

**STORMWATER PROGRAM
MANAGEMENT PLAN**

FOR

CITY OF PORTLAND, MAINE



Date: December 23, 2008

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SECTION 1 INTRODUCTION

I. Overview of Regulatory Program

The General Permit for Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (heretofore referenced as the "General Permit") was issued by the Maine Department of Environmental Protection (DEP) on July 1, 2008. The General Permit authorizes the direct discharge of stormwater from or associated with a regulated small municipal separate storm sewer system ("MS4") to an MS4 or waters of the State other than groundwater. Discharges must meet the requirements of the General Permit and applicable provisions of Maine's waste discharge and water classification statutes and rules. Compliance with the General Permit authorizes a person to discharge stormwater, pursuant to 38 M.R.S.A. § 413. The General Permit authorizes direct discharges in those parts of Maine for which the Department has received delegated authority under the Federal NPDES program. Several key requirements of the General Permit are described below.

A. Stormwater Program Management Plan

The regulated MS4, hereinafter the "permittee" or "City of Portland," shall develop, implement, and enforce a Stormwater Program Management Plan ("Plan") implementing six minimum control measures, set forth in Section H of the General Permit, which are designed to reduce the discharge of pollutants within the Urbanized Area (UA), from its regulated small MS4 to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. Maximum extent practicable is generally a focus on pollution prevention and source control. Maximum extent practicable is an iterative process with an ultimate goal of protecting and improving water quality. For the purposes of the permit, narrative effluent limitations requiring implementation of BMPs are generally the most appropriate form of effluent limitations when designed to satisfy technology requirements (including reductions of pollutants to the MEP) and to protect water quality. The Plan and all Minimum Control Measures must be substantially implemented by June 30, 2013. The permittee shall describe in its Stormwater Program Management Plan how it will reduce or eliminate polluted stormwater runoff to the maximum extent practicable within the UA, from its MS4.

B. Minimum Control Measures (MCM's)

The General Permit requires that for each MCM, the permittee shall: define appropriate best management practices (BMPs); designate a person(s) responsible for each BMP; define a time line for implementation of each BMP; and define measurable goals for each BMP. The Minimum Control Measures to be included in the Plan are as follows:

- Public education and outreach on stormwater impacts
- Public involvement and participation
- Illicit discharge detection and elimination
- Construction site stormwater runoff control

- Post-construction stormwater management in new development and redevelopment
- Pollution prevention/good housekeeping for municipal operations

C. Evaluation and Assessment

As specified in Part IV(J)(1) of the General Permit, the permittee shall evaluate program compliance, the appropriateness of identified best management practices, and progress towards achieving identified measurable goals.

D. Annual Reporting and Record Keeping

The permittee shall keep records required by the permit for at least three (3) years following its expiration, or longer if requested by the Commissioner. The permittee shall make records, including its Stormwater Program Management Plan, available to the public at reasonable times during regular business hours.

By September 1, 2009, and annually thereafter by September 1, the permittee shall submit a report for the Department's review and approval to:

**Municipal/Industrial Stormwater Coordinator
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017**

The report must include the following.

1. The status of compliance with permit conditions based on the permittee's Plan, an assessment of the appropriateness of identified best management practices, progress towards achieving identified measurable goals for each of the Minimum Control Measures, and progress toward achieving to goal of reducing the discharge of pollutants to the MEP.
2. Results of information collected and analyzed, including monitoring data, if any, during the reporting period.
3. A summary of the stormwater activities the permittee intends to undertake pursuant to its Plan during the next reporting cycle.
4. A change in any identified BMPs or measurable goals that apply to the Plan.
5. A summary describing the activities, progress, and accomplishments for each of the minimum control measures #1 through #6 (including such items as the status of education and out reach efforts, public involvement activities, stormwater mapping efforts, dry weather inspections, detected illicit discharges, detected illicit connections, illicit discharges that were eliminated, construction site inspections, number and nature of enforcement actions, post construction BMP status and inspections, and the status of the permittee's good housekeeping/pollution prevention program.

Changes to the report based on the Department's review comment(s) must be submitted to the Department within 30 days of the receipt of the comment(s). If possible, the permittee will

provide an estimate of annual expenditures for permit compliance for the reporting period and projected budget for the following year.

