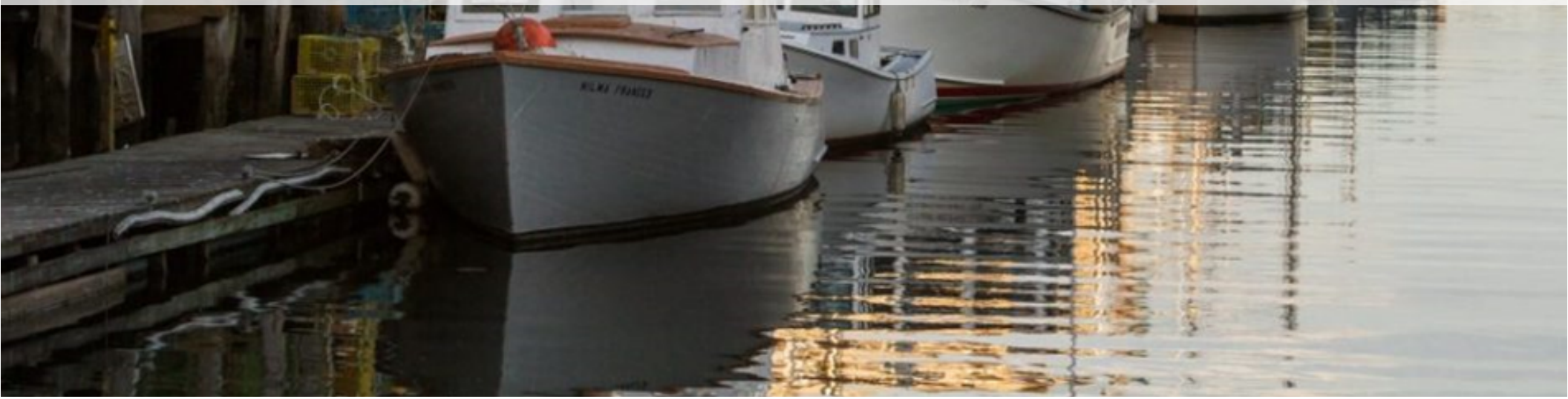
CITY OF

PORTLAND

WOODARD &CURRAN

STORMWATER MANAGEMENT PROGRAM PLAN



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APPENDICES

1. STORMWATER PROGRAM OVERVIEW

WHY IS THIS IMPORTANT?

Stormwater runoff commonly transports pollutants through municipal separate storm sewer systems (MS4s), where it is discharged, often untreated, into local water bodies. To the public, the MS4 is more commonly known as a stormwater drainage system or simply as the "drain." These stormwater drains have been constructed in developed areas to reduce the risk of flooding and damage to our built infrastructure. Unfortunately, stormwater drainage systems carry pollution during rain events and snow melt – this can include oil, trash, and any other materials found on lawns, streets, and parking lots.

In the City of Portland, stormwater runoff discharges that are conveyed by the MS4 to the environment are regulated under the Clean Water Act and require a permit. Portland is one of thousands of communities and institutions across the country that must comply with these regulations. The stormwater drainage system discharge permit is known as the "MS4 General Permit" and is issued and managed by both the U.S. Environmental Protection Agency (EPA) and the State of Maine Department of Environmental Protection (ME DEP).

WHAT DOES PORTLAND HAVE TO DO?

The City of Portland has had MS4 permit coverage since 2003. As part of new permitting requirements, Portland is required to develop a written Stormwater Management Program (SWMP) every five years when the permit is reissued. This SWMP (Plan) is a "living" reference document that will guide the City's implementation of requirements within the permit. Portland is required to keep records of, and report on, the activities and measures that are implemented and consistent with this Plan. 2022 MS4 General permit requirements are summarized (and simplified) as follows:

Implement public education programs to help City residents, business owners, and developers understand their role in keeping stormwater clean.

Engage the public in decision-making throughout the program.

Find and fix leaky or unauthorized sanitary sewer lines or other non-stormwater sources that might be discharging into the drainage system.

Ensure that construction projects do not pollute runoff with sediments and debris.

Ensure that new development and redevelopment control and treat runoff before it leaves the property.

Engage in pollution prevention actions like road and parking area best practices (cleaning drainage systems and sweeping pavements), and ensure that municipal activities like vehicle washing, lawn maintenance, and materials storage do not contribute to stormwater pollution.

The City of Portland is located within Cumberland County and has a population of over 66,000, according to the 2010 census. The City of Portland is located within the Stroudwater River, Fore River, Capisic Brook, Long Creek, Back Cove and Casco Bay watersheds, and the City's regulated MS4 area has four primary tributaries: Fall Brook, Capisic Brook, Stroudwater River and Fore River, that flow through the community before discharging into Casco Bay. The Portland Department of Public Works maintains almost 200 miles of drainage pipe and thousands of drainage structures that discharge stormwater from the MS4 to the environment in hundreds of locations. The City's drinking water and sanitary sewer system is operated and maintained by the Portland Water District (PWD), which is a separate entity from the City of Portland. The City and the PWD cooperate on various elements of the stormwater program, as described herein. Portland continues to strive at making improvements to its stormwater management program every year to protect and improve its water resources.

1.1 MINIMUM CONTROL MEASURES AND MEASUREABLE GOALS

As per Part IV of the 2022 MS4 General Permit, traditional MS4s must implement a SWMP that includes the following six (6) minimum control measures (MCMs).

1. Education/Outreach Program
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention/Good Housekeeping for Municipal Operations

As required by the 2022 MS4 General Permit, there are specific actions that must be undertaken to reduce stormwater pollution. These actions are called Best Management Practices (BMPs). The following plan outlines these BMPs, the measurable goal for each BMP, the deadline for development and implementation of BMPs, and the responsible party for implementing the BMP. Section 1.5 of this SWMP identifies the person(s) or department(s) responsible for the BMPs identified in this SWMP.

The Permit Year (PY) corresponds to each regulatory year starting on July 1, 2022.

MCM 1: Education/Outreach Program (Permit Section IV.C.1.)

Objective: Implement an education program that addresses stormwater issues of significance. The ultimate objective of a public education program is to increase knowledge of and help change behaviors of the target audiences so that pollutants in stormwater are reduced. The target audiences are the general public, municipal audiences, commercial audiences, developers/contractors, and institutions. The City of Portland participates in the Cumberland County Soil & Water Conservation District's (CCSWD) Interlocal Stormwater Working Group (ISWG), a coalition of MS4 permittees in Cumberland county working together to meet MS4 permit requirements. ISWG develops and administers public outreach programs that cover these communities and meet the requirements of MCM 1; the ISWG E&O Plan for the 2022 MS4 Permit period is outlined below.

