassDOT legal to require the property owner to remove the illicit connection. Once the connection has been removed, MassDOT will perform follow-up dry weather screening and dye testing to confirm the disconnection. | 3 |
| 2020 | 5/6/2025 | 60 Main Street, Boylston, MA | Maintenance Observation | Sampling results indicate that the flow does not exceed the permit criteria for likely sewer input. | MassDOT observed a potential illicit connection from 60 Main Street tied into a MassDOT inlet. The MassDOT inlet across the street in front of 65 Main Street has a 4-inch PVC pipe entering from the direction of the property at 60 Main Street and the roadway between the inlets has signs of trenching. MassDOT sent an NOV letter to the property owner on 12/28/2020. No communication was received from the owner. At some point the pipe connection was disconnected and a pop-up emitter was installed in the front yard. Sheet flow from a pop-up emitter in the yard now discharges into a different MassDOT drainage structure. MassDOT performed a follow-up site visit on 8/22/2024. In dry weather, no sheet flow was observed coming from the yard at 60 Main Street. MassDOT used CCTV to camera the 4-inch pipe. Sediment build up was observed on the inside of the pipe. The CCTV camera was able to view 75-feet down the pipe, approximately to the edge of the house before refusal. | On 5/6/2025, MassDOT performed wet weather sampling of the overland flow from the pop-up emitter draining into the MassDOT catch basin. MassDOT sampled and tested the flow and results showed that the flow does not exceed permit thresholds for likely sewer input. | Closed | MassDOT has closed this investigation after confirming this connection is only stormwater. MassDOT will work with the resident to confirm the sheet flow from the pop-up emitter and flow to our system is minimized and a Tie-in permit is pursued. | 3 |
| 2021 | 3/19/2026 | 454 Patriots Road (#2), Templeton, MA | Maintenance Observation | N/A | On 4/7/2021, MassDOT's consultant performed an IDDE field investigation to follow up on a potential illicit connection at 454 Patriots Road, Templeton (#1). MassDOT's consultant observed a six-inch high-density polyethylene (HDPE) pipe connected into MassDOT's inlet structure, which is located directly outside the residence. The direction of the HDPE pipe is generally aligned with the western half of the residence at 454 Patriots Road. No flow or obvious signs of an illicit connection were observed at the inlet structure. On 1/23/2026, District 2 sent another NOV Letter to the property owner (multiple copies of the letter were sent by both certified and non-certified mail to two different recipients, the property owners, and their son). | On 3/19/2026, MassDOT performed a site visit to observe the HDPE pipe in the inlet structure. No flow or obvious signs of an illicit connection were observed at the inlet structure. MassDOT is in the process of working with the MassDOT legal team to determine next steps. In previous permit years, this case was combined with the potential illicit connection 454 Patriots Road, Templeton (#1) for reporting, but this year this case has its own row to show there are three separate pipes and potential illicit connections to the one inlet outside of 454 Patriots Road. | Investigation On-Going | MassDOT will continue to work with MassDOT legal to require the property owner to remove the potential illicit connection. | 2 |
| 2021 | 3/19/2026 | 458 Patriots Road, Templeton, MA | Maintenance Observation | N/A | On 4/7/2021, MassDOT's consultant performed an IDDE field investigation to follow up on a potential illicit connection at 454 Patriots Road, Templeton (#1). MassDOT's consultant observed a six-inch polyvinyl chloride (PVC) pipe connected to MassDOT's inlet structure, which is located in front of the residence at 454 Patriots Road. The direction of the PVC pipe is generally aligned with the residence at 458 Patriots Road. No flow or obvious signs of an illicit connection were observed at the inlet structure. | On 3/19/2026, MassDOT performed a site visit to observe the PVC pipe in the inlet structure. MassDOT walked the area around 458 Patriots Road to see if the pipe daylighted or if there were any visible structures that the pipe could have connected to. Based on the direction of the pipe relative to the property, it appears that this pipe may only drain the driveway area. In previous permit years, this case was combined with the potential illicit connection 454 Patriots Road, Templeton (#1) for reporting, but this year this case has its own row to show there are three separate pipes and potential illicit connections to the one inlet outside of 454 Patriots Road. | Investigation On-Going | To confirm whether this pipe drains only the driveway, MassDOT will perform CCTV of the pipe. | 2 |

