

Daniel E. Wathen, [Augusta, Chairman](#)  
Robert D. Stone, [Auburn, Vice Chairman](#)  
Michael J. Cianchette, [Cumberland](#)  
Ann R. Robinson, [Portland](#)  
Thomas J. Zuke, [Saco](#)  
Bruce A. Van Note, [Ex-Officio](#)



Peter Mills, [Executive Director](#)  
Douglas D. Davidson, [Chief Financial Officer & Treasurer](#)  
Peter S. Merfeld, [P.E., Chief Operations Officer](#)  
Jonathan A. Arey, [Secretary & General Counsel](#)

**VIA E-MAIL**

September 14, 2021

Ms. Rhonda Poirier, MEPDES Stormwater Program Manager  
Division of Water Quality Management  
Bureau of Water Quality  
Maine Department of Environmental Protection  
17 State House Station  
Augusta, Maine 04333-0017

SUBJECT: Maine Turnpike Authority  
Stormwater Program Management Plan  
Maine DEP Permit # MER043001  
Annual Report for Permit Year Eight (July 1, 2020 through June 30, 2021)

Ms. Poirier:

On behalf of Maine Turnpike Authority (MTA), we are pleased to submit this Annual Report for Permit Year Eight (PY8, defined as July 1, 2020 through June 30, 2021). This report is intended to satisfy the requirements in **Part IV(J)** of the Maine Pollutant Discharge Elimination System (MEPDES) General Permit for Stormwater Discharges from Maine Department of Transportation (MaineDOT) and MTA Municipal Separate Storm Sewer Systems (MS4s).

This Annual Report describes the status of MTA's Best Management Practices (BMPs) and Measurable Goals (MGs) program for each of the six Minimum Control Measures (MCMs) presented in MTA's Stormwater Program Management Plan (SPMP) (dated December 2, 2013) for PY8.

**BACKGROUND**

MTA's SPMP was developed in accordance with **Part IV(A)** of the MPDES MS4 General Permit for the purpose of establishing, implementing and enforcing a stormwater management program to reduce the discharge of pollutants from MTA's roadways, drainage areas and facilities located within Urbanized Areas (UAs). For each MCM established in the SPMP, MGs have been established to evaluate the effectiveness of the designated BMPs. A schedule with milestones for implementation of applicable BMPs have been established for these goals. The SPMP has not been modified or updated since its initial submittal to the Maine Department of Environmental Protection (Maine DEP); therefore, a copy of the SPMP is not included with this report

In accordance with **Part IV(J)(1)** of the MPDES MS4 General Permit, this Annual Report provides a summary of activities that demonstrate MTA's compliance status with respect to the MS4 permit conditions and progress toward the achievement of the goals identified for each MCM in the subsections below. No monitoring or other data collection activities were required by the MS4 permit in PY8. Anticipated activities in PY9 include additional stormwater infrastructure mapping update efforts (BMP 3.1), dry weather inspections (BMP 3.2), MS4 infrastructure maintenance and cleaning (BMP 6.3, 6.4, and 6.5), municipal coordination (BMP 2.2 and 3.4),

**Safe | Reliable | Sustainable**

employee training (BMP 6.2), and ongoing construction projects that include new post-construction BMPs (BMP 5.2). No changes have been made to measurable goals identified in the SPMP. The subsections below describe the activities, progress, and accomplishments for each of the MCMs.

MTA enforces certain MCMs through construction contract specifications and has developed the Construction Project Environmental Compliance (CPEC) Program to document compliance with MS4 MGs and other stormwater requirements. Relevant elements of the CPEC Program are summarized in **MCMs 1, 4, 5 and 6**. The CPEC Program was not modified in PY8.

## **MCM 1 - PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS**

### ***Goals:***

- 1. To raise awareness that polluted stormwater runoff is one of the most significant sources of water quality problems for Maine's waters;*
- 2. To motivate staff and contractors to use Best Management Practices (BMPs) which reduce polluted stormwater runoff; and*
- 3. To reduce polluted stormwater runoff through increased awareness and utilization of BMPs.*

### **BMP 1.1 CONTINUE RAISING AWARENESS OF STORMWATER ISSUES AMONGST EMPLOYEES AND CONTRACTORS**

MTA's annual stormwater training program was conducted for maintenance personnel and construction inspectors to address pollution reduction in stormwater runoff. The maintenance personnel stormwater training program, which is combined with Spill Prevention, Control and Countermeasures (SPCC) and Erosion and Sedimentation Control (ESC) practices training, is typically completed annually in May and June by regulatory specialists from GZA GeoEnvironmental, Inc. (GZA) and MTA staff. As a result of the COVID-19 pandemic, MTA modified the maintenance personnel training format for 2021, by providing 'take home' PowerPoint training handouts and a quiz, which was returned by the trainees to MTA staff for grading and evaluation.

MTA staff also delivered an in-person PowerPoint review of construction project environmental and permit compliance to MTA's construction inspectors and MTA management during MTA's Annual Construction Inspectors Meeting on March 5, 2021 and March 12, 2021.