E. Impaired Waters and Total Maximum Daily Load (TMDL)

If the waterbody to which a discharge drains is impaired and has an EPA approved TMDL, then the discharge must be consistent with the TMDL waste load allocation and any implementation plan. If a TMDL is approved or modified by EPA subsequent to the effective date of this General Permit, the Department shall notify the permittee and may:

- a. Require the permittee to review its Plan for consistency with the TMDL, and propose any necessary modification to the Plan to be submitted to the Department within six months of the receipt of notification concerning the TMDL;
- b. Issue a watershed-specific General Permit for the area draining to the impaired waterbody. The watershed-specific MS4 General Permit may reference parts of this General Permit; or
- c. Require an individual permit.

II. Basis of Plan Development

This Stormwater Program Management Plan was developed in accordance with the requirements of the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems, which was issued by the Maine Department of Environmental Protection (DEP) on July 1, 2008. Per the General Permit, implementation of the six MCMs is required only within the urbanized area, as defined by the latest decennial (2000) census by the U.S. Bureau of Census, of the regulated small MS4.

SECTION 2 REGULATED MS4 INFORMATION

I. Location Map

The location map for the City of Portland (hereinafter “City”) is included as Figure 2.1.

II. Urbanized Area Map

The urbanized area map was developed from the U.S. Census Bureau Census 2000 Urbanized Area and Urban Cluster Data, and is included as Figure 2.2.

III. Priority Watersheds

The City’s highest priority watershed is: Capisic Brook Watershed. Several factors lead Portland to focus on this watershed, including, but not limited to the following:

- Over 1500 acre size of Capisic Brook Watershed (within Portland)
- Single family home density and land use mix
- The number of structures and conveyances within the watershed: 129 outfalls (about 90 appear to be public), 751 catchbasins, 20 miles of storm drains, 32 miles of sewers, 304 drain manholes, 889 sewer manholes, 28 culverts, and 12 detention ponds. The City will attempt to quantify the open ditch system in Permit Year 1; see Appendix B.
- Complexity of the watershed’s hydrography and underground sewer & storm systems
- Watershed boundary overlap into City of Westbrook
- The City has completed a majority of its CSO abatement work within this watershed.
- The MeDEP has completed a draft TMDL report for this watershed.

The City’s second highest priority watershed is the Fallbrook Watershed. If time and resources permit, the City hopes to implement additional measures within Fallbrook toward the end of the permit cycle, as long as the City reaches its goals pertaining to the Capisic Brook Watershed.

**SECTION 3
MINIMUM CONTROL MEASURES**

I. PUBLIC EDUCATION AND OUTREACH

The City of Portland (hereinafter “City”) will fulfill the requirements for Public Education and Outreach through participation in and partial funding of the Interlocal Stormwater Working Group (ISWG) for Public Education and Outreach services, as described in this section of the plan.

A. Goals

1. To raise awareness that polluted stormwater runoff is a significant source of water quality problems for Maine's waters;
2. To motivate people to use Best Management Practices (BMPs) which reduce polluted stormwater runoff ; and
3. To reduce polluted stormwater runoff as a result of increased awareness and utilization of BMPs.

B. *Required Best Management Practices*

1. Continue Awareness Outreach Efforts from the Previous MS4 Permit Cycle.

a. Actions

- i. In Permit Year 1, the City and ISWG will continue to provide a thinkblumaine.org link on the City’s website to raise awareness of stormwater issues.
- ii. In Permit Year 1, the City and ISWG will continue to use the think blue Maine ducky logos in all YardScaping materials to reinforce the connection between lawn care activities and stormwater issues.
- iii. In Permit Year 1, the City and ISWG will continue to provide informational material (fact sheets, brochures and display board) in municipal buildings to raise awareness of stormwater issues.

b. Reporting: The annual report of Permit ear 1 will contain information regarding the availability of stormwater information on the City’s website and the display materials used and locations of the displays.

c. Responsible Party: Nicole Clegg, Communications Director in cooperation with ISWG Education Coordinator.