| Original Date Issued Identified | Date of Most Recent Field Visit/ Sampling | Address | Source Identification | Sampling Results | Description of Potential Issue and Background | Description of 2025 - 2026 Actions | Investigation Status | Next Steps for 2026 - 2027 | District |
|---|---|---|---|---|---|---|---|---|---|
| 2021 | 10/22/2025 | Near 164 Boston Road, Groton, MA (SWIN-169042) | Visual Inspection | High surfactants (9,999 mg/L) and significant colony forming units (CFU) of E. Coli (2,420 CFU/100ml) | During a site visit on 4/7/2021 by MassDOT's consultant of a different potential illicit connection nearby at 164 Boston Road (SWIN-243401), the consultant identified this second potential illicit connection discharging to MassDOT's drainage system. A 6-inch clay pipe with discolored flow and strong odor was found at the inlet structure located near the northeast corner of the Johnson's Restaurant and Dairy Bar parking lot. MassDOT reviewed the Non-Vehicular Access Permit Application records for authorized connections and no permit was found. Dry weather sampling was performed in 2022 (see sampling results to left). MassDOT performed CCTV of the pipe in 2024 which observed 20 feet and confirmed direction of the pipe coming from the building. MassDOT sent the property owner a NOV letter on 3/12/2025. | On 5/28/2025, District 3 met with the property owner and confirmed there was a plugged pipe inside the building (a floor drain) that was the supposed source of flow to the catch basin. MassDOT also observed that the pipe connected into the catch basin was flowing at 25% capacity. On 10/22/2025, MassDOT performed dye testing in the building and observed flow in this catch basin and did not see any dye in the structure during the test. During the same day, MassDOT also confirmed the connection in the building (floor drain pipe) appeared to be capped. | Investigation On-Going | MassDOT will perform dry weather sampling to confirm that capping the pipe has removed the illicit connection and that the flow observed is just stormwater/groundwater flow. | 3 |
| 2021 | 3/17/2026 | Santilli Circle Mystic Road Everett, MA | Visual Inspection | The Department of Conservation and Recreation (DCR) sampled the outfall mistakenly thinking it was owned by DCR. The DCR dry weather flow sampling results exceeded threshold for ammonia, chlorine, and surfactants which indicates a likely sewer input. | This potential illicit connection was identified during a dry weather IDDE survey by DCR and reported to MassDOT's Stormwater Management Unit. MassDOT's consultant, Tetra Tech, performed a site visit on 5/24/2021 to review the site and conduct research on the roadway ownership. Tetra Tech's research on roadway ownership indicated that DCR owns the roadway (based on 1999 plans); however, after further investigation, they verified that the outfall and drainage system ownership was accepted by MassDOT for ownership. Tetra Tech performed two dry weather surveys on 10/1/2021 and 10/6/2021 where no flow was observed. On 10/26/2021, Tetra Tech performed a wet weather survey and a sample was taken at the manhole directly upstream of the outfall which exceeded E. coli and enterococcus thresholds but did not indicate likely sewer input based on MS4 permit requirements. On 3/24/2022, Tetra Tech performed an additional wet weather survey which again exceeded E. coli and enterococcus thresholds but did not indicate likely sewer input. MassDOT confirmed with MWRA that their sewer line was in this area, but it is below MassDOT's drainage system. | While the wet weather values did not exceed the likely sewer input, MassDOT wanted to rule out illicit discharges as a source of the e. Coli and enterococcus results. MassDOT performed CCTV on the accessible stormwater infrastructure within the Santilli Circle drainage system that discharge to the MassDOT outfall. The system was inspected overnight on two separate site visits. On 5/11/2025, Tetra Tech and BMC performed the first night of CCTV work which captured data for all drainage pipes except for several segments that were inaccessible and required cleaning. On 11/9/2025, Tetra Tech and BMC performed the second night of CCTV work which captured the remaining infrastructure that was not accessible during the first inspection. MassDOT reviewed the CCTV footage and did not identify any sources of apparent illicit input. On 3/17/2026, as a final confirmation that there is no illicit connection, MassDOT completed a site walk to confirm there is no illicit input at grade within the catchment area of the system. No potential sources of illicit input were observed during this site visit. Since sources of illicit input were not observed, no dry weather flow was observed on multiple occasions, and the wet weather sampling did not exceed the likely sewer input thresholds, MassDOT is closing this investigation. | Closed | No further action needed. | 4 |
| 2024 | 10/27/2025 | 1 Pineland Ave, Shrewsbury, MA | Visual Inspection | Sampling results did not meet the thresholds for likely sewer input. | MassDOT observed dry weather flow discharging from the corrugated metal pipe outfall at the corner of 3 Pineland Ave's parking lot. MassDOT observed corrosion and orange coloring in the pipe. | On 10/27/2025, MassDOT reviewed the upstream stormwater system that discharges to the outfall at 3 Pineland Ave. MassDOT performed field observations and took dry weather flow samples at the outfall and upstream key junction structures in the ramps and parking lot at 111 SW Cutoff Road in Worcester, where flow from the wetland connects into the MassDOT drainage system. MassDOT tested the flow, and the results indicated that the flow to this outfall does not exceed the permit thresholds for likely sewer input. MassDOT concluded that no further investigation is necessary to close out the IDDE investigation. Based on the catchment investigation, MassDOT concludes that the dry weather flow is input from the nearby wetland. | Closed | No further action needed. | 3 |
| 2024 | 6/5/2025 | 65 Main Street, Boylston MA | CCTV investigation | N/A | While investigating the potential illicit connection at 60 Main Street with CCTV, MassDOT observed a different 4-inch pipe in the MassDOT inlet coming from the direction of 65 Main Street. No dry weather flow was observed at the time of the CCTV. On 3/11/2025, District 3 sent a NOV letter to the property owner. | On 6/5/2025, MassDOT's permits inspector met with the owner and visually confirmed the pipe is no longer functional and the connection from the property has been cut and capped, both on the building and catch basin side. MassDOT documented the cap and cut with photos and added them to the records in the MassDOT IDDE geodatabase. | Closed | No further action needed. | 3 |