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
1.1a	Implement raise awareness campaign targeting the general public	IV.C.1.g.1.	Portland, through its participation in the ISWG, will raise 15% of the target audience's awareness of what happens to stormwater at their residence or place of work. According to the 2019 US Census Bureau, the ISWG region's population for ages 25 to 34 is approximately 38,000 people: therefore 15% of the target audience is approximately 6,000 people. • Target Audience: People 25 to 34 in the ISWG region • Overarching Message: "Water that lands on our roads, roofs, and other hard surfaces picks up pollutants and carries them to our local waterbodies without being treated." This message will be presented with variations based on target audience interests and outreach tools used. • Outreach Tools: A minimum of three outreach tools will be selected from Appendix D each year. Each tool will be assessed and customized based on the target audience's receptiveness to the method. Any tool used in a given year will be tailored to the message for the relevant target audience subset based on common characteristics and/or demographics. • Evaluation: Effectiveness will be evaluated annually by tracking process indicators for each tool implemented that year and by tracking impact indicators where available (see Appendix D). • Implementation schedule: A minimum of three of the tools from Appendix D will be implemented each year for the duration of the permit.	Annual

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
1.1b	Implement raise awareness campaign targeting developers/contractors	IV.C.1.g.1.	A baseline evaluation will be conducted in Permit Year 1 to establish contractor and developer awareness and the baseline target audience. Portland, through its participation in the ISWG, will raise awareness of developers and contractors by 15% from the Permit Year 1 established baseline audience of developers and contractors about construction-related stormwater pollutants and methods available to reduce discharge of those pollutants. • Target Audience: Developers and contractors who are located within the ISWG region. • Overarching Message: "Through proper design and site management, erosion and sediment control best management practices can reduce the potential to negatively impact local water bodies." This message will be presented with variations based on target audience interests and outreach tools used. • Outreach Tools: A minimum of three outreach tools will be selected from Appendix D each year. Each tool will be assessed and customized based on the target audience's receptiveness to the method. Any tool used in a given year will be tailored to the message for the relevant target audience subset based on common characteristics and/or demographics. • Evaluation: Effectiveness will be evaluated annually by tracking process indicators for each tool implemented that year and by tracking impact indicators where available (see Appendix D). Effectiveness will also be measured by the number of DEP certified contractors located within the ISWG region over the course of the permit term. • Implementation schedule: A minimum of three of the tools will be implemented each year for the duration of the permit.	Annual

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
1.2a	Implement change behavior campaign targeting proper pet waste disposal by dog owners ages 25 to 34	IV.C.1.g.2.	A baseline evaluation will be conducted in Permit Year 1 to establish dog owner behavior of dog waste disposal and the baseline target audience within the ISWG region. Portland, through its participation in the ISWG, will work towards changing the behavior of 15% of pet owners from the Permit Year 1 established baseline audience of dog owners so more will properly dispose of their pet waste. • Target audience: Dog owners ages 25 to34 within the ISWG region • Overarching Message: "Dispose of dog waste as a solid waste, so it does not end up in our stormwater. Once in the stormwater, dog waste contributes nutrients, bacteria, and pathogens to our ponds, lakes, streams, rivers, and bays, which can lower property values, harm our drinking water, and hinder recreational and economic opportunities." This message will be presented with variations based on target audience interests and outreach tools used. • Outreach Tools: A minimum of three outreach tools will be selected from Appendix D each year. Each tool will be assessed and customized based on the target audience's receptiveness to the method. Any tool used in a given year will be tailored to the message of the relevant target audience subset based on common characteristics and/or demographics. • Evaluation: Effectiveness will be evaluated annually by tracking process indicators for each tool implemented that year and by tracking impact indicators where available (see Appendix D). Effectiveness will also be evaluated by conducting visual (observational) surveys of dog waste disposal at public areas and tracking the presence of dog waste bags in catch basins. • Implementation schedule: A minimum of three of the tools will be implemented each year for the duration of the permit.	Annual

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
1.2b	Implement change behavior campaign targeting proper pet waste disposal by dog owners ages 35 to 55	IV.C.1.g.2.	A baseline evaluation will be conducted in Permit Year 1 to establish dog owner behavior of dog waste disposal and the baseline target audience within the ISWG region. Portland, through its participation in the ISWG, will work towards changing the behavior of 15% of pet owners from the Permit Year 1 established baseline audience of dog owners so more will properly dispose of their pet waste. • Target audience: Dog owners ages 35 to 55 within the ISWG region • Overarching Message: "Dispose of dog waste as a solid waste, so it does not end up in our stormwater. Once in the stormwater, dog waste contributes nutrients, bacteria, and pathogens to our ponds, lakes, streams, rivers, and bays, which can lower property values, harm our drinking water, and hinder recreational and economic opportunities." This message will be presented with variations based on target audience interests and outreach tools used. • Outreach Tools: A minimum of three outreach tools will be selected from Appendix D each year. Each tool will be assessed and customized based on the target audience's receptiveness to the method. Any tool used in a given year will be tailored to the message for the relevant target audience subset based on common characteristics and/or demographics. • Evaluation: Effectiveness will be evaluated annually by tracking process indicators for each tool implemented that year and by tracking impact indicators where available (see Appendix D). Effectiveness will also be evaluated by conducting visual (observational) surveys of dog waste disposal at public areas and tracking the presence of dog waste bags in catch basins . • Implementation schedule: A minimum of three of the tools will be implemented each year for the duration of the permit.	Annual

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
1.3	Evaluate effectiveness of Education and Outreach program	IV.C.1.h. & i.	Portland will submit an annual report each year of the 2022 MS4 General Permit term documenting the implementation of each BMP through Portland's participation in ISWG. The annual report will include the message for each audience, the outreach tools used, the methods used to determine on-going effectiveness of the campaigns, and any changes planned based on the measures of effectiveness.	Annual
			In Permit Year 5 of the 2022 MS4 General Permit Portland, through its participation in ISWG, will conduct an evaluation of the overall effectiveness of the Awareness and Behavior Change BMPs (BMPs 1.1 and 1.2). The evaluation will be a review of the annually reported benchmark values for the Awareness and Behavior Change BMPs as well as documentation of overall changes during the permit term. The evaluation will identify recommendations for future awareness and behavior change target audiences, messages, tools, and benchmarks. A comprehensive survey will be conducted for the ISWG region to evaluate the impact of the awareness campaigns.	End of Permit Year (PY) 5
1.4	Additional outreach activities		Portland will continue to support the Cumberland County Soil & Water Conservation District's youth education curriculum to community schools as funding allows. Annual reports will include the total number of students reached, which schools were involved, and the lesson topics covered.	Annual
			Portland will support the regional YardScaping effort to reduce nutrients from entering regional waterways and increase buffers. Annual reports will include the total number of people reached with workshops, partner point of sale locations, and workshop survey data.	Annual

MCM 2: Public Involvement and Participation (Permit Section IV.C.2.)

Objective: Provide opportunities to engage the public in both the planning and implementation process of the stormwater program.

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
2.1a	Public notice requirement	IV.C.2.a.	Portland will follow applicable state and local public notice requirements for their Stormwater Management Plans and Notices of Intent (NOIs) to comply with the MS4 General Permit. Copies of the NOIs and plans will be made available on Portland's website. Portland will document public meetings related to their stormwater program and attendance of those meetings in their annual report.	Annual
2.1b	Public notice requirement	IV.C.2.a.	The ISWG members meet as a group 6 times per year to review issues associated with implementation of the Stormwater Management Plan and MS4 General Permit. These meetings will be publicized through the CCSWCD website, on ISWG member websites, and open to the public.	Annual
2.2a	Conduct annual public participation activity	IV.C.2.b.	Portland will annually host, conduct, and/or participate in a public community event with a pollution prevention and/or water quality theme from the list included in the 2022 MS4 General Permit or another activity approved by the DEP. Stormwater stewardship and educational messages and activities will be incorporated into the event. The event will be advertised on Portland's website, through Portland's and CCSWCD's social media accounts, and other Portland and CCSWCD communication methods. The annual report will include a description of the event and the estimated attendance/participation.	Annual

MCM 3: Illicit Discharge Detection and Elimination (IDDE) (Permit Section IV.C.3.)

Objective: Implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to the municipal separate storm sewer system.