MTA SPCC/ Stormwater/ ESC training sessions held in 2021 emphasized the following:

- Stormwater pollution prevention BMPs for highway maintenance facilities, including structural and non-structural BMPs, and best practices for equipment storage/ maintenance, vehicle rinsing and washing, materials handling and storage;
- MTA's Spill Prevention, Control, and Countermeasure (SPCC) Refresher Training, including regulatory background, SPCC/Stormwater Facility Plans and potential sources, Spill Prevention and Control BMPs, spill response procedures and notifications;
- MTA's Mobile SPCC Plan, which includes procedures for refueling of mobile equipment, such as mowers, loaders, and other heavy equipment, and to avoid/ minimize refueling in environmentally sensitive areas, such as within UA and UIS watersheds;
- Erosion and sedimentation control BMPs for construction sites, including maintaining limits of disturbance, erosion control barriers and other structural BMPs, BMP inspection and maintenance, mulch application, winter construction requirements, street sweeping, and appropriate re-establishment of vegetation cover;

- MS4 Permit obligations and recordkeeping requirements;
- Illicit discharge identification and response requirements;
- Post-construction stormwater BMP inspection obligations and maintenance practices for highway operations staff;
- Maine DEP and U.S. Army Corps of Engineers Permit obligations; and,
- MTA’s CPEC program, including the need for weekly construction inspection report records with photos, and construction-phase and post-construction checklist completion.

These training topics were selected to help ensure that MTA highway maintenance and operations staff, and construction site resident engineers and inspectors are aware of their roles in achieving the goals of MTA’s Stormwater Awareness Plan. Additionally, MTA’s CPEC Program requires that contractors performing work on projects located within MTA’s UA or an UIS watershed receive, review, and sign a copy of this plan. By signing the plan, the contractor is acknowledging that they have read, understand, and will disseminate the information in the plan to individuals working on the project.

Process Indicators for PY8 are as follows:

- Number of employee training sessions: **3**
  - One take home training packet and quiz were provided to staff each of the following MTA highway maintenance facilities: York, Kennebunk, Crosby/ South Portland, Gray, Auburn, and Litchfield/ West Gardiner; and,
  - Two in-person construction inspectors’ meetings were held at MTA headquarters (HQ) on March 5 and March 12, 2021 where a review of key environmental protection measures were discussed.
- Number of MTA employees trained: **77 highway operations staff, 3 management staff, and 6 construction residents/ inspectors**
- Number of contracted resident engineers and construction inspectors trained: **18**
- Number of contractors provided a copy of MTA’s Stormwater Awareness Plan: **3**

Impact indicators are not required for PY8.

#### BMP 1.2 CONTINUE ENCOURAGING EMPLOYEES AND CONTRACTORS TO UTILIZE BMPs THAT MINIMIZE STORMWATER POLLUTION

In PY8, MTA maintained and implemented the existing BMP Adoption Plan that identifies target BMPs to be utilized by employees and contractors that are designed to minimize stormwater pollution. As part of the urban impaired stream (UIS) strategy associated with this MCM, the BMP Adoption Plan places emphasis on utilizing target BMPs within MTA’s two designated highest priority watersheds. Best Management Practice implementation at MTA construction sites was reviewed during the employee training as described in **BMP 1.1** (above) to ensure that all MTA employees are aware of their roles in achieving the goals of the Targeted BMP Adoption Plan.

Process Indicators for PY8 are discussed under **BMP 1.1**. Impact indicators are not required for PY8.

#### BMP 1.3 CONTINUATION OF EXISTING EDUCATION AND OUTREACH EFFORTS

MTA has continued the existing education and outreach efforts established during the previous MS4 permit cycle. MTA requires all contractors to submit training certificates for the delegated On-Site Responsible Party (OSRP) on

MTA contracted projects, regardless of the size or location of the project, to ensure they are adequately trained and knowledgeable in ESC from Maine DEP's Non-Point Source (NPS) Training Program or an equivalent program.

Process Indicators for PY8 are as follows:

- Number of completed or ongoing construction projects within the UA disturbing one acre or more: **5**
- Number of initiated construction projects within the UA disturbing one acre or more: **3**
- Number of contractors required to review and sign copies of MTA's Stormwater Awareness Plan and Targeted BMP Adoption Plan in PY8: **3**

Impact indicators are not required for PY8.

Additionally, MTA was a bronze level sponsor of Maine's Envirothon, which is a natural resource problem-solving competition where high school students are tested, in an outdoor setting, in five natural resource areas: aquatics, forestry, soils, wildlife, and a current nationwide environmental issue.

## **MCM 2 – PUBLIC INVOLVEMENT AND PARTICIPATION**

### ***Goals:***

*Involve MTA's community including various departments or facilities, and when applicable, involve regulated small MS4 communities, in both the planning and implementation process of improving water quality and reducing quantity via the stormwater program.*

### **BMP 2.1 PUBLIC NOTICE REQUIREMENT**

MTA maintains a written public notice policy and complies with the Maine Freedom of Access Act. In PY8, MTA did not host any public meetings involving MS4 stakeholders in the implementation of this General Permit.