# Appendix B: Active MassDOT Construction NOIs in Permit Year 23

# Active MassDOT Construction NOIs in Permit Year 23

*Projects which have filed a NOI during a previous Permit Year are denoted with a "P".*
*Boxes with no checkmarks denote those where the NOI has not yet been filed.*

| District | Project Number | Project Description | Estimated Completion Date | Contractor Filed NOI in PY23 | MassDOT Filed NOI in PY23 |
|---|---|---|---|---|---|
| 1 | 604003 | PITTSFIELD- RECONSTRUCTION OF EAST STREET (ROUTE 9) | 8/31/2028 | ☑ | ☑ |
| 1 | 608886 | CHESTERFIELD- RECONSTRUCTION OF NORTH ROAD AND DAMON POND ROAD | 11/5/2027 | ☑ | ☑ |
| 1 | 608547 | EGREMONT- RECONSTRUCTION OF MOUNT WASHINGTON ROAD (PHASE I) | 11/12/2030 | ☑ | ☑ |
| 2 | 603371 | ORANGE- RECONSTRUCTION OF NORTH MAIN STREET, FROM SCHOOL STREET TO LINCOLN AVENUE (0.4 MILES) INCLUDES RELOCATION OF FALL HILL BROOK CULVERT | 4/27/2029 | ☑ | ☑ |
| 2 | 609049 | WEST BROOKFIELD- RESURFACING & RELATED WORK ON ROUTE 9, FROM 850' WEST OF WELCOME ROAD TO PIERCE ROAD (1 MILE - PHASE II) | 11/28/2027 | ☑ | ☑ |
| 2 | 608881 | LONGMEADOW- SPRINGFIELD- RESURFACING AND INTERSECTION IMPROVEMENTS ON LONGMEADOW STREET (ROUTE 5) AND CONVERSE STREET (0.84 MILES) | 6/8/2028 | ☑ | ☑ |
| 2 | 609002 | GREENFIELD- RESURFACING AND RELATED WORK ON MONTAGUE CITY ROAD | 5/13/2027 | ☑ | ☑ |
| 2 | 609065 | HOLYOKE- RESURFACING AND RELATED WORK ON CABOT STREET AND RACE STREET (CENTER CITY CONNECTOR) | 4/2/2028 | ☑ | ☑ |
| 3 | 609187 | HUBBARDSTON- BRIDGE REPLACEMENT, H-24-003, WILLIAMSVILLE ROAD OVER THE BURNSHIRT RIVER | 8/6/2027 | ☑ | ☐ |
| 3 | 608491 | MENDON- RESURFACING AND RELATED WORK ON ROUTE 16 | 8/9/2029 | ☑ | ☐ |
| 3 | 608778 | SOUTHBRIDGE- INTERSECTION IMPROVEMENTS AT CENTRAL STREET, FOSTER STREET, HOOK STREET AND HAMILTON STREET | 4/20/2029 | ☑ | ☐ |
| 3 | 610659 | STERLING- STORMWATER DRAINAGE IMPROVEMENTS AT WACHUSETT RESERVOIR ON ROUTE 110 (METROPOLITAN ROAD) | 10/30/2026 | ☑ | ☐ |
| 4 | 608816 | LOWELL- DRACUT- METHUEN- RESURFACING AND RELATED WORK ON ROUTE 110 | 11/8/2027 | P | ☑ |
| 4 | 609466 | HAVERHILL- METHUEN- BRIDGE REPLACEMENT, H-12-040=M-17-030, I-495 (NB & SB) OVER MERRIMACK RIVER AND M-17-031, I-495 (NB & SB) OVER ROUTE 110 AND H-12-056, INDUSTRIAL AVENUE (EB & WB) OVER I-495 | 10/14/2030 | ☑ | ☑ |