2. Work with existing partners and seek out partners to help raise awareness of stormwater issues.

- a. Actions
 - i. During Permit Year 1, the City and ISWG will partner with thinkbluemaine, Casco Bay Estuary Partnership, Friends of Casco Bay, Maine Board of Pesticide Control, Maine DEP, UMaine Cooperative Extension, and the Portland Water District.
 - ii. By the end of Permit Year 2, the City and ISWG will investigate potential partnerships with organizations identified in the Awareness Plan to be developed in Permit Year 1.
- b. Reporting: The City will list partners and cooperative activities that resulted in the dissemination of stormwater awareness messages.
- c. Responsible party: Nicole Clegg, Communications Director in cooperation with ISWG Education Coordinator.

3. Develop and implement Stormwater Awareness Plan.

- a. Actions
 - i. In Permit Year 1, the City and ISWG will assess or utilize existing assessments of the target audience to document baseline level of awareness by which the implementation of the awareness plan can be measured.
 - ii. By March 2, 2009 the City will submit a plan to DEP through ISWG to raise awareness of stormwater issues such as the path stormwater runoff takes, sources of stormwater pollution and the impact that polluted stormwater runoff has in the community(s). The plan will identify:
 - 1) the target audience
 - 2) the outreach tool(s) to be used
 - 3) the message
 - 4) the distribution system
 - 5) the time line and implementation schedule
 - 6) the person(s) responsible for implementation
 - 7) an impact evaluation protocol
 - 8) a plan modification protocol (this must include DEP approval of significant plan modifications)
 - 9) the goals (e.g., the targeted level of change sought as a result of the education and outreach effort; specific measurable goals for plan implementation).
 - iii. Unless DEP responds in writing or verbally otherwise, as of July 1, 2009 the Awareness Plan is considered approved and implementation of the Stormwater Awareness Plan will begin.
- b. Reporting: The Permit Year 1 annual report will document the target

audience baseline level of awareness, the dates that the draft and final Plan(s) were submitted to DEP, when the Plan was approved, and significant milestones to be reported in the remaining permit years. In Permit Years 2 and 4, the City will report on the implementation of the Plan and process indicators; covering significant milestones and any changes made to the plan. In Permit Year 3, the report will include a cursory evaluation and assessment on both the progress of implementing the Plan as well as the impact the efforts are having on the target audience. The Permit Year 5 report will provide an in-depth assessment of both the implementation and impact of the Plan.

- c. Responsible Party: Nicole Clegg, Communications Director in cooperation with ISWG Education Coordinator.

4. Continue Targeted Best Management Practices Adoption efforts from previous MS4 permit cycle.

- a. In Permit Year 1, the City and ISWG will continue to refine YardScaping materials, as needed, based on either new research or feedback from users; to offer YardScaping Adult Education classes to change lawn care practices and build local support for implementation of YardScaping practices; and develop and streamline the Point of Sale lawn care education program by incorporating lessons learned, developing new or refining existing promotional materials, offering YardScaping classes at Point of Sale locations, refining tracking methods for products and promotional materials, and building local networks for dissemination of YardScaping materials.
- b. Reporting: The annual report will provide a list of events or occasions where ISWG and/or the City provided YardScaping information or education, the MS4 audience, the number of people contacted, the date and, where applicable, and the number of people who planned to implement changes in their lawn care practices. The report will also include an evaluation, as well as lessons learned.
- c. Responsible party: Nicole Clegg, Communications Director in cooperation with ISWG Education Coordinator.

5. Develop and implement BMP Adoption Plan

- a. Actions
 - i. In Permit Year 1, the City and ISWG will assess or utilize existing assessments of the target audience to document baseline level of action by which the implementation of the BMP Adoption Plan can be measured.

- ii. By March 2, 2009 the City will submit a plan to DEP through ISWG to encourage the targeted audience to adopt or practice specific BMPs that will reduce stormwater pollution. The Plan will include:
 1. The BMP
 2. The target audience
 3. The outreach tool(s) to be used
 4. The message
 5. The distribution system
 6. The time line
 7. The person(s) responsible for implementation
 8. An impact evaluation protocol
 9. A plan modification protocol
 10. The targeted level of change as a result of the outreach effort (specific measurable goals for plan implementation).
 - iii. Unless DEP responds in writing or verbally otherwise, as of July 1, 2009 the BMP Adoption Plan is considered approved and implementation of the Plan will begin.
- b. Reporting: The Permit Year 1 annual report will document the target audience baseline, the date that the draft and final plan(s) were submitted to DEP, when the Plan was approved, and significant milestones to be reported in the remaining permit years. In Permit Years 2 and 4, the City will report on the implementation of the Plan and process indicators; making sure to cover significant milestones and any changes made to the Plan. In Permit Year 3 the report will include a cursory evaluation and assessment on both the progress of implementing the Plan as well as the impact the efforts are having on the target audience. The Permit Year 5 report will provide an in-depth assessment of both the implementation and impact of the Plan.
- c. Responsible party - Nicole Clegg, Communications Director in cooperation with ISWG Education Coordinator and the DEP.