### **BMP 2.2 COORDINATE WITH REGULATED COMMUNITIES**

In PY8, the MTA maintained close communication with MS4 communities and their respective Stormwater Coordinators, primarily through participation in the Greater Portland Interlocal Stormwater Working Group (ISWG) and the Southern Maine Stormwater Working Group (SMSWG). Community coordination is also a component of MTA's CPEC program, which includes project development phase communication with host municipalities that addresses planned construction and maintenance activities. Additionally, MTA complies with stormwater management requirements of UIS watersheds both within and outside of the UA. MTA communicates periodically, through participation in local stormwater group meetings and involvement as a stakeholder with host municipalities regarding watershed management planning efforts within MTA's ROW. MTA participated in the following efforts in fulfillment of **MCM 2** in PY8:

- MTA personnel have attended and participated in numerous public meetings related to stormwater management, including five ISWG meetings, three SMSWG meetings, three MS4 stakeholder meetings with Maine Department of Environmental Protection (Maine DEP) staff, one Goosefare Brook Steering Committee Meeting, one transportation MS4/ Departments of Transportation New England regional working group meeting, and one webinar hosted by the U.S. Environmental Protection Agency on stormwater management for transportation infrastructure. MTA personnel maintained contact with the Lewiston-Auburn MS4 cluster through ISWG meetings;
- Maintained a position on the Long Creek Watershed Management District (LCWMD) Governing Board. MTA personnel attended and participated in six LCWMD Governing Board meetings in PY8; and,

- Coordinated with a private landowner that owns property abutting the Warren Avenue Bridge rehabilitation projection in Portland regarding stormwater concerns, which was ongoing in PY8. The landowner was concerned that a swale draining stormwater from the construction site was discharging sediment into a catch basin on their property. MTA promptly responded by improving check dams draining into the swale and installing a stone-lined construction-phase plunge pool at a median culvert outlet draining into the swale. This addressed the landowners concerns satisfactorily. The culvert outlet will ultimately be abandoned when construction is complete due to permanent median drainage modifications as part of the bridge rehabilitation project, resulting in substantially less median drainage entering the swale and the abutting property owner's catch basin.

### **MCM 3 – ILLICIT DISCHARGE DETECTION AND ELIMINATION**

#### ***Goals:***

*Develop, implement and enforce a program to detect and eliminate illicit discharges and non-stormwater discharges in MTA's stormwater systems.*

#### **BMP 3.1 GROUND VERIFY WATERSHED-BASED MS4 INFRASTRUCTURE MAP**

The UA within MTA's ROW was mapped during the previous MS4 permit cycle using 2000 Census Bureau data. In PY1, MTA completed the process of identifying the additional UA that required stormwater infrastructure mapping as a result of the 2010 Census Bureau data. PY2 ground verification of infrastructure in the two highest priority watersheds identified a data gap in MTA's infrastructure mapping at bridge structures associated with intersecting local roads (i.e., over/underpasses). During PY3, MTA began mapping the drainage infrastructure at bridge structures associated with intersecting local roads (i.e., over/underpasses) and continued this effort in PY4, PY5, and PY6. In PY7, MTA also completed a comprehensive update of MTA's MS4 infrastructure mapping based on desktop review of recently completed major construction projects. In PY8, MTA completed additional MS4 infrastructure mapping updates based on major construction projects completed through late winter/spring 2021, and MS4 infrastructure identified as part of PY8 coordinated municipal inspections (see BMP 3.2).

MTA maintains its stormwater infrastructure mapping data in an ArcGIS Server geodatabase that is not publicly available on the MTA website. A copy of the geodatabase and/or pdf maps can be made available to Maine DEP or other interested parties upon request. MTA typically updates these maps annually to reflect modifications in infrastructure (e.g., infrastructure removal/installation, more accurate mapping data, etc.). Maps and tracking forms are provided to each maintenance facility every spring to facilitate catch basin cleaning and dry weather inspections.

#### **BMP 3.2 CONDUCT DRY WEATHER INSPECTIONS OF OUTFALLS AND IMPLEMENT A COORDINATED INSPECTION PROGRAM**

As part of MTA's prioritized dry weather inspection program, MTA staff conducted dry weather inspections at approximately 204 sites in PY8. Of these, 39 constituted outfalls as defined by the MS4 permit. Large scale construction projects that are underway within the MS4 permit area, making certain sites inaccessible for inspection or clean out. Once construction is completed, normal inspection of currently inaccessible sites will resume. In addition, there are a number of dry weather inspection sites in the two-lane section of highway between Mile Marker (MM) 41-53 that are currently not able to be inspected due to safety concerns. MTA's Highway Maintenance Lane Closure Guidance specifies that two travel lanes must remain open during times of high traffic volume. To complete dry weather inspections safely, road crews must set up lane closures during times of off-peak traffic volume. Due to active construction work and the high level of daytime traffic on the stretch of two-lane highway between MM 41-53, lane closures are not permitted during daytime working hours. MTA has not authorized night time work for MS4 dry weather inspections; therefore, MTA staff cannot safely inspect the stormwater infrastructure on this

stretch of highway. Construction of a third travel lane in both directions of the Turnpike between MM 43.0 and 48.8 commenced in 2020. As part of that construction, catch basins within the project area will be cleaned, and future inspection of catch basins should be facilitated by the addition of the third travel lane.