| | | | | | |
|---|---|---|---|---|---|
| 4 | 605850 | ARLINGTON- CONSTRUCTION OF A NEW DISTRICT FOUR ADMINISTRATION BUILDING ON APPLETON STREET | 12/21/2027 | ☑ | ☑ |
| 4 | 605966 | LOWELL- RECONSTRUCTION & RELATED WORK ON VFW HIGHWAY | 6/5/2027 | ☑ | ☑ |
| 4 | 610726 | MEDFORD- READING- SOMERVILLE- STONEHAM- WINCHESTER- WOBURN- INTERSTATE PAVEMENT PRESERVATION ON I-93 | 4/15/2028 | ☑ | ☑ |
| 4 | 608930 | LAWRENCE- LAWRENCE MANCHESTER RAIL CORRIDOR (LMRC) RAIL TRAIL | 6/7/2028 | ☑ | ☑ |
| 4 | 607887 | LOWELL- ROURKE BRIDGE REPLACEMENT, L-15-088, WITH NEW BRIDGE, L-15-114, WOOD STREET EXTENSION OVER MERRIMACK RIVER AND MBTA/CSX RAILROAD | 4/15/2030 | ☑ | ☑ |
| 4 | 609516 | BURLINGTON- IMPROVEMENTS AT I-95 (ROUTE 128)/ROUTE 3 INTERCHANGE | 5/20/2027 | ☑ | ☑ |
| 4 | 608514 | BEVERLY- TEMPORARY BRIDGE CONSTRUCTION, B-11-001, BRIDGE STREET OVER BASS RIVER (HALL-WHITAKER DRAWBRIDGE) | 5/22/2028 | ☑ | ☑ |
| 4 | 609250 | BILLERICA- INTERSECTION IMPROVEMENTS AT BOSTON ROAD (ROUTE 3A), LEXINGTON STREET AND GLAD VALLEY ROAD | 9/21/2027 | ☑ | ☑ |
| 4 | 605304 | HAVERHILL- BRIDGE REPLACEMENT, H-12-007, BRIDGE STREET (SR 125) OVER THE MERRIMACK RIVER AND THE BRADFORD RAIL TRAIL | 3/17/2032 | ☑ | ☑ |
| 4 | 609211 | PEABODY- INDEPENDENCE GREENWAY EXTENSION | 4/24/2028 | ☑ | ☑ |
| 5 | 608007 | COHASSET- SCITUATE- CORRIDOR IMPROVEMENTS AND RELATED WORK ON JUSTICE CUSHING HIGHWAY (ROUTE 3A), FROM BEECHWOOD STREET TO HENRY TURNER BAILEY ROAD | 10/24/2027 | P | ☑ |
| 5 | 608753 | TAUNTON- CORRIDOR IMPROVEMENTS AND RELATED WORK ON BROADWAY (ROUTE 138), FROM PURCHASE STREET TO JACKSON STREET (PHASE 2) | 8/25/2029 | P | ☑ |
| 5 | 612574 | DENNIS- YARMOUTH- BRIDGE REPLACEMENT, D-07-004=Y-01-003, ROUTE 28 OVER BASS RIVER INCLUDING INTERSECTION IMPROVEMENTS AT MAIN STREET(ROUTE 28)/NORTH MAIN STREET/OLD MAIN STREET | 5/6/2031 | ☑ | ☑ |
| 5 | 606082 | BOURNE- MEDIAN INSTALLATION ON ROUTE 6 (SCENIC HIGHWAY) | 1/14/2031 | ☑ | ☑ |
| 5 | 613358 | STOUGHTON- CORRIDOR IMPROVEMENTS ON ROUTE 138, FROM CANTON T.L. TO CHARLES AVENUE (PHASE 2) | 10/7/2028 | ☑ | ☑ |
| 5 | 608759 | SWANSEA- TRAFFIC SIGNAL AND SAFETY IMPROVEMENTS AT THREE INTERSECTIONS ON ROUTE 6 | 11/30/2028 | ☑ | ☑ |
| 5 | 608616 | TAUNTON- BRIDGE REPLACEMENT, T-01-024, SCADDING STREET OVER SNAKE RIVER | 10/21/2028 | ☑ | ☑ |