C. *Additional Best Management Practices*

1. School Outreach

- a. Actions
 - i. In Permit Year 1, continue the incorporation and implementation of “It’s All Connected” school curriculum in elementary and/or middle schools.
 - ii. In Permit Years 2 - 5, as funding permits, continue the incorporation and implementation of “It’s All Connected” school curriculum in elementary and/or middle schools. The City will focus its efforts in the schools

located within the Capisic Brook watershed

- b. Reporting: Annual reports will include the total number of students reached, which schools were involved and the lesson topics that were covered.
- c. Responsible party: ISWG Education Coordinator and the Portland School Department

2. Raingarden Demonstration

- a. The City will partner with Stantec to create a demonstration raingarden to be located within highly visible Back Cove watershed location.
- b. Responsible Party: Department of Public Services.

3. Mailing Lists

- a. The City will create mailing lists for land owners within each watershed City-wide
- b. Responsible Party: Department of Public Services and MIS

4. Pet Waste Disposal Education

- a. The City will work with local media to educate pet owners that inappropriate disposal of pet waste has an impact on our environment.
- b. Responsible Party: Department of Public Services

II. PUBLIC INVOLVEMENT AND PARTICIPATION

The City will fulfill the requirements for Public Involvement and Participation through participation in and partial funding of the Interlocal Stormwater Working Group (ISWG) for Public Involvement and Participation services, or through directly fulfilling the requirements, as described in this section of the plan. The City will involve the public in both the planning and implementation process of improving water quality and reducing quantity via the stormwater program.

A. Goal.

Involve the public in both the planning and implementation process of improving water quality via the stormwater program.

B. *Required Best Management Practices*

1. Public Notice Requirement

- a. Actions
 - i. The City and ISWG will follow state and local Public Notice requirements for both ISWG and individual Stormwater Program Management Plans. Copies of the plans will be made available on the Maine DEP website and the City's website.
 - ii. The City and ISWG will follow state and local Public Notice requirements when involving stakeholders in the implementation of the Small MS4 General Permit.
- b. Reporting: The annual report will describe compliance with public notice requirements including documentation of meetings and attendance, where applicable.
- c. Responsible party: ISWG Stormwater Program Coordinator or Doug Roncarati, Associate Engineer

2. Host Public Events

- a. The City and/or ISWG will annually host/conduct or participate in at least one public event such as storm drain stenciling, stream clean-up, volunteer monitoring, neighborhood educational events, conservation commission outreach program, Urban Impaired Stream outreach program, or adopt a storm drain or local stream program. The target audience will be a segment of the population the City wishes to reach. The City and/or ISWG will consult with DEP to ensure the event will satisfy requirements.
- b. Reporting: The annual report will include description of the event including estimated attendance/participation and an impact evaluation to assess effectiveness of the methods used to plan and host the event. The Permit Year 5 report will include a comprehensive review of the public events, including an analysis of the process and impact indicators.
- c. Responsible Party: Nicole Clegg, Communications Director in cooperation with ISWG Education Coordinator.

C. *Additional Best Management Practices*

1. Household Hazardous Waste Collection

- a. The City will continue to offer weekly collection of Household Hazardous

Waste between April and November via drop-off at the Riverside Recycling facility. This service is also made available to other communities. The City will send reminder notifications to our Public Works peers in those neighboring communities during the 08/09 winter period. Additionally, we accept Universal Waste six days a week year round. This includes fluorescent tubes, compact fluorescents, CRTS & TVs, mercury added items, batteries, and electronics.