MTA's dry weather inspection program includes inspection and cleanout, as needed, of catch basins (CBs), CB outlets, and outfalls (OFs) within the UA and UIS watersheds. Priority is given to the Goosefare Brook and Hart Brook watersheds; however, maintenance crews also inspect and cleanout, as needed, the remaining stormwater infrastructure in the UA every year as a proactive measure. MTA continues to use tracking forms to capture dry weather inspection and catch basin cleanout information, which are summarized in **BMP 6.4** and available to Maine DEP upon request. In PY8 MTA cleaned approximately 55 catch basins in the UA.

In PY8, MTA worked with MS4 Stormwater Coordinators in Biddeford, Saco, and South Portland to evaluate stormwater outfalls and discharges. A summary of those activities is provided below.

### Biddeford

In October 2020, MTA completed an inspection of the South Street and Route 111 Underpass bridges in Biddeford. Inspection of the bridges identified connections between the municipal and MTA MS4 systems including bridge deck drains and riprap downspouts from the road shoulder. Both bridges had four deck drains and four riprap downspouts each, situated near the bridge joint and abutment. Not all of the deck drains and downspouts were located within the actual MS4 boundary, because the bridges lie at the edge of the MS4 UA. Drainage swales on either side of the northbound emergency vehicle ramp from South Street were also identified, which drains runoff from the ramp into the MTA highway ROW ditch line. At both sites, runoff drains from the bridge and road surfaces and into MTA's ROW and MS4 drainage system.

No drainage from MTA's MS4 system into the municipal system was identified, with the exception of any runoff from the bridge surfaces, Route 111, or South Street that is not collected by the deck drains or downspouts and ultimately makes it into the municipal MS4 system. MTA updated its MS4 mapping accordingly as part of its annual update. No indications of illicit discharges or potential illicit discharges were observed. The drainage systems collect only road runoff, and no erosion or sedimentation problems were observed. Biddeford's municipal MS4 Stormwater Coordinator was offered the opportunity to attend the inspection. Although the municipal MS4 Coordinator was not able to attend, the findings of the inspection were communicated to municipal MS4 Coordinator by email.

### Saco

On behalf of MTA, on September 28, 2020 GZA accompanied the City of Saco MS4 Stormwater Coordinator on an inspection of three sites where MTA's ROW intersects the City's ROW in the MS4 UA: North Street (Route 112) Underpass, New County Road (Route 5) Underpass, and Boom Road Underpass. The objective of the site inspection was to confirm MS4 stormwater infrastructure mapping, and to identify any potential illicit discharges or erosion and sediment control problems. Findings are summarized below:

#### North Street (Route 112) Underpass:

- Four unmapped bridge deck drains;
- One offsite commercial catch basin system that outfalls into MTA MS4 system; and,
- One stormwater treatment basin on adjacent commercial property, with an unknown outlet location.

New County Road (Route 5) Underpass:

- Four unmapped bridge deck drains;
- Four unmapped rip-rap downspouts;
- One unmapped run-on point to MTA MS4 system from new subdivision; and,
- Three off-ROW non-MTA municipal cross culverts that should be added to MTA's MS4 mapping for reference purposes.

Boom Road Underpass:

- Four unmapped bridge deck drains; and,
- Two unmapped rip-rap downspouts.

The identified unmapped MS4 infrastructure was incorporated into MTA's MS4 mapping as part of MTA's annual update. No illicit discharges, or erosion or sediment control problems were observed.

South Portland

In October 2020, MTA and the City of South Portland's MS4 Stormwater Coordinator corresponded to confirm mutual commitments to notify each other of identified illicit discharges that drain into or could potentially drain into the other party's nested MS4 stormwater infrastructure. MTA also provided the City of South Portland with the current copy of MTA's MS4 infrastructure mapping for their reference.

BMP 3.3 IMPLEMENT OPEN DITCH ILLICIT DISCHARGE PROGRAM

In PY8 the MTA IDDE program included MTA's open ditch systems. Open ditch IDDE efforts were completed during catch basin inspection activities within the portions of MTA's UA that could be safely accessed for inspection and that were located outside of active work zones. Ditches that discharge directly to waters of the state have been included on the same catch basin inspection tracking forms used to capture catch basin inspection and catch basin cleanout information, which are summarized under **BMP 6.4**, below, and available to Maine DEP upon request. MTA has also categorized connections from CB drain pipes into its ditch system as outfalls and evaluated these conveyances for the presence of unauthorized discharges via dry weather inspection. No illicit discharges were observed in PY8.