| | | | | | |
|---|---|---|---|---|---|
| 5 | 606715 | LAKEVILLE- RECONSTRUCTION AND RELATED WORK ON RHODE ISLAND ROAD (ROUTE 79), FROM THE TAUNTON CITY LINE TO CLEAR POND ROAD | 10/5/2029 | ☑ | ☑ |
| 6 | 607670 | BOSTON- SUPERSTRUCTURE REPLACEMENT, B-16-067 (3GV), MAFFA WAY & B-16-068=S-17-027 (3GW), MYSTIC AVENUE OVER ORANGE & MBTA/BMRR | 12/30/2026 | ☑ | ☐ |
| 6 | 110980 | NEWTON- WESTON- BRIDGE REHABILITATION, N-12-010=W-29-005, COMMONWEALTH AVENUE (ROUTE 30) OVER THE CHARLES RIVER | 10/28/2029 | P | ☑ |
| 6 | 606496 | BOSTON- BRIDGE SUPERSTRUCTURE REPLACEMENT AND WIDENING, B-16-052, BOWKER OVERPASS OVER I-90, MBTA/CSX AND IPSWICH STREET (PHASE 1) | 3/23/2030 | ☑ | ☑ |

# Appendix C: Impaired Waters Program – Summary of NPDES Permit Year 23

# Appendix C

# Impaired Waters Program

## Summary of NPDES Permit Year 23

*Infiltration Basin on I-90 treating stormwater discharge to Dorothy Pond in Millbury, MA.*

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# 1.0 Executive Summary

This past permit year, MassDOT Highway Division (MassDOT) continued to implement the Impaired Waters Program (IWP) through the design and construction of stormwater treatment structures or Stormwater Control Measures (SCMs) in impaired watersheds throughout the state. Phase 1 of the IWP is 99% complete, with only 3 retrofit projects remaining, all in construction. To date, MassDOT has constructed 883 various treatment SCMs as part of IWP Phase 1, providing more than 580 acres of effective impervious cover[1] reduction from MassDOT property.

MassDOT continues to plan, design, and construct SCMs through Phase 2 of the IWP, relying on the Water Quality Data Form (WQDF) as a tool to implement treatment. Designers submitted plans and WQDFs at design milestones from Pre-25% through PS&E for 92 SCMs, including 25 pavement disconnection areas and 67 structural SCMs, as well as 108 SCM accessories (e.g., check dams).

During this permit year, MassDOT released a major WQDF update (version 3.0) to improve SCM data collection for tracking water quality improvements on MassDOT projects, followed by a minor update (version 3.1). MassDOT also advanced prioritization of SCMs in Total Maximum Daily Load (TMDL) watersheds through two initiatives: (1) a data gap analysis of existing SCMs, and (2) project review for SCM inclusion.

# 2.0 Impaired Waters Program Background

MassDOT developed the IWP to address roadway stormwater runoff discharging to impaired waters across the state and to meet commitments under the 2003 National Pollutant Discharge Elimination System (NPDES) Phase II Small MS4 General Permit and the April 22, 2010 EPA enforcement order. “Impaired” water bodies are those listed as Category 4a or 5 on MassDEP’s Integrated List of Waters.[2]

Beginning in 2010, MassDOT committed to a five-year effort to assess all impaired water body segments in the MS4 area that receive runoff from MassDOT roadways. Each assessment determined whether MassDOT roadways drained to the water body, whether stormwater contributed to the impairment, and whether existing SCMs provided adequate treatment. The assessment then set pollutant removal targets and evaluated whether existing SCMs met those targets. Where targets were not met and site conditions allowed, MassDOT committed to design and construct additional SCMs. MassDOT completed assessments of all 684 impaired water bodies meeting the enforcement criteria within five years. The list was later expanded to include additional impaired waters (e.g., from the final 2012 Integrated List), new urbanized areas (2010 census), and newly acquired MassDOT property (e.g., the MassTurnpike), for a total of 826 assessed water bodies.

To use tax dollars efficiently, MassDOT implements IWP SCMs through two primary pathways: Retrofit Projects and Programmed Projects. First, MassDOT maximizes the construction of SCMs as part of major

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[1] The MassDOT IWP uses effective impervious cover as the metric to evaluate the impact of stormwater runoff to receiving waterbody stream quality, as outlined in MassDOT’s IC Method (MassDOT’s Application of the Impervious Cover Method in BMP 7U, 2011).

[2] MassDEP. Integrated List of Waters & Related Reports. Retrieved from https://www.mass.gov/lists/integrated-lists-of-waters-related-reports.

programmed projects where significant improvements are planned for a roadway or intersection (e.g., intersection improvement, highway widening) and if it is feasible to include stormwater treatment upgrades. MassDOT then evaluates the project area draining to the impaired water body and maximizes the installation of structural SCMs as site constraints allow, which may exceed the pollutant removal target set in the assessment.