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
3.1	Continue MS4 system mapping	IV.C.3.d.	Update the separate storm sewer system map annually as the following information becomes available: outfalls, pipes, manholes, catch basins, interconnections, stormwater management features, refined catchment delineations, municipal sanitary sewer, and combined sewer systems (if available or applicable).	Annual
3.2	Update written IDDE Program Manual	IV.C.3.b.	Update written IDDE Program document to meet new permit requirements, ensuring that it includes at a minimum: • Legal authority, statement of responsibilities, outfall/interconnection inventory and initial catchment priority ranking, dry weather outfall inspection and dry weather flow sampling procedures, Quality Assurance Program Plan (QAPP), and illicit discharge confirmation and removal procedures.	Prior to NOI Filing
3.3	Conduct dry weather Outfall/ Interconnection screening and sampling	IV.C.3.e.	Conduct dry-weather Outfall/Interconnection screening annually to meet permit requirement of all outfalls screened by the end of PY5. • Provide data annually. Dry weather screening and sampling (no more than 0.25" of rainfall within 72 hours): • Record condition and information for inventory and priority ranking. • If flowing, collect a sample in accordance with the protocols set forth in the approved QAPP and analyzed for the parameters listed in the IDDE Program Manual.	All outfalls screened by end of PY 5

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
3.4	Conduct investigation of dry weather flow and potential illicit discharges identified during screening and sampling	IV.C.3.e.iv.	Where sampling of dry weather flow at an outfall does not exhibit evidence of an illicit discharge: • Take steps to determine and confirm that flow during dry weather conditions is only uncontaminated groundwater, water from a natural resource, or an allowable non-stormwater discharge that has entered the system. • Collect at least one (1) sample per the 5-year permit term in accordance with the protocols set forth in the approved QAPP and analyzed for the parameters listed in the IDDE Program Manual. Where sampling of dry weather flow at an outfall exhibits evidence of a potential illicit discharge: • Conduct systematic upstream sampling at key junction manholes until either a source is identified, or it has been determined that the evidence of the illicit discharge is due to naturally occurring source(s).	During permit term, document annually
3.5	Conduct expeditious removal of verified sources of illicit discharge and confirmatory screening	IV.C.3.b.iv.	Upon verification of an illicit discharge, locate, identify, and eliminate the illicit discharge as expeditiously as possible. Where elimination of an illicit discharge within 60 days is not possible, establish an expeditious schedule and report the dates of identification and schedule for removal in the annual report. • Confirm removal of verified illicit discharges through follow-up screening and inspection.	During permit term, document annually

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)

3.6	Conduct wet weather assessment	IV.C.3.f.	Conduct an assessment of outfalls for the potential for illicit discharges during wet weather events, utilizing data collected during the permit cycle, to develop a list of outfalls identified for wet weather monitoring and testing in the next permit cycle. This list will be included in the written IDDE plan along with the rationale for including each outfall. The assessment will take into consideration:
			• Areas within the MS4 that have combined sewer systems;
			• The potential for shared manholes with high-level overflows from the sanitary sewer system into the MS4;
			• Other sanitary sewer collection "trouble areas" identified during Sanitary Sewer Evaluation Surveys;
			• Complaints of sewage odor at a stormwater outfall during wet weather events; and/or
			• Direct discharge from the stormwater system to any of the following:
			  ○ A public beach or recreational area; and/or
			  ○ A water body impaired for bacteria.
				End of PY5

3.7	Evaluate the overall effectiveness of the IDDE Program	IV. 3	Evaluate the overall effectiveness of the IDDE Program using the indicators for tracking program success as defined in the IDDE Program Manual. Indicators include: number of illicit discharges identified and removed, number and percent of total catchments investigated, dry and wet weather screening and sampling results, and volume of sewage removed. • Provide evaluation of IDDE Program annually via annual report.	During permit term, document annually
3.8	Conduct Sanitary Sewer Overflow (SSO) reporting and inventory	IV.3.g.	Document SSOs that discharge to the MS4 and are within the regulated urbanized area. Identify any corrective measures implemented for annual reporting. Maintain database or summary of SSOs through permit term.	Throughout permit term

MCM 4: Construction Site Stormwater Runoff Control (Permit Section IV.C.4.)

Objective: Implement an effective construction stormwater runoff control program and policy that minimizes or eliminates erosion on regulated construction sites within the regulated MS4 area and to ensure that sediments and other pollutants are not transported in stormwater from construction sites and allowed to discharge to a water of the U.S. through the MS4.

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
4.1	Ensure construction stormwater runoff control ordinances are consistent with MS4 General Permit	IV.C.4.i.	Review City Ordinances to ensure that site development applicants meet Maine Construction General Permit and Chapter 500 Stormwater Management Law Permit obligations. • Continue to implement an effective construction stormwater runoff control program. • Continue to require construction site operators, performing land disturbance activities that exceed one acre (or common plan of development greater than one acre), to implement an erosion and sediment control program consistent with the Construction General Permit and Stormwater Management Law Permit.	End of PY 1
4.2	Develop written construction site stormwater runoff control program procedures	IV.C.4.ii & iii. & iv.	Assemble written Construction guidance. • Include references to the City's Stormwater Management Ordinance, Portland Technical Manual, and other relevant regulations. • Include procedures and workflow for site plan review, inspections, responsible parties, and data tracking.	End of PY 1
4.3	Track, inspect, and document applicable construction projects	IV.C.4.v.	Review and update written procedures for site inspection and enforcement of erosion and sediment control measures as needed. Track the number of site plan reviews, site inspections, and enforcement actions and include in annual report.	Throughout permit term, annually

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment (Permit Section IV.C.5.)

Objective: Implement and manage a local program and policy to reduce the discharge of pollutants found in stormwater through the retention, detention, and treatment of stormwater on regulated new or redevelopment sites within the regulated MS4 area.

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
5.1	Update local ordinance on stormwater management in new & redevelopment	IV.C.5.b.i. & ii.	Review and update the Post Construction Stormwater Management Ordinance or other regulatory mechanism (as needed). • Require that the owner or operator of a post construction BMP provide an annual report, completed by a qualified inspector, documenting that all onsite BMPs are adequately maintained and functioning as intended. • Require that if a post construction BMP requires maintenance, the owner or operator must provide a record of the deficiency and corrective action(s) taken in no less than 60 days following the date the deficiency was identified. Require that, if 60 days is not feasible, then the City may establish an expeditious schedule to complete the maintenance and establish a record of the deficiency and corrective action(s) taken.	End of PY 1
5.2	Implement procedure for notifying site developers to consider Low Impact Development techniques	IV.C.5.a.i.	Assemble written Construction and Post-Construction Program guidance. • Document procedure for notifying site developers to consider Low Impact Development techniques. • Include references to the City's Stormwater Management Ordinance, Portland Technical Manual, and other relevant regulations. • Include procedures and workflow for site plan review, inspections, responsible parties, and data tracking	End of PY 1
5.3	Track and document post construction BMP inspection and maintenance	IV.C.5.	Track and record the number of post construction BMPs, annual inspection reports submitted for each, and documentation of any required maintenance and subsequent corrective action. Include in annual report.	Throughout permit term, annually

MCM 6: Pollution Prevention and Good Housekeeping in Municipal Operations (Permit Section IV.C.6.)

Objective: Implement a Pollution Prevention & Good Housekeeping Program for municipal operations to prevent or reduce pollutants in runoff from all municipal operations and municipal facilities located in the regulated MS4 area.

