



STORMWATER MEMORANDUM OF AGREEMENT 2018 ANNUAL PROGRESS REPORT

I. INTRODUCTION

This Annual Progress Report has been prepared to satisfy the requirements of the *Memorandum of Agreement for Stormwater Management Between the Maine Department of Transportation, Maine Turnpike Authority and Maine Department of Environmental Protection* (MOA), dated June 2017 as adopted by the Maine Department of Environmental Protection (DEP), Maine Department of Transportation (MaineDOT) and Maine Turnpike Authority (MTA).

In accordance with the 2017 MOA, MTA has included a list of projects subject to the requirements of the MOA that started construction within the last calendar year (2018) and that are scheduled to start in the next calendar year (2019). Also included is a description of alternative stormwater management measures installed and their performance, if known; a description of instances where the General Standards were not fully applied because it was not practicable to do so and the extent to which the General Standards were not met; and a list of staff or designees who provided oversight on stormwater or erosion and sedimentation control.

II. 2018 CONSTRUCTION PROJECTS

In 2018, MTA initiated 10 contracted construction projects involving one acre or more of soil disturbance. Construction activities included bridge repair/maintenance projects, slope repairs, ramp improvements, service plaza improvements, toll system upgrades, emergency vehicle access ramps, and pavement rehabilitation. A list of these 2018 construction projects is provided as **Table 1**. In 2018, one ongoing MTA construction project (Contract 2016.08: Interchange 44 Barrier Toll Plaza Open Road Tolling Conversion) and two initiated projects (Contract 2018.20: York Toll Plaza Reconstruction, and Contract 2018.19: Cummings Road Bridge Replacement) required post-construction treatment of stormwater in accordance with the MOA.

In 2018 MTA also initiated approximately 14 additional projects involving less than one acre of soil disturbance, and routine highway operation and maintenance work. These smaller projects are not listed in Table 1, as they disturbed less than one acre of ground and did not trigger MOA applicability. None required post-construction stormwater management, although as a standard MTA requirement all projects involving soil disturbance adhered to Chapter 500 Basic Standards. Activities included paving, bridge painting, bridge repairs, wearing surface repairs, fence installation, culvert repairs, guide sign installation, garage bay extensions, and toll plaza repairs.

III. 2019 CONSTRUCTION PROJECTS

In 2019, the MTA has initiated (or anticipates) five contracted construction projects involving one acre or more of soil disturbance. These include service plaza improvements, toll system upgrades, bridge rehabilitation, and ramp and interchange improvements. The ongoing and initiated/anticipated projects for 2019 are summarized in **Table 2**. All five of the projects anticipated to initiate in 2019 require post-construction treatment of stormwater following the MOA.

In 2019 MTA also expects to initiate approximately 13 additional projects involving less than one acre of soil disturbance, and routine highway operation and maintenance work. These smaller projects are not listed in Table 2 as they will disturb less than one acre of ground and do not trigger MOA applicability or post-construction stormwater management. All projects involving soil disturbance in 2019 will adhere to Chapter 500 Basic Standards per standard MTA requirements.

Activities will include culvert repairs, shrub planting, paving, underground storage tank removal, guide sign installation, bridge repairs, pavement striping, and fuel station system improvements.

IV. ALTERNATIVE STORMWATER MANAGEMENT MEASURES

In 2018 MTA initiated construction of Contract 2018.19: Cummings Road Bridge Replacement. This project included the installation of two proprietary esplanade box filters and associated drainage system improvements (gutters, curbs, sheet flow, catch basins, and riprap downspouts). Construction of this project is not yet complete, and the performance of the esplanade box filters will be monitored and documented when the project moves from construction to operation.

V. INSTANCES WHERE THE GENERAL STANDARDS WERE REQUIRED

In 2018, two initiated projects required compliance with the General Standards:

- Contract 2018.20: York Toll Plaza Reconstruction
 - This project with both linear and non-linear components included approximately 15 acres of new impervious cover in a non-urban impaired stream watershed.
 - The project was located partially within the existing travel corridor and was required to comply with the General Standards to the extent practicable as determined through consultation with, and agreement by DEP, as follows:
 - 75% of new linear impervious in the existing travel corridor. The project met the General Standards by treating 75.1% (10.67 acres) of new linear impervious area in the existing travel corridor.
 - 75% of new linear impervious outside of the existing travel corridor (a new toll plaza access driveway). The project met the General Standards by treating 79% (0.46 acres) of new linear impervious area outside of the existing travel corridor.
 - 95% of new non-linear impervious (toll plaza administration building). The project met the General Standards by treating 96.7% (0.42 acres) of new non-linear impervious area.
 - Nine under drained soil filters and additional stormwater buffers were designed as post-construction stormwater treatment measures. Construction is currently ongoing.
- Contract 2018.19: Cummings Road Bridge Replacement
 - This linear project includes approximately 0.88 acres of new impervious cover split between two urban impaired stream watersheds (Red Brook and Long Creek).
 - The project is located partially in the existing travel corridor and is required to comply with the General Standards to the extent practicable as determined through consultation with, and agreement by DEP, as follows:
 - 75% (0.66 acres) of new linear impervious. The project was able to treat 71.5% (0.63 acres) of the new linear impervious area through the use of proprietary esplanade box filters. Non-proprietary stormwater treatment measures fully meeting the General Standards were not feasible due to the site's soil conditions, shallow groundwater, and setback requirements.
 - Construction of this project is ongoing.

VI. STORMWATER MOA OVERSIGHT

MTA conducts annual stormwater and Erosion and Sedimentation Control (ESC) training, which includes a discussion of the MOA. Stormwater MOA compliance and oversight is provided by the following MTA personnel:

MTA Personnel	MTA Job Title
Sean Donohue, CSS	<i>Permitting Coordinator/ Environmental Liaison</i>
John Branscom	<i>Environmental Services Coordinator</i>
Peter Merfeld, P.E.	<i>Chief Operations Officer</i>
<i>MTA Engineering Personnel</i>	
Steve Tartre, P.E.	<i>Director of Engineering and Building Maintenance</i>
Scott Warchol	<i>Construction Program Manager</i>
Jeff Nadeau, P.E.	<i>Resident Engineer</i>
Ralph Norwood, P.E.	<i>Project Manager</i>
J. Ryan Leavitt, P.E.	<i>Senior Resident Engineer</i>
Scott McConihe	<i>Inspector</i>
Gerry Ouellette	<i>Inspector</i>
Jody Dyke	<i>Inspector</i>
<i>MTA Highway Maintenance Personnel</i>	
John Cannell, P.E.	<i>Director of Highway & Equipment Maintenance</i>
Brian Taddeo, P.E.	<i>Highway Maintenance Engineer</i>
Roger Mathews	<i>Highway Division Supervisor</i>
Andy Perry	<i>Highway Division Supervisor</i>
Jeff Stevens	<i>Foreman at Gardiner and Litchfield Highway Maintenance Facility</i>
Nicole Chase	<i>Foreman at Auburn Highway Maintenance Facility</i>
Cliff O'Brien	<i>Foreman at Gray Highway Maintenance Facility</i>
Bill Thompson	<i>Foreman at South Portland (Crosby) Highway Maintenance Facility</i>
Jim Sotir	<i>Foreman at Kennebunk Highway Maintenance Facility</i>
Joe Violette	<i>Foreman at York Highway Maintenance Facility</i>

In addition to these MTA staff, several engineering consulting contractors provided technical and professional services to MTA pertaining to stormwater and erosion control maintenance, inspection, design, planning, permitting and compliance.