In areas where programmed projects are not planned and the assessment identified necessary pollutant removal, MassDOT has proactively identified locations to install SCMs along existing roadways as stand-alone retrofit projects, or more typically, incorporated SCMs into resurfacing projects. From the areas identified in the assessments, MassDOT has constructed approximately 99% of these retrofit projects. There are only three retrofit projects remaining, all in construction.

MassDOT has initiated IWP Phase 2 to further advance water quality goals in impaired watersheds, shifting from an individual water body focus to a watershed-based approach that prioritizes TMDL watersheds. This aligns with EPA's watershed-scale treatment emphasis in the 2016 MS4 Permit and Draft 2024 MS4 Permit.

MassDOT catalogs planned and constructed SCMs through designer-submitted WQDFs, which provide SCM data that are uploaded to the stormwater asset database. The WQDF helps designers determine whether a project is within an impaired watershed and provides treatment recommendations based on MassDOT's priority watersheds. Since its inception in 2010, the WQDF has been updated regularly to keep it current with the latest initiatives of the MassDOT Stormwater Unit (the Stormwater Management Unit). The most recent MassDOT WQDF version is available at this link: https://www.mass.gov/info-details/stormwater-management-unit.

This report summarizes progress of the IWP (Phases 1 and 2) and related Stormwater Unit initiatives.

# 3.0 Phase 1 of the Impaired Waters Program

Starting in 2010, MassDOT committed to assess, by June 2015, all impaired water body segments (2010 Integrated List of Waters) receiving runoff from MassDOT roadways within the MS4 regulated area. MassDOT completed these assessments, identified pollutant reduction targets for MassDOT direct discharges, and designed, constructed, and programmed SCMs to meet these targets where feasible.

Programmed projects in the State Transportation Improvement Program (STIP) or otherwise in MassDOT's construction program provide key opportunities to incorporate SCMs and improve water quality through holistic planning, drainage redirection, and utility or alignment modifications. MassDOT uses these projects to maximize stormwater treatment, including in locations outside the MS4 area or on MassDOT-executed municipal projects, where MassDOT funds and/or constructs the project and the municipality retains ownership upon completion of construction.

Retrofit projects (stand-alone or bundled with resurfacing) focus on specific locations where SCMs will improve stormwater quality discharging to impaired waters, specifically direct discharges. For retrofit projects, consultants evaluate MassDOT urban roads draining to impaired waters, identify site constraints, gather survey/geotechnical data as needed, and design SCMs to achieve pollutant reduction to the maximum extent practicable. MassDOT then advertises these designs for construction.

Table 1 presents the remaining retrofit projects that satisfy EPA enforcement commitments and are currently under construction.

**Table 1. Status of Remaining Phase 1 IWP Projects**

| Projects in Construction | | | |
|---|---|---|---|
| **Water Body ID** | **Water Body Name** | **Project Name** | **Estimated Construction Completion** |
| MA62-04 | Taunton River | Somerset – Stormwater Improvements along Route 6 | Fall 2027 (advertised 3/28/26) |
| MA41-05 | Cady Brook | I-90 at Cady Brook | Summer 2026 |
| MA42-03 | French River | I-90 at French River | Summer 2026 |

## 3.1 Total Maximum Daily Load (TMDL) Waterbodies

The 2010 EPA enforcement required that "*all TMDL waters in urbanized areas to which MassDOT discharges must have been evaluated to determine if existing BMPs are sufficient and, if not, MassDOT must have identified additional controls that should be implemented".* By 2015, MassDOT had evaluated all the waters with TMDLs covered by the enforcement that potentially received MassDOT discharges, evaluated the need for additional controls, and programmed construction of SCMs where feasible. MassDOT continues to seek opportunities through programmed projects to incorporate structural SCMs to treat discharges to TMDL waters, using the WQDF, the Stormwater Design Guide (SDG), and proactive project review described in Section 4.3.

# 4.0 Phase 2 of the Impaired Waters Program

With construction of all required SCMs for the EPA enforcement order underway, MassDOT has initiated Phase 2 of the IWP. Phase 2 adopts a watershed-based approach, prioritizing TMDL watersheds, consistent with the 2016 MS4 Permit and Draft 2024 MS4 Permit.

MassDOT is prioritizing projects in watersheds with phosphorus TMDLs that require treatment to meet numeric phosphorus targets in the 2016 MS4 permit. These watersheds include the Charles River watershed, various lakes and ponds in central Massachusetts, and the Mystic River watershed which has an Alternative TMDL from May 2020.

During this reporting year, 27 projects were submitted at major design milestones with 92 individual SCMs as part of IWP Phase 2. Data collected for the 92 SCMs include 25 pavement disconnection areas and 67 structural SCMs. There were also 108 SCM accessories (e.g., check dams, sediment forebays). Table 2 shows the number of SCMs proposed within various watersheds this permit year.