BMP 3.4 CONTINUE TO IMPLEMENT ILLICIT DISCHARGE DETECTION AND ELIMINATION PROCEDURE POLICY

MTA has an established procedure and has developed a form for evaluating and documenting suspected illicit discharges. The catch basin cleanout and IDDE tracking form directs the inspector to complete the Suspected Illicit Discharge Form and notify MTA's Permitting Coordinator who then performs an investigation of each suspected illicit discharge in accordance with MTA's IDDE SOP. In permit years one through five (PY1-PY5), no illicit discharges were identified during MTA's annual dry weather inspections; however, one illicit discharge was identified in PY4 during MTA routine maintenance. In PY6, one illicit discharge was identified during MTA's Coordinated Inspection with the City of Portland. In PY7 and PY8, no additional illicit discharges were identified.

BMP 3.5 IDENTIFY NON-STORMWATER DISCHARGES

Five vehicle accident or construction-related spills within the UA occurred in PY8, which were reported to Maine DEP and cleaned up as soon as possible without impacts to stormwater infrastructure or waters of the State. Copies of the spill reports are available to Maine DEP upon request.

## MCM 4 – CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

### **Goals:**

*Continue to implement and enforce MTA's program to reduce pollutants in stormwater runoff from construction activities that result in a land disturbance of greater than or equal to one acre.*

### **BMP 4.1 CONTINUE TO IMPLEMENT CONSTRUCTION PROJECT ENVIRONMENTAL COMPLIANCE (CPEC) PROGRAM**

The CPEC Program is the primary means by which the MTA addresses stormwater management issues, including runoff from construction activities conducted by MTA and/or its contractors. The CPEC Program includes MS4 elements intended to control stormwater runoff from construction sites such as:

- Language in the specifications and ESC Plan to notify the contractor that they are in an MS4 project area;
- Requiring contractors to provide Maine DEP erosion and sediment control training certificates for the delegated OSRP for each contracted construction project, regardless of size or location; and,
- Applying structural and non-structural BMPs during construction in an MS4 project area.

In PY8, MTA maintained these requirements, as well as those construction-related requirements associated with Chapter 500 of Maine's Stormwater Management Law as implemented through the Memorandum of Agreement for Stormwater Management Between the Maine Department of Transportation, Maine Turnpike Authority and Maine Department of Environmental Protection (Stormwater MOA). These measures included the requirement to apply MaineDOT's BMP/ESC Manual on all projects.

The MTA submits a separate Annual Progress Report to the Maine DEP to satisfy the requirements in the Stormwater MOA, as adopted by the Maine DEP, MaineDOT, and MTA. The Annual MOA Report, which was submitted to Maine DEP in April 2021, summarized construction projects disturbing an acre or more. In PY8, there were eight active construction projects within the UA disturbing one (1) acre or more:

- 2018.19 – Cummings Road Underpass Bridge Replacement, Mile 44.6 – Scarborough
- 2018.20 – York Toll Plaza, Mile 8.8 – York
- 2019.09 – Bridge Improvements, Stroudwater River Overpass, Mile 46.7 and Maine Central Railroad Overpass, Mile 47.9 – Portland
- 2019.10 – Warren Avenue Bridge Improvements Mile 49.0 – Portland
- 2019.13/14 & 2021.07 – Exit 45 Interchange Reconstruction Mile 44.9 – Scarborough and South Portland
- 2020.03 – Portland Area Widening & Safety Improvements Mile 43.0 to Mile 46.4 – Scarborough, Portland, and South Portland
- 2020.09 – Riverside Industrial Parkway Emergency Vehicle Ramp Mile 50.0 – Portland
- 2021.01 – Paving and Ramp Improvements MM 30 – 35.5 – Biddeford

Active construction projects in PY8 were documented under MTA's CPEC Program, which includes inspection documents and other environmental compliance considerations. MTA continues to rely on binding contract language to ensure that contractors comply with the construction related BMPs/requirements of (1) Chapter 500; (2) applicable portions of the MOA; (3) the Maine Construction General Permit (CGP); and (4) the MS4 permit.

MTA employees and contractors are trained appropriately on construction site stormwater management controls. Contractors and MTA personnel are required to conduct weekly inspections and maintain inspection documentation for review when performing construction. The CPEC Program requires projects to be inspected as follows:

- Prior to construction (e.g., photographic documentation, temporary BMPs in place, etc.);
- On at least a weekly basis, and preceding and following a significant precipitation/ storm event during construction by a qualified MTA representative (e.g., Inspector or Engineer) along with the contractor's OSRP, who is appropriately trained;
- As part of periodic CPEC Program environmental audits by MTA environmental staff; and
- When transitioning from construction to post-construction (i.e., final walkthrough).

The CPEC Program provides a mechanism to ensure that stormwater requirements and other environmental regulatory obligations, including inspections and corrective actions, are considered and documented during construction, and appropriate actions are undertaken to reduce pollutants in stormwater from construction activities. As a result of the effectiveness of the CPEC Program, routine corrective actions were required in PY8 for projects in which one or more Maine DEP permits may apply (i.e., MS4, CGP, and Ch500/MOA). The non-significant corrective actions required during PY8 included routine measures such as:

- Repair of slope erosion;
- Repairing staked hay bales, silt fencing, and other structural BMPs;
- Additional mulch application;
- Removing accumulated sediment at silt fences;
- Street sweeping; and,
- Re-loaming and seeding or mulching areas after a storm event.