TABLES

Table 1 – Review of 2018 MTA Construction Projects

Table 2 – Review of 2019 MTA Construction Projects

**TABLE 1
REVIEW OF 2018 MTA CONSTRUCTION PROJECTS SUBJECT TO THE STORMWATER MEMORANDUM OF AGREEMENT**

Contract Number	Project Type	Description of Work	Limits of Disturbance (LOD)	Linear or Non-Linear	Soil Disturbance in a Chapter 502 Listed Watershed?	Amount of New Impervious Cover (IC) or Developed Area ¹	Within Existing Corridor	Applicable Standards ²	Post-Construction Stormwater BMPs
2016 & 2017 Stormwater MOA Construction Projects Active in 2018									
2016.08	Other (Toll Upgrades)	Scarborough: Interchange 44 Barrier Toll Plaza Open Road Tolling Conversion (MM 44.3)	17.35 acres	Linear	17.35 acres in Red Brook Watershed	3.34 acres of New Impervious Cover (Net Increase)	Yes	Basic, General	720' Underdrain Treatment Swale and Berm
2017.01	Pavement Rehabilitation	Lewiston/Sabattus: Pavement Rehabilitation Clear Zone Improvements MM 80.7 to MM 88.6, Ferry Road Bridge Repairs MM 80.8, Sabattus Exit 86 Toll System Upgrades MM 86.0	1.51 acres	Linear	No	No change	Yes	Basic	None
2017.03	Bridge Repair & Rehabilitation	Sabattus: Bridge Replacement at Maxwell Road Underpass (MM 90.0)	2.5 acres	Linear	No	No change	Yes	Basic	None
2017.04	Bridge Repair & Rehabilitation	West Gardiner/Hallowell: High Street Underpass Bridge Repair (MM103.6) and Winthrop Road Underpass Superstructure Replacement (MM 108.3)	1.71 acres	Linear	No	No change	Yes	Basic	None
2017.11	Other (Emergency Ramps)	Auburn: Emergency Vehicle Ramp & Bridge Repairs, Hackett Road Underpass (MM 76.9)	2.2 acres	Linear	No	0.27 acres of New Impervious Cover	Yes	Basic	None
2017.13	Other (Widening)	Cumberland/Gray: Acceleration Lanes & Shoulder Widening, Cumberland and Gray Service Plazas (MM58.8)	6.7 acres	Linear	No	0.98 acres of New Impervious Cover	Yes	Basic	None
2017.56	Other (Emergency Access)	Gray: Emergency Access Roads, Weymouth Road Underpass (MM 66.2)	2.33 acres	Linear	No	0.35 acres of New Impervious Cover	Yes	Basic	None
Stormwater MOA Construction Projects Initiated in 2018									
2018.20	Toll Plaza Reconstruction	York: York Toll Plaza Reconstruction (MM 7.9 to MM 9.6)	33.54	Linear and Non-linear	No	15 acres of New Impervious Cover	Partially	Basic, General	Nine Vegetated Underdrained Soil Filters and Buffers
2018.02	Interchange 47 Paving	Portland: Paving, lane widening, slope repairs, guardrail adjustments (MM 47.3)	1.29	Linear	1.29 acres partially in Nasons Brook Watershed	0.15 acres of New Impervious Cover	Yes	Basic	None
2018.03	Ramp Improvements	Scarborough: Exit 44 Ramp Improvements (MM 44.3)	5.11	Linear	No	0.72 acres of New Impervious Cover	Yes	Basic	None
2018.05	Bridge Repair & Rehabilitation	West Gardiner: Exit 103 I-295 SB Underpass Reconstruction (MM 103)	3.76	Linear	No	0.29 acres of New Impervious Cover	Yes	Basic	None
2018.09	Bridge Repair & Rehabilitation; Emergency Access	Gray: Dutton Hill Road Underpass Bridge Repairs and Emergency Access Roads (MM 59.9); Weymouth Road Underpass Bridge Repairs (MM 66.2)	4.5	Linear	No	0.23 acres of New Impervious Cover	Partially	Basic	None
2018.15	Bridge Repair & Rehabilitation	Gardiner/ Litchfield: Cobbosseecontee Stream Bridge Rehabilitation (MM 99.2)	1.56	Linear	No	0.2 acres of New Impervious Cover	Yes	Basic	None
2018.16	Emergency Access	Falmouth: Blackstrap Road Emergency Vehicle Ramps (MM 52.0)	3.33	Linear	No	0.57 acres of New Impervious Cover	Partially	Basic	None
2018.17	Ramp Slope Repairs	Auburn: Exit 75 Toll System-Slope Repairs (MM 75.3)	3.94	Linear	No	No change	Yes	Basic	None
2018.18	Service Plaza Fuel System Replacement	Kennebunk: Kennebunk Service Plaza Fuel System Replacement (MM 25.5)	4.26	Non-Linear	No	No change	Yes	Basic	None
2018.19	Bridge Repair & Rehabilitation	Scarborough: Cummings Road Bridge Replacement (MM 44.6)	5.5	Linear	5.5 acres split between Red Brook and Long Creek Watersheds	0.88 acres of New Impervious Cover	Partially	Basic, General	Two Proprietary Esplanade Box Filters

NOTES:

1 - Developed Area excluding area that within one calendar year of being disturbed is returned to a condition with the same drainage pattern that existed prior to the disturbance and is revegetated, provided the area is not mowed more than twice per year.

2 - Applicable Standards refer to Chapter 500 Stormwater Management as it applies through the Stormwater Memorandum of Agreement between Maine DEP, MaineDOT, and MTA.