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
6.1	Update Stormwater Pollution Prevention Plan (SWPPP) for public works facilities, transfer stations, and school bus maintenance facilities	IV.C.6.d.	Update SWPPP (and Spill Prevention, Control, and Countermeasure (SPCC), as needed) for the District Road public works facility, Canco Road public works facility, Riverside Recycling Facility & Evergreen Cemetery. The SWPPP shall include the elements listed in IV.C.6.d. Keep all records associated with the development and implementation of the SWPPP. Keep a copy of the SWPPP onsite at all times.	Prior to effective date
6.2	Conduct site inspection procedures consistent with SWPPP for public works facilities, transfer stations, and school bus maintenance facilities	IV.C.6.d.6. & 7.	Inspect all areas exposed to stormwater, areas identified in the SWPPP that are potential pollutant sources, areas where spills and leaks have occurred in the past three years, discharge points, and all stormwater control measures at each facility with a SWPPP at least once per calendar quarter and report findings in annual report.	Once per quarter, document annually
6.3	Update Operations & Maintenance (O&M) Program documentation	IV.C.6.b. & c.	Review and update written O&M procedures per section IV.C.6. of the permit. • Update Pollution Prevention Operation and Maintenance documentation as needed; inclusive of all City facilities within the regulated MS4 area, drainage system operations activities, and inspection obligations. The documentation shall include the following: • Municipal Facilities Inventory. • Municipal Infrastructure Maintenance: Street Sweeping and Catch Basin Cleaning SOPs. • Prioritized schedule for repairing or upgrading conveyances, structures, and outfalls of the regulated MS4 area.	Prior to Effective Date

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
6.4	Implement street sweeping program	IV.C.6.b.iii.	Implement street sweeping program outlined in the Pollution Prevention Operation and Maintenance documentation. At a minimum, sweep all paved streets and municipally owned parking lots annually after snowmelt. Document street sweeping activities and include in annual report.	Throughout permit term, annually
6.5	Implement catch basin cleaning program	IV.C.6.b.iv.	Implement catch basin cleaning program outlined in the Pollution Prevention Operation and Maintenance documentation. At a minimum, inspect all municipally owned catch basins biennially to ensure that no catch basin sumps exceed 50% full. If two consecutive inspections of a given catch basin show excess accumulation, then that catch basin must be inspected and cleaned annually until two consecutive inspections find less than 25% accumulation. Document catch basin cleaning activities and include in annual report.	Throughout permit term, annually
6.6	Conduct employee training program consistent with SWPPP	IV.C.6.d.2.h.	Conduct employee training consistent with SWPPP and Pollution Prevention Operation and Maintenance documentation.	Throughout permit term, annually

1.2 IMPAIRED WATERS

The City of Portland has completed the initial stages of an Integrated Water Resources Management Plan (Integrated Plan) and is in the process of finalizing this report and incorporating it into an Integrated Permit. The Integrated Plan sets a realistic schedule for resource allocation to address major water resources issues stemming from impairments including, but not limited to, bacteria from the combined sewer system and non-point source pollutants from urban development. The Integrated Plan provides alternatives for improving water quality categorized under Capitol Programs, Capitol Projects, Operation and Maintenance Programs, Policy, Study, and Watershed Management initiative.

Discharges to waterbodies with impairments and an approved Total Maximum Daily Load (TMDL) have additional requirements in part IV.E. of the 2022 MS4 General Permit. The City of Portland MS4 discharges to waterbodies that are considered impaired, according to ME DEP's 2016 Integrated List of Waters, including waterbodies with an approved TMDL. All such waterbodies in Portland are covered by the Statewide Impervious Cover TMDL. For these waterbodies, Portland will address compliance with the TMDL waste load allocations (WLA) as outlined below:

- Consistent with the requirements of MCM 4 and MCM 5, Portland will continue to refine regulatory policies that minimize the impact of development and redevelopment on waters in the City. With existing policies, it is anticipated that there will be reductions in the impact of impervious cover through redevelopment over time.

For waters within the City that are subject to the Statewide Bacteria TMDL, the City will implement the Illicit Discharge Detection and Elimination Program and the mitigation phase of the Inflow and Infiltration Program, including structural sewer repairs to defective manholes and pipes throughout the City. The City will also continue to reduce the volume of combined sewer discharge through separation and storage projects.

The City of Portland has several additional impaired waters not subject to the Statewide Impervious Cover TMDL, Statewide Bacteria TMDL or other TMDL. Per the Draft MS4 General Permit and Fact Sheet, Portland consulted with the MaineDEP and did not receive any guidance with regard to these impaired waters.

For the areas within the City that directly discharge to an Urban Impaired Stream (UIS), three structural or non-structural BMPs must be considered for inclusion in Portland's permittee-specific ME DEP Order. The UIS in Portland are Capisic Brook, Dole Brook, Long Creek, Nasons Brook, and Fall Brook; all of which are covered by the Statewide Impervious Cover TMDL, with the exception of Fall Brook, which is classified as Category 5-A (TMDL Required) and Long Creek, which is subject to a separate impervious cover-based permit. Consistent with the requirements in Section IV.E.3. of the MS4 General Permit, the BMPs Portland proposes to implement in these watersheds are:

Capisic Brook and Capisic Pond Wetland

Impairment(s): Benthic Macroinvertebrate Bioassessments, Habitat Assessment, Periphyton (Aufwuchs) Indicator Bioassessments
TMDL Defined Issue: Impervious Cover

Proposed BMPs:

1. Sagamore Village Stormwater Retrofit Project: Install multiple, distributed green infrastructure BMPs to treat 29 acres (approximately 10 acres existing impervious area) directly discharging to the brook.

2. Review, assess progress on and update the Capisic Brook Watershed Management Plan developed between 2010-2012 and approved in 2012. Include data gap analysis if necessary (e.g.: Impervious cover "disconnection" analysis, habitat assessment, geomorphic stream channel restoration needs, wetlands/groundwater recharge study, etc.).
3. Support development of a Citywide Fertilizer ordinance.

Alternatives:

- Targeted Public Education Program to Reduce Illegal Dumping of Pet Waste Bags into Catch Basins: Use catch basin inspection tracking system, targeted signage and other education and outreach methods developed under the Capisic Brook Watershed Greener Neighborhoods Cleaner Streams Program to help reduce nutrient and bacteria inputs to the MS4 that contribute to harmful algae blooms (HABs), lower dissolved oxygen levels and adversely impact both aquatic habitat and water quality.

Dole Brook and Dole Brook Wetland

Impairment(s): Benthic Macroinvertebrate Bioassessments
TMDL Defined Issue: Impervious Cover

Proposed BMPs:

1. Conduct preliminary mapping study to identify wetlands, stream channel/drainage and other habitat within the watershed in preparation for development of a watershed management plan.
2. Conduct a hydrogeomorphological study in preparation for development of a watershed management plan.
3. Evaluate, restore and upgrade the aging detention pond on Palmer Avenue to meet today's stormwater treatment and volume standards.

Alternatives:

- Targeted Public Education Program to Reduce Illegal Dumping of Pet Waste Bags into Catch Basins: Use catch basin inspection tracking system, targeted signage and other education and outreach methods developed under the Capisic Brook Watershed Greener Neighborhoods Cleaner Streams Program to help reduce nutrient and bacteria inputs to the MS4 that contribute to harmful algae blooms (HABs), lower dissolved oxygen levels and adversely impact both aquatic habitat and water quality.

Long Creek – Administered under the Long Creek Watershed MS4 General Permit

Impairment(s): Benthic Macroinvertebrate Bioassessments
TMDL Defined Issue: Impervious Cover

Proposed BMP: Continue to work with the LCWMD to implement the Long Creek Watershed Management Plan as a Participating Landowner and permittee.

Nasons Brook and Nasons Brook Wetlands Complex

Impairment(s): Benthic Macroinvertebrate Bioassessments, Dissolved Oxygen, Periphyton (Aufwuchs) Indicator Bioassessments
TMDL Defined Issue: Impervious Cover

Proposed BMPs:

1. Engage with the City of Westbrook to create an intermunicipal agreement to begin conducting preliminary studies with the long-range goal of developing a watershed management plan. The headwaters of the stream and most of the remaining undeveloped land within the watershed are located in Westbrook, so collaboration will be key to preventing future degradation and developing a restoration plan.
2. Portland will collaborate with the City of Westbrook to develop a Salt Reduction Outreach Plan for commercial and potentially industrial and residential property owners in the Nasons Brook watershed.
3. Support development of a Citywide Fertilizer ordinance.

Alternatives:

- Conduct a preliminary study (e.g.: hydrogeomorphological, water quality or habitat study) in preparation for development of a watershed management plan.

