VIA E–MAIL

September 14, 2020

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 Seven (July 1, 2019 through June 30, 2020)

Ms. Poirier:

On behalf of Maine Turnpike Authority (MTA), we are pleased to submit this Annual Report for Permit Year Seven (PY7, defined as July 1, 2019 through June 30, 2020). 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 PY7.

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. On March 8, 2019, MTA received correspondence from Maine DEP regarding MTA's PY5 Annual Report. Maine DEP's review did not include questions or requests for information; therefore, no response was submitted by MTA. On January 20, 2020, MTA received correspondence from Maine DEP regarding MTA's PY6 Annual Report. Maine DEP requested clarification regarding the number of sites inspected in PY6 that were actually outfalls as defined in the permit; and, clarification related to which projects had new post-construction stormwater BMPs installed in PY6 and the

cumulative number of new post-construction stormwater BMPs. MTA provided answers to the Maine DEP's questions in a letter submitted via email on March 21, 2020.

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 PY7. Anticipated activities in PY8 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), 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**. In March 2017 (PY4), a revised CPEC Program was prepared and implemented to streamline the process and capture the appropriate environmental compliance reporting information. The CPEC Program was not modified in PY5, PY6, or PY7.

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 2020, 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 February 7, 2020.

MTA SPCC/ Stormwater/ ESC training sessions held in 2020 emphasized the following:

- MS4 Permit obligations;
- Maine DEP and U.S. Army Corps of Engineers Permit obligations;

- Construction-phase best management practices (BMP's) for erosion and sedimentation control including maintaining limits of disturbance, erosion control barriers and other structural BMPs, BMP inspection and maintenance, mulch application, street sweeping, and appropriate re-establishment of vegetation cover;
- MS4 System map updates and catchbasin inspection forms, and review of annual street sweeping, catch basin inspection/clean out, and illicit discharge inspection activity recordkeeping requirements;
- 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;
- Post-construction stormwater BMP inspection obligations and maintenance practices for highway operations staff;
- 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; 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 elements of MTA's Stormwater Awareness Plan were summarized in the 'take home' employee training to ensure that all MTA highway maintenance and operations staff are aware of their roles in achieving the goals of this 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 PY7 are as follows:

- Number of employee training sessions: **2**
  - 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,
  - One in-person construction inspectors' meeting was held at MTA headquarters (HQ).
- Number of MTA employees trained: **94**
- Number of contracted resident engineers and construction inspectors trained: **21**
- Number of contractors provided a copy of MTA's Stormwater Awareness Plan: **3**

Impact indicators are not required for PY7.

<u>BMP 1.2 CONTINUE ENCOURAGING EMPLOYEES AND CONTRACTORS TO UTILIZE BMPs THAT MINIMIZE STORMWATER POLLUTION</u>

In PY7, 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 PY7are discussed under **BMP 1.1**. Impact indicators are not required for PY7.

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 PY7 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 PY7: **3**

Impact indicators are not required for PY7.

Additionally, MTA was a bronze medal 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.

MTA and the MaineDOT also shared a silver level sponsorship for the 2019 Maine Stormwater Conference. Both organizations were invoiced for this sponsorship in February 2019 during PY6, although the conference was held during PY7 in December 2019.

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 PY7, 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 PY7, 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 PY7:

- MTA personnel have attended and participated in multiple public meetings, seminars, and conferences related to stormwater, including one MS4 Stakeholder meetings, one meeting with Maine Department of Environmental Protection (Maine DEP) Non-Point Source Pollution Program staff, four ISWG meetings, four SMSWG meetings, the Maine Stormwater Conference, and two ISWG MS4 training sessions. MTA personnel also maintain contact with the Lewiston-Auburn MS4 cluster through ISWG meetings;
- Maintains a position on the Long Creek Watershed Management District (LCWMD) Governing Board. MTA personnel attended and participated in six LCWMD Governing Board meetings in PY7; and,
- Coordinated with the City of Saco and an abutting property owner on Industrial Drive in Saco to determine whether there was a direct connection between MTA's MS4 system and the abutting property. MTA confirmed there was no outlet or outfall to the abutting property.

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.

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 320 sites in PY7, down from 346 sites in PY6. Of these, 48 constituted outfalls as defined by the MS4 permit. The reduction in the number of inspection sites between PY6 and PY7 is in part attributed to large scale construction projects commencing within the MS4 permit area, making certain sites inaccessible for inspection or clean out. Once construction is completed, normal inspection activities will resume. In addition, as described in MTA's PY6 report, there are a number of dry weather inspection sites in the two-lane section of highway between Mile Marker (MM) 41-53 and the Falmouth Spur 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 the high level of daytime traffic on the stretch of two-lane highway between MM 41-53 and the Falmouth Spur, 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.