- b. Reporting: The annual report will include description of the household hazardous waste program and information regarding the amount of such waste collected by the City each year.
- c. Responsible Party: Troy Moon, Solid Waste Coordinator

2. Public Event for Refugee Community

- a. The City will host/conduct at least one public event specifically for Portland's refugee community.
- b. Reporting: The annual report will include description of the event including estimated attendance/participation and an impact evaluation to assess effectiveness of the methods used to plan and host the event.
- c. Responsible Party: Nicole Clegg, Communications Director and Department of Public Services

3 Trash Video

The City will work with the local community cable channel to promote improved trash control and cleanup methods in the City's parks and open spaces through a video that will air on November 21, 2008.

5. Leaf Collection

The City will continue free curbside leaf collection to its residents for four weeks in the fall annually. Residents may also drop of leaves at 2 remote sites for four consecutive Saturdays and may dispose of yard waste and brush at the Riverside Recycling Facility at no charge for less than 10 cubic yards.

III. ILLICIT DISCHARGE DETECTION AND ELIMINATION

A. Goal

Develop, implement and enforce a program to detect and eliminate illicit discharges and non-stormwater discharges.

B. *Required Best Management Practices*

1. Develop a watershed based storm sewer system infrastructure map.

a. Actions

- i. By the end of Permit Year 1, the City will review its respective storm sewer infrastructure maps and develop a revisions and update action plan, including a target schedule for mapping the Capisic Brook watershed.
- ii. By the end of the Permit Year 5, the City will develop a watershed based storm sewer system infrastructure map showing the location of all stormwater catch basins, connecting surface and subsurface infrastructure depicting the direction of in-flow and out-flow pipes, and the locations of all discharges from all stormwater outfalls operated by the City. Each catch basin will be uniquely identified to facilitate control of potential illicit discharges, and to ensure proper operation and maintenance of the structures. For each outfall, the following information will be included: type, material, and size of conveyance, outfall or channelized flow (e.g. 24” concrete pipe); the name and location of the immediate surface waterbody or wetland to which the stormwater runoff discharges (or, if an outfall does not discharge directly to a named waterbody, the name and location of the nearest named waterbody to which the outfall eventually discharges.)

b. Reporting: Annual update of mapping efforts undertaken in the Permit Year.

c. Responsible Party: Benjamin Ouellette, GIS Coordinator and the Department of Public Services.

2. Adopt non-stormwater discharge ordinance.

a. Actions

- i. Drafted an ordinance by Sept. 18, 2008.
- ii. Scheduled a council meeting on October 20,2008.
- iii. Adopted and implemented the ordinance by November 28, 2008.

b. Responsible Party: Mary Costigan, Associate Corporation Counsel

c. Reporting: Documentation of illicit discharge incidents and municipal enforcement actions as a result of the adopted ordinance will be included in annual reports to DEP each year of the permit.

d. Responsible Party for reporting: John Emerson, Wastewater Facilities

Coordinator

3. Develop dry weather inspection program for MS4 outfalls.

- a. Actions
 - i. By end of Permit Year 1, select and delineate the topographic boundaries of the Capisic Brook watershed.
 - ii. By end of Permit Year 1, determine two highest priority sub-watersheds within the Capisic Brook Watershed
 - iii. By end of Permit Year 1, have SOP for dry weather outfall inspection program.
 - iv. By end of Permit Year 1, have forms and data collection system in place for dry weather outfall inspections.
 - v. By end of Permit Year 1, have trained inspectors on how to conduct and record dry weather inspections.
 - vi. By end of Permit Year 1, develop and implement a policy/procedure or protocol that identifies the steps that must be taken when an illicit discharge is encountered in order to locate the source of the illicit discharge and eliminate it.
 - vii. By the end of Permit Year 1, conduct dry weather outfall inspections in the two highest priority sub-watersheds within the Capisic Brook watershed.
 - viii. In Permit Years 2 - 5, conduct annual dry weather outfall inspections in additional sub-watersheds within the Capisic Brook watershed and the Fallbrook watershed, such that by Permit Year 5, inspections are being conducted in one or more sub-watersheds of the Fallbrook watershed.
- b. Reporting: Inspection results will be documented in a database management system or other recordkeeping system and a summary will be reported in annual reports submitted to the DEP.
- c. Responsible Party: John Emerson, Wastewater Facilities Coordinator

4. Open ditch Illicit Discharge Program

- a. Actions
 - i. During Permit Years 3 - 5, the City will develop a strategy for detecting illicit discharges in their open ditch system within the Capisic Brook watershed.
 - ii. By the end of Permit Year 5, to the extent allowable under State or local law, the City will implement a strategy for detecting illicit discharges within its open ditch systems in the Capisic Brook watershed.