**TABLE 2
REVIEW OF ANTICIPATED 2019 MTA CONSTRUCTION PROJECTS SUBJECT TO THE STORMWATER MEMORANDUM OF AGREEMENT**

Contract Number	Project Type	Description of Work	Limits of Disturbance (LOD)	Linear or Non-Linear	Soil Disturbance in a Chapter 502 Listed Watershed?	Amount of New Impervious Cover (IC) or Developed Area ¹	Within Existing Corridor	Applicable Standards ²	Post-Construction Stormwater BMPs
2016, 2017, and 2018 Construction Projects Active in 2019									
2016.08	Other (Toll Upgrades)	Scarborough: Interchange 44 Barrier Toll Plaza Open Road Tolling Conversion (MM 44.3)	17.35 acres	Linear	17.35 acres in Red Brook Watershed	3.34 acres of New Impervious Cover (Net Increase)	Yes	General	720' Underdrain Treatment Swale and Berm
2018.20	Toll Plaza Reconstruction	York: York Toll Plaza Reconstruction (MM 7.9 to MM 9.6)	33.54	Linear and Non-linear	No	15 acres of New Impervious Cover	Partially	Basic, General	Nine Vegetated Underdrained Soil Filters and Buffers
2018.05	Bridge Repair & Rehabilitation	West Gardiner: Exit 103 I-295 SB Underpass Reconstruction (MM 103)	3.76	Linear	No	0.29 acres of New Impervious Cover	Yes	Basic	None
2018.15	Bridge Repair & Rehabilitation	Gardiner/ Litchfield: Cobbosseecontee Stream Bridge Rehabilitation (MM 99.2)	1.56	Linear	No	0.2 acres of New Impervious Cover	Yes	Basic	None
2018.17	Ramp Slope Repairs	Auburn: Exit 75 Toll System-Slope Repairs (MM 75.3)	3.94	Linear	No	No change	Yes	Basic	None
2018.18	Service Plaza Fuel System Replacement	Kennebunk: Kennebunk Service Plaza Fuel System Replacement (MM 25.5)	4.26	Non-Linear	No	No change	Yes	Basic	None
2018.19	Bridge Repair & Rehabilitation	Scarborough: Cummings Road Bridge Replacement (MM 44.6)	5.5	Linear	5.5 acres split between Red Brook and Long Creek Watersheds	0.88 acres of New Impervious Cover	Partially	Basic, General	Esplanade Box Filters
Construction Projects Initiated/Anticipated in 2019									
2019.02	Service Plaza Parking Expansion, Exit Ramp Repaving	Kennebunk: Exit 25 Paving and Kennebunk Service Plazas (MM 25.5)	23.49	Linear and Non-linear	No	10 acres of New Impervious Cover and 18 acres of New Developed Area	Yes	Basic, General	Four underdrained soil filters and one wet pond
2019.04	Toll Plaza Reconstruction	West Gardiner: West Gardiner Open Road Tolling (MM 103)	41.38	Linear and Non-linear	No	6.28 acres of New Impervious Cover and 0.84 acres of New Developed Area	Yes	Basic, General	Two gravel treatment wetlands
2019.09	Bridge Rehabilitation	Portland: MCRR and Stroudwater Bridges (MM 46.7 and MM 47.9)	15.29	Linear	15.29 acres partially in Nason's Brook Watershed	3.28 acres of New Impervious Cover	Yes	Basic, General	Two underdrained soil filters
2019.10	Bridge Rehabilitation	Portland: Warren Avenue Bridge (MM 49.0)	11.26	Linear	11.26 acres partially in Capisic Brook Watershed	2.7 acres of New Impervious Cover	Yes	Basic, General	One underdrained soil filter swale
2019.13/14	Bridge Rehabilitation, Toll Plaza Reconstruction, Ramp Reconstruction, Transmission Line Relocation	Scarborough and South Portland: Exit 45 Preload Contract (MM 44.9)	24.12	Linear	24.12 acres split between Long Creek and Red Brook	3.48 acres of New Impervious Cover and 3.6 acres of New Developed Area	Yes	Basic, General	Three underdrained soil filters and four meadow buffers

NOTES:

1 - Developed Area excluding area that within one calendar year of being disturbed is returned to a condition with the same drainage pattern that existed prior to the disturbance and is revegetated, provided the area is not mowed more than twice per year.

2 - Applicable Standards refer to Chapter 500 Stormwater Management as it applies through the Stormwater Memorandum of Agreement between Maine DEP, MaineDOT, and MTA.