Fall Brook

Impairment(s): Habitat Assessment (i.e. base flow)
TMDL Defined Issue: None

Proposed BMPs:

1. Conduct a hydrogeomorphological study to better understand how water is moving through the watershed (e.g.: Infiltration and groundwater recharge areas, reasons for lack of base flow in lower reaches, etc.) in preparation for development of a watershed management plan.
2. Conduct a wetlands, stream channel and MS4/combined sewer mapping study in preparation for development of a watershed management plan.
3. Conduct flow, dissolved oxygen and conductivity monitoring in the upper reaches of the watershed if there is sufficient flow during at least part of the season.

Alternatives:

- Support development of a Citywide Fertilizer ordinance.

A list of all impaired waters that are within the City of Portland and their impairment causes is provided in Table 1-1 below. A map showing ME DEP's 2016 Integrated Waters for the City of Portland is provided in Appendix B of this SWMP.

Table 1-1: Impaired Waters within Portland, ME (Based on Approved 2016 Integrated List)

Waterbody	ID	Class	Impairment	Category	TMDL Defined Issue	Waste Load Allocation
Capisic Brook[1]	ME0106000105_610R01	C	Benthic Macroinvertebrate Bioassessments Habitat Assessment Periphyton (Aufwuchs) Indicator Bioassessments	4-A TMDL Completed Impaired Use Other than Mercury	Impervious Cover	14% Effective Impervious Cover
Capisic Pond Wetland	ME0106000105_610R01 _W023	C	Benthic - Macroinvertebrate Bioassessments	4-A TMDL Completed Wetland Habitat with Impaired Use	Impervious Cover	14% Effective Impervious Cover
Dole Brook[1]	ME0106000105_609R01	B	Benthic - Macroinvertebrate Bioassessments	4-A TMDL Completed Impaired Use Other than Mercury	Impervious Cover	8% Effective Impervious Cover
Dole Brook Wetland	ME0106000105_609R01 _W026	B	Benthic - Macroinvertebrate Bioassessments	4-A TMDL Completed Wetland Habitat with Impaired Use	Impervious Cover	8% Effective Impervious Cover
Long Creek[1]	ME0106000105_610R03	C	Benthic - Macroinvertebrate Bioassessments	4-B TMDL Completed[3] Pollution Control Requirements Reasonably Expected to Result in Attainment (2020)	Impervious Cover	16% Effective Impervious Cover

Waterbody	ID	Class	Impairment	Category	TMDL Defined Issue	Waste Load Allocation
Nasons Brook[1]	ME0106000105_607R11_01	C	Benthic - Macroinvertebrate Bioassessments Dissolved Oxygen Periphyton (Aufwuchs) Indicator Bioassessments	4-A TMDL Completed Impaired Use Other than Mercury	Impervious Cover	14% Effective Impervious Cover
Nasons Brook Wetland Complex	ME0106000105_607R11_01_W127	C	Benthic - Macroinvertebrate Bioassessments	4-A TMDL Completed Wetland Habitat with Impaired Use	Impervious Cover	14% Effective Impervious Cover
Fore River Estuary	804-7	SC	Marine Life Toxics	5-A TMDL Required Estuarine and Marine Waters Impaired by Pollutants Other Than Those Listed in 5-B Through 5-D	No	--
			Fecal Coliform	4-A(b) TMDL Completed Estuarine and Marine Waters with Impaired Use (Bacteria from Combined Sewer Overflows)[2]	Statewide Bacteria	14 Fecal Coliform/100mL 31 Fecal Coliform/100 mL[4]
Fore River, Back Cove, Portland Harbor, Casco Bay	804-5	SC	Fecal Coliform	4-A(b) TMDL Completed Estuarine and Marine Waters with Impaired Use (Bacteria from Combined Sewer Overflows)[3]	Statewide Bacteria	14 Fecal Coliform/100mL 31 Fecal Coliform/100 mL[4]

Waterbody	ID	Class	Impairment	Category	TMDL Defined Issue	Waste Load Allocation
Fall Brook[1]	ME0106000105_610R08	C	Habitat Assessment	5-A TMDL Required Impaired by Pollutants Other Than Those Listed in 5-B Through 5-D	No	--
Stroudwater River	ME0106000105_610R04	B	Dissolved Oxygen	5-A TMDL Required Rivers and Streams Impaired by Pollutants Other Than Those Listed in 5-B Through 5-D	No	--
Stroudwater River and Minor Drainages of the Fore River	ME0106000105_610R	B	--	3 Insufficient Data	No	--
Presumpscot River	ME0106000103_60R_01	C	--	2 Attaining Some Uses Insufficient Information for Other Uses	No	--

1. Watershed is classified as an Urban Impaired Stream watershed. From the 2022 MS4 General Permit: "If the waterbody to which a point source covered by this GP discharges is an UIS (Appendix B of this permit) the permittee must propose and fully implement at least three structural or non-structural BMPs to be considered for inclusion in the permit modification, unless the Department has determined the MS4 discharge is not causing or contributing to the impairment. The BMPs must address a specific impairment from the MS4 discharge within the UA."
2. Permitted facilities under this impairment listing are the Portland Water District, City of South Portland, and Town of Cape Elizabeth.
3. Permitted facilities under this impairment listing are the City of Portland and the Portland Water District.
4. In approved shellfish growing areas affected by point sources, Fecal Coliform geometric mean shall not exceed 14/100mL and estimated 90th percentile shall not exceed 31/100mL.

1.3 ANNUAL PROGRAM SELF-EVALUATION, RECORD KEEPING & ANNUAL REPORTING

Covered entities are required to collect and report information about the development and implementation of their SWMP. The City of Portland conducts annual evaluations of its program compliance, the appropriateness of its identified Best Management Practices (BMPs), and progress towards achieving its identified measurable goals, which include reducing the discharge of pollutants to the maximum extent practicable (MEP).

The City of Portland will keep records required by the 2022 MS4 General Permit for at least three (3) years after its expiration. Records include but are not limited to: information used in the development of any written (hardcopy or electronic) program required by the permit, any monitoring results, copies of reports, records of screening, follow-up and elimination of illicit discharges; maintenance records; inspection records; and data used in the development of the Notice of Intent (NOI), SWMP, SWPPP, and annual reports. Records will be available for public observation as requested. Records will be submitted to the ME DEP as requested.

Annual reports are due to the ME DEP each year by September 15. The annual reports shall include the following content for the reporting period:

- Status of compliance with General Permit and permittee specific DEP Order conditions;
- An assessment/evaluation of:
    - The effectiveness of the SWMP.
    - The appropriateness of the identified BMPs.
    - Progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP.
    - The identified measurable goals for each of the MCMs.
- A summary of all information collected and analyzed, including outfall screening and sampling results;
- Any change in identified BMPs or measurable goals and justification for those changes; and
- A description of the activities, progress, and accomplishments for each MCM, including:
    - The status of education and outreach efforts.
    - The status of public involvement activities.
    - The status of stormwater mapping efforts.
    - The number of visual dry weather inspections performed.
    - The number of inaccessible and new outfalls.
    - The number of dry weather flow sampling events and laboratory results.
    - The number of detected illicit discharges.
    - The number of detected illicit connections.
    - The number of illicit discharges that were eliminated.
    - Construction site inspections and number and nature of enforcement actions.
    - Post construction BMP status and inspections.
    - The number of functioning post construction BMPs.
    - The number of post construction sites requiring maintenance or remedial action.

- The status of the good housekeeping/pollution prevention program including the percentage of catch basins cleaned, those catch basins cleaned multiple times, and the number of catch basins that could not be evaluated for structural condition in a safe manner.
- The types of trainings presented, the number of municipal and contract staff that received training, the length of the training, and training content delivered.
- Revisions to the SWPPP procedures and/or changes in municipal operations.