## **MCM 5 – POST-CONSTRUCTION STORMWATER MANAGEMENT**

### ***Goals:***

- 1. Continue to implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre.*
- 2. Develop and implement strategies that include a combination of structural and/or non-structural best management practices (BMPs).*
- 3. Develop and implement an approved BMP inspection schedule that at a minimum stipulates that new BMPs are inspected at least once during the first year of installation.*

### **BMP 5.1 CONTINUE TO IMPLEMENT CONSTRUCTION PROJECT ENVIRONMENTAL COMPLIANCE (CPEC) PROGRAM**

As described under **MCM 4**, MTA has continued to implement the CPEC Program to address stormwater management in new development and redevelopment. In PY8, MTA maintained and enforced these requirements, as well as post-construction standards associated with Chapter 500 and the Stormwater MOA throughout MTA's

ROW. As described under BMP 5.3, MTA inspected post-construction stormwater treatment BMP's at least once during the PY.

#### BMP 5.2 INCLUDE A COMBINATION OF STRUCTURAL AND NON-STRUCTURAL BMPs

With regard to non-structural BMPs, as discussed in **BMP 1.2**, in PY8 MTA maintained and implemented its BMP Adoption Plan that identifies target BMPs to be utilized by employees and contractors that minimize stormwater pollution. MTA's CPEC Program requires that contractors conducting work on projects located within MTA's UA or an UIS watershed receive, review, and sign a copy of this plan. As discussed in **BMP 1.1**, in PY8 MTA continued its annual training of highway operations staff, which included a review of post-construction stormwater BMP maintenance practices. Construction resident engineers and inspectors also attended an environmental compliance training in PY8. MTA implemented its illicit discharge detection and elimination program, as described in **BMP's 3.1 – 3.5**, and maintained its street sweeping (see **BMP 6.3**) and catch basin clean out (see **BMP 6.4**) program to help minimize the impacts of post-construction stormwater runoff on water quality.

In PY8, six active construction projects within the MS4/ UA permit area boundary included the construction of new post-construction stormwater treatment BMPs as summarized in Table 1. At the start of PY8, MTA maintained five existing underdrained soil filter stormwater treatment BMPs within the MS4/ UA permit area boundary, which is an increase of one new post-construction stormwater treatment BMP since the start of PY7. When all of the BMPs listed in Table 1 are completed and operational, MTA's post-construction stormwater treatment BMPs treating impervious cover within the MS4/ UA permit area boundary will increase to 27.

In addition to the post-construction stormwater treatment BMPs outlined in Table 1, as part of contract 2021.01 Pavement Rehabilitation and Safety Improvements Project, in 2021 MTA relocated 490 linear feet of an unnamed tributary to Thatcher Brook to accommodate Exit 32 ramp improvements. The project design included moving the stream as far from the southbound lanes of the Turnpike as feasible with natural meanders and in-stream wood additions, while remaining within MTA right-of-way. The end result was an overall increase in the distance between the channel and the southbound lanes, including a 121-foot segment of channel that had been previously straightened and routed into the road ditch. The Thatcher Brook watershed-based plan identifies this location as an area with poor buffering, which will be improved by relocating the channel further from the roadway and maintaining a riparian wetland fringe when the site revegetates. One of the goals of the relocation was to improve opportunity for infiltration and sheet flow of runoff from the outside lane of the Turnpike between the edge of the pavement and the stream. Photograph 1 below shows the relocated stream channel and re-constructed riparian zone during construction before the site had revegetated. Fish and crayfish have been observed in the relocated stream channel.

**Table 1  
 Maine Turnpike Authority MS4 Permit Area Post-Construction Stormwater BMPs  
 Under Construction During PY 8**

<b>Project/Contract Number</b>	<b>Project</b>	<b>Municipality</b>	<b>Post-Construction Stormwater BMP Under Construction</b>
2018.19 <sup>1</sup>	Cummings Road Underpass Bridge Replacement, Mile 44.6	Scarborough	Three Proprietary Esplanade Box Filters
2018.20 <sup>2</sup>	York Toll Plaza, Mile 8.8	York	Two Underdrained Soil Filters
2019.09	Bridge Improvements, Stroudwater River Overpass, Mile 46.7 and Maine Central Railroad Overpass, Mile 47.9	Portland	Two Underdrained Soil Filters
2019.10	Warren Avenue Bridge Improvements, Mile 49.0	Portland	One Underdrained Soil Filter Swale
2019.13/14 & 2021.07 <sup>1</sup>	Exit 45 Interchange Reconstruction, Mile 44.9	Scarborough and South Portland	Three Underdrained Soil Filters and Four Meadow Buffers
2020.03 <sup>1</sup>	Portland Area Widening & Safety Improvements, Mile 43.0 to 46.4	Scarborough, Portland, and South Portland	Six Underdrained Soil Filters and One Meadow Buffer

**Table 1 Footnotes:**

<sup>1</sup> Project area straddles UA boundary in some locations. All catchments ultimately drain into the UA.

<sup>2</sup> 2018.20 York Toll Plaza Project includes nine underdrained soil filters and five stormwater buffer areas across the entire project footprint. Of these, because the project is only partially located within the UA boundary, two underdrained soil filters provide treatment to stormwater from impervious cover within the UA boundary.