- b. Reporting: Annual reports to DEP in Permit Years 3-5 will include a status report on the development and implementation of the Open Ditch Illicit Discharge Program, including a description of the strategy to be employed, once developed. The reporting of illicit discharge detections and actions taken will be done under the Non-Stormwater Discharge Ordinance.
- c. Responsible Party: John Emerson, Wastewater Facilities Coordinator

C. *Additional Best Management Practices*

1. Combined and Sanitary Sewer Infrastructure Map

- a. By the end of Permit Year 5, the City will map its combined and sanitary sewer system features, as well as accessible private outfalls.
- b. Reporting: The annual report will include an update of mapping efforts undertaken in the Permit Year.
- c. Responsible Party: Benjamin Ouellette, GIS Coordinator and Department of Public Services

2. Dry weather outfall inspection program

- a. The City will document and make use of opportunistic inspections, especially as they may occur in other Urban Impaired Stream watersheds.
- b. Reporting: Inspections will be included in the database and in the summary submitted with the annual report.
- c. Responsible Party: Department of Public Services

IV. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

A. Goals

Develop, implement, and enforce a program, to reduce pollutants in any stormwater runoff to the regulated small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre will be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more.

Per General Permit Part IV(H)(4a.), the City will rely on either the Maine Construction

General Permit or Chapter 500, Stormwater Management.

B. *Required Best Management Practices*

1. Notification to construction site developers and operators of the requirements for registration under the Maine Construction General Permit or Chapter 500, Stormwater Management for the discharge of stormwater associated with construction activities;

- a. Actions
 - i. During Permit Year 1, continue notification procedures currently in place using check-off box notices on building permit applications that notify applicants of the registration requirements.
 - ii. By the end of Permit Year 1, evaluate current system and modify if necessary.
- b. Reporting: Any system modifications will be summarized in our annual reports.
- c. Responsible party: Building Inspections Division

2. Develop and implement a mechanism to annually document every construction activity that disturbs one or more acres in the City.

- a. In Permit Year 1 implement a tracking system to record every activity that disturbs one or more acres. This system may track and differentiate construction activities within UIS watersheds; the Capisic Brook watershed, and all other watersheds.
- b. Reporting: The system will be used to summarize data to be included in annual reports submitted to the DEP.
- c. Responsible party: Department of Public Services and Department of Planning and Urban Development

3. Develop and implement a construction site inspection program.

- a. Actions
 - i. By the end of Permit Year 1, develop a procedure for construction site inspections to be carried out in the following manner: In the Capisic Brook watershed, and other Urban Impaired Stream watersheds, inspect the construction activity at least three times with one inspection at project completion to ensure that all post construction BMPs were properly

installed, and that final stabilization of the site has been completed. For other watersheds, inspect the construction activity a minimum of twice, with one inspection at project completion to ensure that all post construction BMPs were properly installed, and that final stabilization of the site has been completed.

- ii. By the end of Permit Year 1, develop a standardized inspection form to ensure documentation of all required inspections.
 - iii. By the end of Permit Year 1, develop a process for tracking and notifying the site developer or contractor of noncompliance issues. For sites that are not in compliance, the inspector(s) will provide site operators with guidance on how to come into compliance. Sites that are not brought into compliance within the inspector's specified time period shall be issued a written notice of deficiencies. Continued noncompliance will be reported to the DEP with supporting documentation.
 - iv. By the end of Permit Year 1, identify (or develop) and implement (as needed) a training program for municipal inspectors.
- b. Reporting: Inspection results will be documented in a database management system or other recordkeeping system and a summary will be reported in annual reports submitted to the DEP.
 - c. Responsible party: Department of Planning and Urban Development

C. *Additional Best Management Practices*

1. Chapter 500

- a. The City will propose adoption of a more stringent version of Chapter 500 that would apply stormwater management BMPs to a broader category of projects (i.e., not limited to activities that result in a land disturbance of greater than or equal to one acre) and would apply them city-wide.
- b. Reporting. The annual report for Permit Year 1 will report on the progress of the adoption. If adopted, the subsequent annual reports will contain information regarding the implementation of the ordinance.
- c. Responsible party. The Department of Planning and Urban Development.