1.4 RESPONSIBLE PARTIES FOR STORMWATER PROGRAM IMPLEMENTATION

Title/ Position of Responsible Person	Role/Program Element(s)
Director of Public Works Supported by the Water Resource Manager, Compliance Section Coordinator, Stormwater Program Coordinator & Corporation Counsel	Overall Administration & Implementation of the SWMP, MS4 General Permit & Stormwater Ordinance
Stormwater Program Coordinator Supported by the ISWG Education & Outreach Coordinator	MCM 1 (Public Education and Outreach) MCM 2 (Public Participation)
Water Resource Manager Supported by the Compliance Section Coordinator, Stormwater Program Coordinator, Utility Coordinator, Asset Manager & Corporation Counsel	MCM 3 (IDDE Program, MS4 Maintenance & Planning, System Asset Mapping & Management)
Compliance Section Coordinator Supported by City Engineer, Development Review Manager, Development Review Coordinator, Stormwater Program Coordinator, Corporation Counsel & other City staff	MCM 4 (Stormwater Pollution Prevention for Development: Construction Phase)
Development Review Manager & City Engineer Supported by Compliance Coordinator, Stormwater Program Coordinator & Corporation Counsel	MCM 5 (Development Planning: Stormwater Management & Post-Construction Stormwater Management)
Compliance Section Coordinator Supported by the Stormwater Program Coordinator & multiple department heads and operations & facilities managers	MCM 6 (Pollution Prevention & Good Housekeeping for Municipal Operations & Facilities)

In addition to the parties above, the City of Portland partners with the Cumberland County Soil and Water Conservation District on implementation of specific components of MCM 1 and MCM 2. The City cooperates with the Portland Water District on MCM 1 and MCM 3 implementation. As needed, the City communicates with Maine Department of Transportation and the Maine Turnpike Authority to coordinate on mapping measures and IDDE (MCM 3). City staff also periodically meet with and cooperate with the Interlocal Stormwater Working Group (Biddeford, Cape Elizabeth, Cumberland, Falmouth, Freeport, Gorham, Old Orchard Beach, Portland, Saco, Scarborough, South Portland, Southern Maine Community College, University of Southern Maine, Westbrook, Windham, and Yarmouth).

2. PROGRAM DOCUMENTS: PLANS, PROCEDURES, INVENTORIES, AND MAPS

The permit requires certain documents to be included in the SWMP. These documents will be developed consistent with the schedule outlined in Section 1.1. This Section provides information on where these documents can be accessed. Some of these documents have been appended to this SWMP, while others are provided in a location external to the SWMP due to size or complexity. Hard copies of the following documents can be found at the Public Works Department, unless otherwise noted below.

2.1 IDDE PROGRAM

2.1.1 IDDE Program Manual

The City of Portland has developed a written IDDE Program Manual consistent with the requirements of part IV.C.3. of the MS4 General Permit. The IDDE Program Manual includes:

- Responsible parties
- Regulatory authority
- Dry weather outfall screening and sampling procedures
- Interconnection screening procedures
- Initial assessment and priority ranking of outfalls/interconnections
- Catchment investigation procedures
- Enforcement procedures
- Training resources and modules

The IDDE Program Manual can be accessed at the Public Works Department.

2.1.2 Separate Storm Sewer System Map

The City of Portland has developed a Separate Stormwater Sewer System Map consistent with the requirements of part IV.C.3.d. of the MS4 General Permit. The map provided in Appendix A includes the following information:

- Outfalls and receiving waters
- Open channel conveyances
- Interconnections with other MS4s and other storm sewer systems
- Municipally-owned stormwater treatment structures
- Waterbodies identified by name and indication of all use impairments per the 2016 Maine Integrated List of Waters report
- Initial catchment delineations
- Regulated urbanized area

The map will be updated annually.

2.1.3 SSO Inventory

In accordance with MCM 3.7, the City will work cooperatively with the Portland Water District to document SSOs that discharge to the MS4 and are within the regulated urbanized area. The City will maintain a database or summary of these SSOs throughout the permit term.

2.2 CONSTRUCTION AND POST-CONSTRUCTION STORMWATER MANAGEMENT PROGRAM

2.2.1 Site Inspections and Erosion and Sediment Control Procedures

Consistent with the requirements of part IV.4.a of the MS4 General Permit, the City of Portland has developed written procedures for site inspections and enforcement of sediment and erosion control procedures. These procedures will be detailed in the City's construction and post-construction guidance documents, which will be available on the City's website.

2.2.2 New Development/Redevelopment Ordinance

Consistent with the requirements of part IV.5.a. of the MS4 General Permit, the City of Portland has developed a regulatory mechanism to require site development applicants to consider Low Impact Development and to ensure long-term operation and maintenance of post-construction stormwater BMPs. These procedures are found in the City Ordinances and will be detailed in the City's construction and post-construction guidance documents, which will be available on the City's website.

2.3 MUNICIPAL FACILITIES AND OPERATIONS PROGRAMS

2.3.1 Comprehensive Operation & Maintenance Plans

The Interlocal Stormwater Working Group has developed Operation and Maintenance Plans consistent with the requirements of part IV.C.6. of the MS4 General Permit. The objectives of the Comprehensive Operation & Maintenance Plans are to provide general guidance to detail ways to reduce stormwater-transported pollution during typical activities on municipally-owned properties, to establish procedures for MS4 infrastructure maintenance that will help reduce the discharge of pollutants from municipally-owned facilities, and to promote behavior that will improve water quality in the City of Portland.

The Operations & Maintenance Plans, as well as all other written standard operating procedures (SOPs), can be accessed at the Public Works Department.

2.3.2 Stormwater Pollution Prevention Plans

The City has developed written Stormwater Pollution Prevention Plans (SWPPPs) for the District Road DPW facility, Canco Road facility, Riverside Recycling Center & Evergreen Cemetery consistent with the requirements of part IV.6.c.d of the MS4 General Permit. The SWPPPs include:

- Pollution and prevention team
- Description of the facility and identification of potential pollutant sources
- Identification of stormwater controls

- Material exposure prevention, good housekeeping, preventative maintenance, spill prevention and response, erosion and sediment control, management of runoff, salt storage pile or salt-containing pile management, employee training, and maintenance of control measure practices

The SWPPPs can be accessed at the Public Works Department.

2.4 EDUCATION AND OUTREACH PLAN

The City has developed a written Municipal Awareness and Behavior Change Plans outlining the City's Education and Outreach program consistent with the requirements of part IV.C.1 of the MS4 General Permit.

The Municipal Education and Outreach Plans can be accessed at the Public Works Department.

CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature

Date

DocuSigned by:
Jon P. Jennings
4F521A7E020344B...

3/30/2021

Name

Appendices

APPENDIX A: SEPARATE STORM SEWER MAP

Stormwater Collection System Overview

Portland, ME

Legend

- StormManholes
- Catchbasin
- Stormwater BMP

Outfalls

- Unknown
- City
- Jetport
- MDOT
- Private
- State
- PWD

- Storm Drain Pipe
- Underdrain
- Culverts
- Portland Boundary
- Town Boundaries

0 0.25 0.5 1 Miles

N

WOODARD &CURRAN

Project #: 0232276.04
Map Created: March 2021

Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

Figure Exported: 3/11/2021 By: staylsln Using: \\woodardcurran.net\shared\Projects\0232276.04 Portland ME - SWMP Services\wip\GIS\SWMPFigures\SWMPFigures.aprx Layout: MS4 System Overview

APPENDIX B: IMPAIRED WATERS AND SPECIAL RESOURCE WATERS

Presumpscot River
*ME0106000103_609R_*

Dole Brook
ME0106000105_609R0

Capisic Brook
ME0106000105_610R01

Stroudwater River
and minor drainages of the Fore River
ME0106000105_610R

Nasons Brook
ME0106000105_607R11_01

Fall Brook
ME0106000105_610R08

Stroudwater River
and minor drainages of the Fore River
ME0106000105_610R

Stroudwater River
ME0106000105_610R04

Stroudwater River
and minor drainages of the Fore River
ME0106000105_610R

Stroudwater River
and minor drainages of the Fore River
ME0106000105_610R

Note: Marine impaired waters not shown. All impaired waters in the City of Portland can be found in the Maine DEP's 2016 Integrated Water Quality Monitoring and Assessment Report.

Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, Maine DEP

Portland's Water Resources

Portland, ME

Legend

2016 Integrated List Waters Categories
- 1
- 2
- 3
- 4A
- 4B
- 4C
- 5

Chapter 502 At Risk Lakes
Chapter 502 Urban Impaired Stream Watersheds
Outfalls with Direct Discharge to Impaired Waters
Portland Boundary
Town Boundaries

0 0.25 0.5 1 Miles

N

WOODARD &CURRAN

Project #: 0232276.04
Map Created: March 2021

Figure Exported: 3/15/2021 By: staytslin Using: \\woodardcurran.net\shared\Projects\0232276.04 Portland ME - SWMP Services\wip\GIS\SWMPFigures\SWMPFigures.aprx Layout: Water Resources

APPENDIX C: DEFINITIONS

Applicant - Means a municipality which files an NOI pursuant to Part III of the 2022 MS4 General Permit.

Best Management Practices (BMP) - Means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Catch basin evaluation - Means an inspection of a catch basin structure that includes documentation of water quality. Water quality evaluation includes, at a minimum, visual observations of sheen, discoloration, foaming, evidence of sanitary sewage, excessive algal growth, and similar visual indicators, as well as observations of odor and the depth of sediment in the sump. This evaluation may be conducted in conjunction with a routine cleaning event or separately, in order to determine which structure(s) require cleaning.

Commissioner - Means the Commissioner of the Maine Department of Environmental Protection.

Common Plan of Development or Sale - Means a subdivision under municipal law as determined by the municipality where the subdivision is located.

Compensation Fee Utilization Plan - Means a plan that specifies how funds received as a fee payment will be allocated to reduce the impact of stormwater pollution to an impaired waterbody.

Construction Activity - Means:

- Construction activity including one acre or more of disturbed area, or activity with less than one acre of total land area that is part of a common plan of development or sale, if the common plan of development or sale will ultimately disturb equal to or greater than one acre; or
- Any other construction activity designated by the Department based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the State.

Department (DEP) - Means the State of Maine Department of Environmental Protection.

Direct Discharge - The definition of "Direct Discharge" in the 2022 MS4 General Permit has been taken from Maine law 38 M.R.S. § 466 ("Definitions") and is as follows: "any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged."

Discharge - Means any spilling, leaking, pumping, pouring, emptying, dumping, disposing or other addition of pollutants to the Waters of the State (for the purpose of the 2022 MS4 General Permit, located within the permittee's UA and not including groundwater.)

Discharge Point – For the purposes of the 2022 MS4 General Permit, the location where collected and concentrated stormwater flows are discharged from the facility such that the first receiving waterbody into which the discharge flows, either directly or through a separate storm sewer system, is a water of the State.

Disturbed Area - Means all land areas that are stripped, graded, grubbed, filled or excavated at any time during the site preparation or removing vegetation for, or construction of, a project. Cutting of trees, without grubbing, stump removal, disturbance or exposure of soil is not considered "disturbed area". "Disturbed area" does not include routine maintenance but does include redevelopment and new impervious areas. "Routine maintenance" is maintenance performed to maintain the original line and grade, hydraulic capacity, and original purpose of the facility. Paving impervious gravel surfaces provided that an applicant or permittee can prove the original line and grade and hydraulic capacity will be maintained and original purpose of the gravel surface remains the same is considered routine maintenance.

Dry Weather Flow - Means any observable flow from an outfall when there has not been measurable precipitation greater than 1/4 of an inch, or ice or snow melt within 72 hours prior to the outfall inspection.

Dry weather inspection - Means an inspection of an outfall that includes observations of sheen, discoloration, foaming, evidence of sanitary sewage, excessive algal growth, and similar visual indicators, as well as detection of odor. These inspections must be completed during a dry weather flow condition (when the storm sewer system is not impacted by current or recent precipitation) or when the outfall is not flowing even if it is within the 72 hours of precipitation greater than 1/4 of an inch, or ice or snow melt.

Education/outreach Campaign - Means a specific set of activities aimed at an identified target audience organized to achieve a particular goal. Campaigns are the totality of all the efforts and tools used to achieve the goal.

Education Outreach tool – A method used to deliver a message to a target audience. Messages may be printed materials such as brochures or newsletters; electronic materials such as websites or online ads; mass media such as newspaper articles or public service announcements (radio or television); or displays in public areas such as town/city hall.

Education Outreach to change behavior – Means to promote and reinforce desirable behaviors designed to reduce stormwater pollution.

Education/outreach Program - Means all the education and outreach campaigns and activities to meet minimum control measure 1 (MCM1) and may include activities in the other minimum control measures.

Illicit Discharge - Means any discharge to a regulated MS4 system that is not composed entirely of stormwater other than: discharges authorized pursuant to another permit issued pursuant to 38 M.R.S. §413; uncontaminated groundwater; water from a natural resource [such as a wetland]; or other Allowable Non-Stormwater Discharges identified in Part IV(C)(3)(h) of the 2022 MS4 General Permit.

Impaired Waterbody - Means a waterbody that is not attaining water quality criteria or standards, as determined by the Department.

Low impact development - "Low impact development" or "green infrastructure" means site planning and design strategies intended to replace or replicate predevelopment hydrology through the use of source control and relatively small-scale measures integrated throughout a site to disconnect impervious surfaces and enhance filtration, treatment, and management of stormwater runoff as close to its source as possible. Low impact development strategies may be either nonstructural or structural, except that low impact development strategies utilizing structural stormwater management techniques shall be limited to an impervious contributing drainage area equal to or less than 1 acre. Low impact development strategies include, but are not limited to: bioretention filters, grass swales and channels, vegetated filter strips, permeable pavements, rain gardens and vegetated rooftops.

Maintenance - "Maintenance" means an activity undertaken to maintain operating condition, original line and grade, hydraulic capacity, and original purpose of the project. Paving an impervious gravel surface at original line, grade and hydraulic capacity is considered maintenance. Replacement of a building is not considered maintenance of the building.

Message – Information distributed to a specific target audience.

Municipal Separate Storm Sewer Systems (MS4) - Means a conveyance or system of conveyances designed or used for collecting or conveying stormwater (other than a publicly owned treatment works (POTW), as defined at 40 CFR 122.2, or a combined sewer), including, but not limited to, roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels or storm drains owned or operated by any municipality, sewer or sewage district, Maine Department of Transportation (MDOT), Maine Turnpike Authority (MTA), State agency or Federal agency or other public entity that discharges to waters of the State other than groundwater.

New development or construction - "New development or construction" means activity undertaken to develop property, including but not limited to: the construction of buildings, parking lots, roads and other new impervious surfaces; landscaping; and other activities that disturb land areas. New development or construction does not include redevelopment or maintenance. Permitted municipalities may define new development more stringently.

Notice of Intent (NOI) - Means a notification of intent to seek coverage under the 2022 MS4 General Permit and a permittee specific DEP Order as provided in Part III(A), made by the applicant to the Department on an NOI form(s) provided by the Department. This is also the mechanism used to request coverage under the 2022 MS4 General Permit and under a permittee specific DEP Order.