**Table 2. SCMs Proposed in Permit Year 23**

| Watershed | SCMs Proposed |
|---|---|
| Taunton River | 14 |
| Mystic River | 13 |
| Cape Cod (no N TMDL) | 13 |
| Long Island Sound | 13 |
| Buzzards Bay | 12 |
| SuAsCo | 9 |
| Ipswich | 6 |
| North Coastal | 5 |
| Merrimack | 2 |
| South Coastal | 2 |
| Cape Cod (N TMDL) | 2 |
| Boston Harbor | 1 |
| **Total** | **92** |

Phase 2 IWP projects are primarily implemented through programmed projects, relying on the SDG for design guidance and the WQDF to alert designers when they are in a priority watershed and provide recommendations for treatment. These tools, along with MassDOT's review process, work toward maximum inclusion of stormwater treatment on MassDOT projects to the extent practicable.

MassDOT collects SCM data through the WQDF, using spatial locations in addition to water quality treatment information, which allows MassDOT to track treatment at the watershed scale. See more information about data tracking in Section 4.3.

Note that MassDOT is continuing to implement standalone stormwater retrofit projects as opportunity arises. This past year, these projects are being implemented (i.e. design or construction) through the IWP and include the following:

- Sterling - Stormwater Improvement at Wachusett Reservoir MA81147 (Nashua River Watershed)
- Worcester - Route 20 Flood Control Project providing water quality improvements via dredging at Flint Pond MA51188 (Blackstone River Watershed)
- Worcester - Stormwater Improvements along I-290 and 122A addressing Unnamed Tributary MA51-08 (Blackstone River Watershed)

## 4.1 Stormwater Design Guide and Water Quality Data Form

Phase 2 relies on MassDOT's integrated stormwater tools, including the SDG, WQDF, and associated design and review processes.

The SDG provides design guidance for programmed project designers, directing them to maximize the water quality treatment provided on site and assisting MassDOT with meeting MassDEP's Stormwater Standards, when applicable. It includes MassDOT-preferred SCMs and techniques for SCM selection and design for MassDOT's roadway setting. It supports designers in providing information to MassDOT to support tracking stormwater treatment on a watershed-basis in alignment with EPA's stormwater treatment approach. The SDG follows MassDOT's priorities for stormwater treatment in impaired watersheds with a focus on the design of structural SCMs. Issued in November 2023, it supersedes the 2004 MassHighway Storm Water Handbook.

The WQDF implements SDG principles at the project level. It collects project scope and location information to generate treatment recommendations based on EPA's watershed-scale pollutant reduction framework and MassDOT's stormwater initiatives and SDG guidance. The WQDF provides designers with general guidance for implementing SCMs, calculates treatment metrics, performs data validation, and collects detailed location and attribute data for structural SCMs (including pavement disconnection) and accessories (e.g., check dams, sediment forebays) for loading into the stormwater asset database. MassDOT's Environmental Section reviews WQDFs at prescribed design phases and provides comments on proposed SCM designs.

The WQDF also documents environmentally sensitive site design and Low Impact Development (LID) measures, such as preserving existing vegetation and drainage patterns, maintaining riparian buffers, minimizing disturbance to wetlands, promoting sheet flow to vegetated areas, and reducing impervious cover, reflecting Chapter 3 of the SDG. For structural SCM design guidance, the WQDF directs users to SDG Chapter 4.

MassDOT released a major WQDF revision in May 2022 (version 1.0) emphasizing Integrated Site Design (ISD) and incorporating EPA's treatment curve methodology for consistent SCM credit tracking. In June 2023, version 2.0 improved data collection, validation, and designer review/certification processes. In April 2025, MassDOT released version 3.0, further improving data collection and enabling identification of existing or previously proposed SCMs at a location, followed by version 3.1 in June 2025 to fix a bug and provide additional designer guidance.

MassDOT also maintains the WQDF Reference Map (which can be found here: https://experience.arcgis.com/experience/0eef00c41c764872b0f148a4f7fb9cf2), which should be used as a resource with the WQDF. This webmap contains the following geospatial data:

- MassDOT Highway Projects,
- MassDOT SCMs,
- MassDOT SCM accessories,
- MassDOT roads,
- Impaired waterbodies as defined by the Integrated List of Waters,
- MS4 regulated area,
- Town boundaries,
- MassDOT priority watersheds, and
- TMDL watersheds defined by MassDEP.

## 4.2 SCM Data Management and Tracking

The WQDF provides a standardized method for MassDOT's Environmental Section to collect treatment data for projects with structural SCMs, enabling more accurate pollutant reduction tracking, with an emphasis on nutrient reduction in TMDL watersheds.