**Photograph 1 – August 2021 photograph of relocated stream and re-constructed riparian wetlands along an unnamed tributary to Thatcher Brook within the UA boundary in Biddeford at Exit 32 southbound.**

**The stream is behind the silt fence, and the site had not yet revegetated at the time of the photo. The stream was moved out of the former ditchline and located further from the road with meanders and four log features embedded in the stream bottom. The area between the toe of the highway slope and the stream has been seeded with a wetland seed mix and will not be mowed. Photo direction is facing upstream.**

#### **BMP 5.3 INSPECT NEW BMPs AT LEAST ONCE DURING THE FIRST YEAR AFTER INSTALLATION**

MTA has incorporated a final walkthrough checklist in the construction phase portion of the CPEC Program. The final walkthrough is completed after temporary BMPs have been removed and the site has reached permanent stabilization. To ensure adequate long-term maintenance of newly constructed BMPs, the final walkthrough checklist includes inspection of new BMPs installed as part of the construction project. Following the final walkthrough, newly constructed BMPs are inspected each year by MTA staff. Final walkthrough checklists are maintained in the project specific CPEC binders and are available to Maine DEP upon request.

In PY8, two new underdrained soil filters were completed and went into operation at the 2019.09 - Bridge Improvements, Stroudwater River Overpass, Mile 46.7 and Maine Central Railroad Overpass, Mile 47.9 project site. A final walk through of the project site was completed on November 9, 2020 by MTA's Resident Engineer

and the contractor, which included review of the two new underdrained soil filters. The BMPs were found to be in good condition and functioning correctly.

Additional statistics regarding stormwater treatment BMPs within the UA are also provided below:

- Number of operational stormwater treatment BMPs within the UA, prior to the effective date of this 5-year permit (i.e., July 1, 2013): **2**
  - Maine Turnpike Authority Headquarters Office: **Two Underdrained Soil Filters**
- Cumulative number of new, currently operational stormwater treatment BMPs within the UA, since the effective date of this 5-year permit (i.e., July 1, 2013): **5 (an increase of two since the end of PY7)**
  - 2015.12 – Exits 32, 36, and 46 NB Toll Upgrades: **Two Underdrained Soil Filters**
  - 2016.08 – Interchange 44 Toll Plaza Open Road Tolling Conversion: **One Underdrained Soil Filter Swale**
  - 2019.09- Bridge Improvements, Stroudwater River Overpass, Mile 46.7 and Maine Central Railroad Overpass, Mile 47.9: **Two New Underdrained Soil Filters**
- Number of stormwater treatment BMPs within the UA that required routine maintenance or remedial action to maintain post-construction BMP functionality in PY8: **7**
  - In PY8, routine maintenance of seven existing stormwater treatment BMPs within the UA included vegetation trimming/ mowing and removal of debris or trash. Two of these BMPs are located at MTA headquarters at 2360 Congress Street in Portland and pre-date the existing MS4 General Permit. The remaining five currently operational stormwater treatment BMPs within the UA are located at Exit 32, Exit 44, and the Maine Central Railroad Overpass at Mile 47.9 as noted above.

## **MCM 6 – POLLUTION PREVENTION/GOOD HOUSEKEEPING**

### **Goals:**

*Reduce pollutant runoff from MTA's roads, other paved surfaces, infrastructure, and facilities through the development and implementation of an operation and maintenance (O&M) program.*

### **BMP 6.1 INVENTORY POTENTIAL POLLUTANT SOURCES AND OPERATIONS**

MTA does not operate any maintenance facilities within the MS4 regulated area. Therefore, potential pollutant sources are generally limited to spills associated with vehicular accidents, road-killed wildlife, and MTA deicing operations. MTA re-evaluated its inventory of potential pollutant sources in PY3 and finalized its MCM 6 Written Procedures in August 2016. Minor administrative changes were made in September 2016 and a copy of the document was included in the PY4 Annual Report. There were no changes to the pollutant source inventory in PY5, PY6, PY7, or PY8.

### **BMP 6.2 ANNUAL EMPLOYEE TRAINING**

As discussed in **BMP 1.1**, MTA's employee training program addresses stormwater pollution prevention, and erosion and sediment control. MTA's training program also incorporates construction and post-construction

inspection and O&M requirements. Seventy-seven (77) highway operations personnel and 24 MTA or contracted resident engineers/ construction inspectors were trained in stormwater pollution prevention and ESC practices in PY8. This included 77 highway operations staff completing a take home training packet and quiz. Typically, the highway operations staff training is completed in-person during May and June, but was completed as a take home exercise in PY8 in response to the Covid-19 pandemic. The average test score for the PY8 stormwater training was 95%. The testing results provide documentation regarding the effectiveness of the training. An in-person construction project resident engineer and construction inspector meeting attended by three MTA engineering and construction management staff members, six MTA resident engineers/ construction inspectors, and 18 contracted resident engineers/ inspectors was also held on March 5, 2021 and March 12, 2021. The meeting included a training review of permit and permit condition compliance, MS4 obligations, construction-phase BMPs, and environmental documentation during construction.