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 PY7, MTA worked with MS4 Stormwater Coordinators in Portland, Saco, and Falmouth, and with Maine DEP staff, to evaluate stormwater outfalls and discharges. A summary of those activities is provided below.

Portland – Potential Illicit Discharge Continued Investigations

As described in MTA's PY6 report, during June 2019 of PY6 MTA completed municipal outfall inspections with the City of Portland, and a potential illicit discharge was identified within a municipal stormwater drainage ditch that drains into MTA's MS4 infrastructure at the corner of Riverside Street and Larrabee Road in Portland. The suspected illicit discharge was petroleum product given visual and olfactory indicators of potential petroleum product in the municipal ditch and the downstream outlet pipe within MTA's property. MTA confirmed abutting properties have previously been used as gas stations, and sites in the vicinity have a history of DEP-documented spills and releases (see Maine DEP spill report P-1052-2008 et. al.). MTA notified and coordinated with Maine DEP in July 2019, and following a July site inspection with Maine DEP staff water samples were collected by Maine DEP staff on August 21, 2019. Activities up to August 21, 2019 were reported in MTA's PY6 report.

In PY7, MTA continued to coordinate with Maine DEP and the City of Portland to confirm whether an illicit discharge into MTA's MS4 system was present. In a September 17, 2019 memorandum, Maine DEP confirmed sampling detected evidence of polycyclic aromatic hydrocarbons (PAHs) indicative of incomplete combustion of hydrocarbons in one of the two sampled locations in the municipal drainage ditch. Maine DEP concluded the detected PAH's were most likely from vehicular exhaust given the location next to a busy urban intersection. No petroleum hydrocarbons were detected in the flowing pipe outfall on MTA property that was draining from the ditch. Maine DEP recommended MTA monitor the site and resample when surface flow in the ditch is higher.

MTA and Maine DEP monitored flow at the site over the coming weeks, and MTA met onsite with Maine DEP to collect additional water samples on November 15, 2019. Based on the results of the August and November sampling, Maine DEP concluded the former Webber Energy Exxon site associated with spill report P-1052-2008 et. al. does not appear to be a source of petroleum contamination to the stormwater and that the sampling is not indicative of petroleum contamination reaching the MTA property. In February 2020 the City of Portland confirmed the restaurant currently occupying the former Webber Energy Exxon site had its stormwater system inspected and cleaned in November 2019, and no issues were reported. Based Maine DEP's sampling conclusions and no indication of problems with the restaurant's stormwater system based on recent inspection, MTA concluded its investigation.

Portland – Barron Center Sewage Overflow

In January 2020 MTA was also contacted by City of Portland stormwater staff regarding a sewage overflow at the Barron Center located adjacent to the northbound lane of the Turnpike and north of Brighton Avenue. A municipal sewage system failure resulted in raw sewage overtopping a manhole and flowing across a Barron Center parking lot and into the MTA ROW. The City collected and cleaned up the sewage overflow promptly from the Barron Center and MTA ROW property. MTA and City of Portland staff inspected the site of the overflow following the clean-up work and found the sewage overflow had been adequately cleaned up. Based on the site inspection, once the sewage reached the MTA ROW it flowed into an area of scrub shrub and mowed/ maintained wet meadow wetlands and uplands during frozen ground conditions, and did not appear to directly flow into any streams or surface water bodies. No ongoing or continued discharge of sewage was occurring, and the site had been cleaned up. The City reported that the cause of the sewage overflow had been repaired, so no further action was required or taken.

Falmouth – Leighton Road Bridge Abutment Washout

In late May 2020, the eastern abutment (northbound side of mainline) of the Leighton Road bridge in Falmouth washed out. The wash out was the result of a municipal contractor flushing a water main along Leighton Road in Falmouth and discharging the water into the MTA ROW. As a result of the washout, sandy and gravelly textured bridge abutment backfill washed into the highway ditch line, with some of the sand and gravel reaching an unnamed stream channel located approximately 70 feet south of the Leighton Road bridge. In early June 2020, MTA staff notified the Town of Falmouth, including the Town's Stormwater Coordinator and MS4 point of contact, about the washout and sediment discharge into the stream, and MTA staff inspected the washout. In early June 2020 MTA staff also installed temporary erosion control measures including two staked hay bale and silt fence check dams to prevent additional sediment from washing down the ditch line and into the stream. An erosion control sock was also installed to help divert water away from the eroded area until permanent repairs can be made. As of August 31, 2020 permanent repairs to the abutment washout have been contracted but the work had not yet started. In the interim, the washout at the bridge abutment is not at risk of additional large scale erosion provided no more water is discharged from the water main into the MTA ROW.