MassDOT has been tracking SCM data in its SCM data layer since the inception of the IWP. Currently the SCM data layer contains over 1,600 features. MassDOT has continued to maintain and update the SCM data layer within the stormwater asset database to track structural SCMs proposed and constructed by our design consultants. The SCM data layer is a powerful tool in the analysis of MassDOT's program and future planning/water quality analysis and allows MassDOT to summarize treatment by watershed for tracking.

The SCM data layer also allows for tracking of SCM inspections and maintenance activities. MassDOT is in the process of developing additional data management and visualization tools which will meet the needs of both office and field staff for planning, tracking, and reporting on inspection and maintenance activities.

Based on MassDOT's current stormwater asset database to date, MassDOT has constructed 883 various treatment SCMs as part of the IWP, which provide more than 580 acres of effective impervious cover reduction from MassDOT property. MassDOT will continue to add SCMs and treatment data and calculate credits as the stormwater asset database and mapping program evolve. New MassDOT SCMs will continue to be added to the database via the WQDF process.

## 4.3 SCMs in TMDL Watersheds

During this permit year, MassDOT continues to meet Stormwater Management Plan (SWMP) BMP 7R (TMDL Watershed Review) by prioritizing design and construction of SCMs in TMDL watersheds and tracking pollutant removal being provided by existing SCMs through the initiatives below.

SCM Data Gap Analysis

The Stormwater Management Unit conducted a SCM data gap analysis for MassDOT's highest priority TMDL watersheds to begin tracking progress towards treatment goals which include:

- Charles River watershed,
- Mystic River watershed, and
- Lakes and Ponds watersheds with phosphorus TMDLs.

The analysis identified MassDOT-owned SCMs in these watersheds for which phosphorus pollutant load and removal credit data had not been incorporated into the asset database. For SCMs with design plans and stormwater reports which had enough detail, MassDOT calculated phosphorus credits, had a consultant QA/QC them, and then updated the stormwater asset database accordingly.

MassDOT uses an internal TMDL dashboard to track SCM pollutant reduction and progress toward treatment goals in TMDL watersheds and will continue to rely on this tool for evaluating watershed-scale progress.

Project Review of Programmed Projects for SCM Inclusion

The Stormwater Management Unit formally reviewed the STIP list of projects and identified programmed projects for MassDOT roads/facilities which are in design and suitable for additional SCMs, with a focus on TMDL watersheds. The Stormwater Management Unit developed implementation scoring criteria to evaluate projects based on:

- What is the scope of work?
- Is there MassDOT Right-of-Way available?
- Are there utilities (overhead and underground), buildings or structures that would impede the construction of an SCM?
- Do proposed conditions include closed drainage or country drainage?

- Are there resource areas nearby?
- Are there physical constraints that would prevent the capture of stormwater runoff?
- Is the space available for an SCM too close to a vehicular travel lane?

The Stormwater Management Unit assigned each criterion a weight and then calculated a weighted score for each project. Based on the project scores, the Stormwater Management Unit identified a subset of projects that were further reviewed for location within MassDOT's highest priority TMDL watersheds (i.e., those with phosphorus TMDLs). If a project was located within one of those watersheds, the Stormwater Management Unit met with MassDOT project managers and designers to discuss the potential of implementing SCMs within TMDL watersheds to the maximum extent practicable. This effort is ongoing as final determinations are made regarding the feasibility of incorporating SCMs into these projects.

While WQDFs also facilitate SCM inclusion, this review allows the Stormwater Management Unit to communicate water quality goals directly with project managers and to promote SCM consideration earlier in project scoping.

# 5.0 Stormwater Asset Database and Drainage Mapping

This permit year, MassDOT continued the Statewide Drainage Mapping Initiative to capture SCM and drainage features not yet documented in the database. This effort supports effective IWP implementation, treatment tracking in impaired watersheds, MassDOT's Illicit Discharge Detection and Elimination (IDDE) Program, and Operations and Maintenance (O&M) of catch basins and SCMs.

MassDOT began using internal staff to complete drainage asset mapping in Summer 2023, and since then, has continued to expand the program and train new mappers and internal review staff. Trained mappers use georeferenced construction and as-built plans (as available) to digitize stormwater features within a controlled version of MassDOT's stormwater asset database. Work is reviewed by an external consultant or trained internal reviewer and then posted to the live GeoDOT stormwater asset database.

During this permit year, MassDOT completed its third round of mapping with internal staff. To date, MassDOT has completed mapping drainage infrastructure for about 17% of the state. To accelerate progress, MassDOT plans to use consultants for the next mapping round while retaining internal staff on an as needed basis. Consultant mapping is scheduled to begin in Spring 2026.