### BMP 6.3 STREET SWEEPING

As reported in previous MS4 permit cycles, MTA maintains a regular pavement sweeping program that includes interchanges, toll plazas, park-and-ride lots, and other facilities. Due to several active construction projects and the associated safety concerns, particularly in the two-lane section of highway between Mile Marker (MM) 41-53, MTA was unable to sweep all of the paved surfaces in its UA in PY8. A summary of sweeping activity completed in PY8 is presented below. MTA generally reuses the collected sweepings as construction fill material.

UA Street Sweeping Summary for PY8:

- Approximate number of lane miles swept: **49**
- Approximate number of toll, interchange, and bridge deck sweeper passes: **78**
- Approximate number of park and rides swept: **0**

### BMP 6.4 CLEANING OF STORMWATER STRUCTURES INCLUDING CATCH BASINS

As discussed in **BMP 3.2**, MTA has a prioritized inspection program that includes inspection and catch basin cleanout, as needed, within the entire UA. Priority is given to Goosefare Brook and Hart Brook watersheds; however, maintenance crews also inspect and clean out, as needed, the remaining stormwater infrastructure in the UA and UIS watersheds on an annual basis. Due to several active construction projects and the safety concerns in the two-lane section of highway between Mile Marker (MM) 41-53 and other locations, MTA was unable to clean all of the catch basins in its UA in PY8. MTA continues to use tracking forms to capture dry weather inspection and catch basin cleanout information, which are summarized below and available to Maine DEP upon request.

UA Catch Basin Maintenance Summary for PY8:

- Approximate number of catch basins inspected: **204**
- Approximate number of catch basins cleaned: **55**
- Approximate number of catch basins repaired: **0**

Catch basin sediment is managed in accordance with Maine DEP regulations regarding the beneficial reuse. MTA may either reuse the collected sediment as construction fill material or dispose of the material in accordance with current State rules. MTA generally reuses the recovered catch basin sediment as construction fill material.

### BMP 6.5 MAINTENANCE AND UPGRADING OF STORMWATER CONVEYANCES AND OUTFALLS

As part of MTA’s Stormwater MOA, a progress report summarizing current and planned construction projects and maintenance efforts (which may include new drainage infrastructure installed or replaced by MTA maintenance crews or contractors) is submitted annually to Maine DEP. In PY8, MTA construction efforts included a wide range of work related to maintaining and operating MTA’s highway infrastructure. Projects included pavement rehabilitation, bridge construction and repairs, interchange and toll plaza construction, highway widening, emergency vehicle ramp construction, maintenance paving, restoration of median drainage, ramp safety improvements, and other routine maintenance activities. Drainage infrastructure improvements are integrated as an element of most of MTA’s contracted construction projects, and are also completed as part of other routine maintenance work. Infrastructure maps and IDDE tracking forms are updated annually to reflect new drainage infrastructure.

An annual inspection of MTA’s infrastructure is also conducted by a professional engineering consultant. The resulting *Annual Inspection Report* and *Operation and Maintenance Annual Report* is available on MTA’s website (<http://www.mainturnpike.com/project-and-planning/Transportation-Planning.aspx>). These reports summarize the condition of MTA’s infrastructure (including drainage infrastructure) and identify any deficiencies observed. MTA uses the information presented in these reports to evaluate and implement a prioritized schedule for repairing or upgrading conveyances, structures, and outfalls as required under this MCM.

### BMP 6.6 STORMWATER POLLUTION PREVENTION PLANS (SWPPPs)

Although MTA does not operate any vehicle maintenance facilities within the UA, MTA continued to maintain the following measures relative to the objectives of **MCM 6** in PY8:

- SPCC Plans with integrated stormwater pollution prevention measures for all MTA Highway/Equipment Maintenance Facilities that address the proper use, storage, and disposal of petroleum products, and additionally address vehicle and equipment storage, maintenance, and refueling practices;
- A Mobile SPCC Plan for MTA’s entire ROW to supplement spill response and prevention measures in the facility specific SPCC Plans and specifically addresses more stringent practices within UA and UIS watersheds; and
- Quarterly facility inspections at its Highway/Equipment Maintenance Facilities.

### **CONCLUSION**

In accordance with the MPDES General Permit **Part IV(J)**, this Annual Report presents a summary of significant goals achieved during the eighth year (July 1, 2020 through June 30, 2021) of implementing MTA’s SPMP including an evaluation of BMPs and MGs established for the six MCMs. If you have any questions concerning this Annual Report of MTA’s MS4 SPMP, please do not hesitate to contact Sean Donohue at [sdonohue@maineturnpike.com](mailto:sdonohue@maineturnpike.com) or (207) 482-8275.

In accordance with the MPDES General Permit **Part III(D)(2)**, we 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 our inquiry of the person or persons who manage the system, or those persons that directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. We are aware that

there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Peter Mills  
Executive Director  
Maine Turnpike Authority



Sean Donohue  
Permitting Coordinator and Environmental Liaison  
Maine Turnpike Authority