Saco – MS4 Drainage System Inspection Request

In August 2019, in response to a request from the City of Saco and an abutting property owner on Industrial Drive in Saco, MTA staff completed field evaluations and review of MTA MS4 system maps to determine whether there was an outfall or direct drainage connection from MTA's MS4 system to the abutting property. Based on two site inspections in August 2019 and the document review, MTA confirmed there was no outlet or outfall to the abutting property. The results of the investigation were communicated to the City of Saco Engineer and MS4 point of contact, as well as the property owner.

BMP 3.3 IMPLEMENT OPEN DITCH ILLICIT DISCHARGE PROGRAM

In PY7 the MTA IDDE program included MTA's open ditch systems. Open ditch IDDE efforts have been completed within MTA's two highest priority UIS watersheds and within all of MTA's UA. Ditches that discharge directly to surface water have been included on the same tracking forms used to capture dry weather 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 OFs and evaluated each of these conveyances for the presence of unauthorized discharges via dry weather inspection. Except for the discharges summarized under **BMP 3.2**, above, no flows from pipes or other conveyances, other than stormwater and authorized non-stormwater conveyances have been observed in PY7.

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, which is summarized under **BMP 3.2**, above. In PY7, no additional illicit discharges were identified.

BMP 3.5 IDENTIFY NON-STORMWATER DISCHARGES

As discussed in **BMP 3.2**, while conducting coordinated outfall inspections in Portland in the last month of PY6, MTA observed a potential illicit discharge of petroleum product in a drainage ditch at the corner of Riverside Street and Larrabee Road (outside of MTA's right-of-way) that drains directly into MTA's MS4 system. Following a file review of available Maine DEP records, continuing into PY 7 MTA completed on-site inspections with Maine DEP staff and the City of Portland Stormwater Coordinator, and accompanied two rounds of Maine DEP sampling at the site. Based on the results of the file review, site inspection, and water sampling results, Maine DEP concluded the adjacent former Webber Energy Exxon gas station site adjacent to the drainage ditch does not appear to be a source of petroleum contamination to the stormwater and that the sampling is not indicative of petroleum contamination reaching the MTA property.

Sixteen motor vehicle accident-related spills within the UA occurred in PY7, 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.

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:

- Including language in the specifications and ESC Plan to notify the contractor that they are in an MS4 project area;
- Requiring contractors to provide training certificates for the delegated OSRP for each contracted construction project, regardless of size or location; and,
- Identifying and inspecting structural and non-structural BMPs designed/ constructed in an MS4 project area.

In PY7, 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 May 2020, summarized construction projects and associated BMPs (structural and non-structural) performed and anticipated.

In PY7, there were eight (8) active construction projects within the UA disturbing one (1) acre or more:

- 2016.08 – Interchange 44 Toll Plaza Open Road Tolling (ORT) Conversion – Scarborough
- 2018.17 – Exit 75 Toll System Upgrades & Stream Relocation, Mile 75.3 – Auburn
- 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

Active construction projects in PY7 were documented under MTA's CPEC Program, which includes inspection documents, stormwater requirements 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 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 routine 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, no significant corrective actions were required in PY7 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 PY7 included routine housekeeping measures such as:

- Repairing staked hay bales, silt fencing, and other structural BMPs;
- 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

Similar to **MCM 4**, MTA has continued to implement the CPEC Program to address post-construction stormwater management in new development and redevelopment. In PY7, MTA maintained and enforced these requirements, as well as post-construction standards associated with Chapter 500 and the Stormwater MOA throughout MTA's ROW. MTA provides a summary of these annual O&M practices to Maine DEP in the Annual MOA Report, which was submitted to Maine DEP in May 2020.

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

With regard to non-structural BMPs, as discussed in **BMP 1.2**, MTA maintains and implements 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 PY7 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 PY7.

In PY7, seven 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 PY7, MTA maintained four existing underdrained soil filter stormwater treatment BMPs within the MS4/ UA permit area boundary. 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 26.