Outfall - Means the point source where the MS4 discharges from a pipe, ditch or other discrete conveyance to the waters of the state other than groundwater, or to another entity's MS4, and does not include pipes, cross culverts, tunnels or other conveyances which connect segments of the same stream or other waters of the state and are used to convey waters of the state. For the purposes of the 2022 MS4 General Permit, a discharge to a location not defined as a water of the state is not considered an outfall.

Outreach to raise awareness – Means to introduce information that may be new to or not well understood by a target audience.

Permittee – Means a municipality that owns or operates the storm sewer system authorized under the 2022 MS4 General Permit.

Permittee Specific DEP Order – Means a document issued by the Department, following a formal public comment period, that establishes a list of required actions and corresponding schedules of compliance for a limited number of BMPs associated with the implementation of the GP.

Person - Means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity which creates, initiates, originates or maintains a discharge authorized by the 2022 MS4 General Permit.

Point source - See "**Direct Discharge**". For the purposes of the 2022 MS4 General Permit, the definitions of "Point source" and "Direct Discharge" are identical.

Redevelopment - "Redevelopment" means an activity, not including maintenance, undertaken to redevelop or otherwise improve property in which the newly developed area is located within the same footprint as the existing developed area.

Regulated Small MS4 - Means any Small MS4 authorized by this General Permit or the general permits for the discharge of stormwater from MDOT and MTA small MS4s or state or federally owned or operated small MS4s including all those located partially or entirely within an UA. A list of these regulated small MS4s owned or operated by municipalities is included in Appendix A of the 2022 MS4 General Permit.

Small MS4 - Means any MS4 that is not already covered by the Phase I MS4 stormwater program including municipally owned or operated storm sewer systems, state or federally-owned systems, such as colleges, universities, prisons, military bases and facilities, and transportation entities such as MDOT and MTA road systems and facilities. See also 40 CFR 122.26(b)(16).

Stormwater - Means the part of precipitation including runoff from rain or melting ice and snow that flows across the surface as sheet flow, shallow concentrated flow, or in drainage ways.

Stormwater Issue of Significance (SIS) – Means any local, regional or statewide issue that must be addressed in order to improve water quality in receiving water bodies. SIS can include single pollutants or multiple pollutants as well as certain actions (increased impervious cover, lack of community awareness, construction, agricultural impacts, etc.) conditions (lack of infiltration, treatment at the source, etc.) or phenomena (development pressure, urban sprawl, flooding, urbanization, pH/acidification, etc.).

Stormwater Management Plan (SWMP) - Means a written plan developed, implemented, and enforced by a permittee. The SWMP defines the specific BMPs that will be implemented by the permittee under each of the six MCMs set forth in Part IV of the GP, which are designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP). The SWMP defines: the measurable goal(s) by which each BMP will be evaluated; the person(s) responsible for implementing each BMP, and; the date by which each BMP will be implemented.

Stormwater Pollution Prevention Plan (SWPPP) - Means a written plan developed and implemented for select municipal operations to reduce or eliminate pollutants as described in the 2022 MS4 General Permit.

Total Maximum Daily Load (TMDL) – Means the sum of the individual waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, natural background and a margin of safety. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If BMPs or other nonpoint source pollution controls make more stringent load allocations practicable, then waste load allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

Urban Impaired Stream - Means a stream that fails to meet water quality standards because of effects of stormwater runoff from developed land. Urban Impaired Streams are those streams identified in Appendix B of the 2022 MS4 General Permit.

Urban Runoff - Means stormwater runoff from an Urbanized Area, that may contain elevated levels of pollutants such as hydrocarbons, chlorides, heavy metals and nutrients which may cause or contribute to a waterbody's impairment. In many instances flow such as frequent elevated storm flows, low base flows, and high temperatures will also be significant contributors to a waterbody's impairment.

Urbanized Area (UA) - Means the area of the State of Maine so defined by the inclusive sum of the 2000 decennial census and latest decennial census (2010) by the U.S. Bureau of the Census.

Waste Load Allocation (WLA) – Means the portion of a receiving waters loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitutes a type of water quality based effluent limitation.

Waters of the State - Means any and all surface waters and subsurface waters that are contained within, flow through, or under or border upon this state or any portion of the state, including the marginal and high seas, except such waters as are confined and retained completely upon the property of one person and do not drain into or connect with any other waters of the state, but not excluding waters susceptible to use in interstate or foreign commerce, or whose use, degradation or destruction would affect interstate or foreign commerce.

APPENDIX D: EDUCATION & OUTREACH TOOLS, LEVELS OF EFFORT, AND EFFECTIVENESS BENCHMARKS

Below is a list of tools with their corresponding minimum level of effort and effectiveness benchmark that will be selected from each year to implement BMP 1.1 and 1.2.

Outreach Tool	Minimum Level of Effort	Effectiveness Benchmark
Poster	10 posters/municipality	Total number of posters distributed
Flyer	1 flyer	Total number of flyers distributed
Brochure	1 brochure	Total number of brochures distributed
Rack Card	1 rack card	Total number of rack cards distributed
Newsletter Article	2 newsletter articles	Total number of newsletters distributed
Post Card	1 post card	Total number of postcards distributed
Factsheet	1 factsheet	Total number of factsheets distributed
Sign	5 signs/municipality	Total number of signs distributed
Story Walk	1 story walk	Number of QR code (or similar technology) scans from signs
Story Map	1 regional story map	Number of visitors to webpage
Stormwater Geocaching	1 regional activity (14 sites)	Number of participants per site
Augmented Reality App	1 regional activity (14 sites)	Number of app downloads Number of engagements within the app
Municipal Electronic Message Board	3 messages	Amount of time message was displayed
Email Newsletter	4 email newsletters	Number of people reached with email Number of interactions with email (e.g., link clicks)
Municipal Website Content	Annual updates to website stormwater content	Number of visitors to stormwater webpage(s)
Think Blue Maine Website Content	Semiannual updates to website content	Number of visitors to website
Social Media Post (each platform counts as separate tool)	12 posts	Amount of post engagement (e.g., reactions, comments, shares, etc.)

Outreach Tool	Minimum Level of Effort	Effectiveness Benchmark
Social Media Ad (each platform counts as separate tool)	Ad(s) run 90 days (multiple ads may be run for shorter durations to total 90 days)	Amount of ad engagement (e.g., reactions, comments, shares, link clicks, etc.) Number of people reached with ad
Social Media Video (each platform counts as separate tool)	3 videos	Amount of video engagement (e.g., views, reactions, comments, shares, etc.)
Online ad	Ad(s) run 90 days (multiple ads may be run for shorter durations to total 90 days)	Number of people reached with ad Amount of ad engagement (e.g., link clicks)
Radio Ad	1 radio ad	Number of people reached with ad
Radio Segment	1 radio segment	Number of people reached with segment
Television Ad (broadcast or streaming)	1 television ad	Number of people reached with ad
Television News Segment (broadcast or streaming)	1 television news segment	Number of people reached with segment
Newspaper Article	1 newspaper article	Number of people reached with article
Newspaper Ad	1 newspaper ad	Number of people reached with ad
Webinar/Workshop	7 hours of training offered (multiple webinars/workshops may be offered to reach 7 hours)	Number of workshop attendees
Social Gathering	3 events	Number of interactions
Tabling	3 events	Number of interactions
Outreach partnership with local retailer	50% of industry retailers in region participating	Number of local retailers participating
Outreach partnership with local organization	3 content shares by partner organization	Number of people reached
Item with branding/messaging	1 item with branding/messaging	Total number of items distributed
A DEP-approved tool	Minimum level of effort will be determined based on the tool	Effectiveness benchmark will be determined based on the tool

APPENDIX E: REVISION LOG

Revision No.	Revision Date	Section of SWMP	Revision(s) Made/Reasoning	Signature