Table 1
Maine Turnpike Authority MS4 Permit Area Post-Construction Stormwater BMPs Under Construction During PY 7

Project/Contract Number	Project	Municipality	Post-Construction Stormwater BMP Under Construction
2016.08[1]	Interchange 44 Toll Plaza Open Road Tolling (ORT) Conversion	Scarborough	Underdrained Soil Filter Swale
2018.19[2]	Cummings Road Underpass Bridge Replacement, Mile 44.6	Scarborough	Two Proprietary Esplanade Box Filters
2018.20[3]	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[2]	Exit 45 Interchange Reconstruction, Mile 44.9	Scarborough and South Portland	Three Underdrained Soil Filters and Four Meadow Buffers
2020.03[2]	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:
[1] 2016.18 Interchange 44 Ramps Open Road Tolling Project was completed in the first half of PY7, and the project and associated stormwater BMP are currently operational.
[2] Project area straddles UA boundary in some locations. All catchments ultimately drain into the UA.
[3] 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.

In addition to the post-construction stormwater treatment BMPs outlined in Table 1, as part of contract 2018.17 Exit 75 Toll System Slope Repair Project, MTA also restored approximately 629 linear feet of an unnamed perennial tributary to Moose Brook and associated riparian zone located within the UA at Exit 75 in Auburn. The stream channel had been previously realigned into a ditch configuration at the base of the Exit 75 northbound off ramp, where the ramp slopes were beginning to erode and become unstable. As part of this ramp slope stabilization project, MTA relocated the stream and restored in-stream and riparian habitat following a natural channel design with pools, riffles, a gravel and cobble substrate, and a riparian zone with shrub and sapling plantings. Photograph 1 below shows the relocated stream channel and constructed riparian zone in the first growing season following construction. Within one year of the completion of construction, fish and crayfish were observed in the restored stream channel, and additional wildlife were inhabiting the restored riparian zone.

Photograph 1 – July 2020 photograph of relocated and restored segment of an unnamed tributary to Moose Brook within the UA boundary in the first growing season following construction at Exit 75 in Auburn. Photo direction is facing downstream.

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 PY7, one new underdrained soil filter went into operation at the 2016.08 - Interchange 44 Toll Plaza Open Road Tolling (ORT) Conversion project site. A final walk through of the project site was completed on December 11, 2019 by MTA's Permitting Coordinator and the Resident Engineer, which included review of the new underdrained soil filter swale. A spring inspection of the underdrained soil filter was also completed on May 29, 2020 by MTA's Permitting Coordinator. The BMP was found to be in good condition and functioning correctly during both inspections.

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): **3**
    - 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**
- Number of stormwater treatment BMPs within the UA that required routine maintenance or remedial action to maintain post-construction BMP functionality in PY7: **5**
    - In PY7, routine maintenance of five 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 three currently operational stormwater treatment BMPs within the UA are located at Exit 32 and Exit 44 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, or PY7.

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. Ninety-four (94) MTA employees and 21 contracted resident engineers/ construction inspectors were trained in stormwater pollution prevention and ESC practices in PY7. This included 85 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 PY7 in response to the Covid-19 pandemic. The average test score for the PY7 stormwater training was 94%. The testing results provide documentation regarding the effectiveness of the training. An in-person construction project resident engineer and construction inspector meeting attended by 9 MTA staff members and 21 contracted inspectors was

also held on February 7, 2020. 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 and the Annual MOA Report, 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 safety concerns in the two-lane section of highway between Mile Marker (MM) 41-53 and the Falmouth Spur, MTA was unable to sweep all of the paved surfaces in its UA in PY7. A summary of sweeping activity completed in PY7 is presented below. MTA generally reuses the collected sweepings as construction fill material.

UA Street Sweeping Summary for PY7:

- Approximate number of lane miles swept: **67**
- Approximate number of toll, interchange, and bridge deck sweeper passes: **70**
- Approximate number of park and rides swept: **1**

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 the Falmouth Spur, MTA was unable to clean all of the catch basins in its UA in PY7. 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 PY7:

- Approximate number of catch basins inspected: **301**
- Approximate number of catch basins cleaned: **31**
- 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 PY7, MTA construction efforts included a wide range of work related to maintaining and operating MTA's highway infrastructure. Projects included pavement rehabilitation, bridge painting, bridge structure rehabilitation projects, toll plaza and system upgrades, guide sign improvements, new emergency vehicle ramps, lane and shoulder widening, and slope stabilization and repairs. Drainage infrastructure repairs are typically included as part of pavement rehabilitation projects, and infrastructure maps and IDDE tracking forms are updated annually to reflect new drainage infrastructure.

An annual inspection of MTA's infrastructure is 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.maineturnpike.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 PY7:

- 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 seventh year (July 1, 2019 through June 30, 2020) 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 me at 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
Sean Donohue, LSS
Permitting Coordinator and Environmental Liaison
Maine Turnpike Authority