V. POST-CONSTRUCTION STORMWATER MANAGEMENT

A. Goal

Develop, implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development

or sale, that discharge into the City's MS4.

B. *Required Best Management Practices*

1. Implement ordinance or similar measure

- a. Actions
 - i. Evaluate the reliance on Chapter 500 or local post construction requirements. In Permit Year 1 the City will determine if they will rely on the State permit process (Chapter 500) for the establishment of post construction BMPs.
 - ii. In Permit Year 1 the City will adapt the model ordinance or other DEP approved measure to meet its desired format.
 - iii. By the end of Permit Year 1, the City will enact a post construction discharge ordinance or similar measure that ensures long term operation and maintenance of post construction BMPs.
- b. Reporting: In Permit Years 2 - 5 the City will implement the post construction ordinance or similar measure and report on said implementation in the annual report.
- c. Responsible Party: Mary Costigan, Associate Corporation Counsel

2. Develop and implement an inspection program for post construction BMPs for which the owner or operator has not hired a qualified third party inspector, and which are located in Urban Impaired Stream watersheds.

- a. Actions
 - i. The City will develop an inspection program, including procedures, protocols, forms, recordkeeping, and training within one year of ordinance or similar measure adoption. The inspection program will provide for annual inspections of a percentage of post construction BMPs located in Urban Impaired Stream watersheds, in accordance with the following schedule:
 - 1-10 post construction sites: inspect at least one site, or 40% (whichever is greater)
 - 11-30 post construction sites: inspect at least four sites, or 30% (whichever is greater)
 - 31-60 post construction sites: inspect at least nine sites, or 25% (whichever is greater)
 - 61-100 post construction sites: inspect at least fifteen sites, or 20% (whichever is greater)

100-160 post construction sites: inspect at least twenty sites, or 17% (whichever is greater)

Over 160 post construction sites: inspect at least twenty-seven sites, or 11% (whichever is greater)

- ii. In Permit Years 3-5 the City will implement the inspection program for any sites within an Urban Impaired Stream watershed regulated by the Post-Construction ordinance or similar measure that have not hired a qualified third party inspector, and document all inspection results. The City will also conduct yearly evaluations of the inspection program and modify as necessary
- c. Reporting: Documentation of all inspections will be entered into a database management system or other recordkeeping system for tracking and annual reporting to DEP. Statewide inspection forms are being developed and implemented in 2008 to facilitate consistency of data collected and to maximize the efficiency of the database management system. Information to be collected includes:
 - i. The cumulative number of sites that have post construction BMPs discharging into the City's MS4;
 - ii. A summary of the number of sites that have post construction BMPs discharging into the City's MS4 that were reported to the municipality;
 - iii. The number of sites with documented functioning post construction BMPs; and
 - iv. The number of sites that required routine maintenance or remedial action to ensure that the post construction BMP is functioning as intended.
- d. Responsible Party: Department of Planning and Urban Development and/or the Department of Public Services

VI. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

A. Goal

Prevent or Reduce pollutant runoff from municipal operations.

B. *Required Best Management Practices*

1. Operations at municipally owned grounds and facilities.

- a. Actions

- i. By the end of Permit Year 1 the City will develop an inventory of all municipal operations conducted in, on, or associated with facilities, buildings, golf courses, cemeteries, parks and open space owned or operated by the City that have the potential to cause or contribute to stormwater or surface water pollution.
- ii. By the end of Permit Year 2, the City will develop and implement written operations and maintenance procedures for municipal operations within the Capisic Brook watershed that includes maintenance schedules and inspection procedures to ensure long term operation of structural and non-structural controls that reduce stormwater pollution to the maximum extent practicable.
- iii. By the end of Permit Year 3, the City will develop and implement operations and maintenance procedures for municipal operations within the remaining watersheds within the City.
- iv. The operations and maintenance procedures will, at a minimum, address, as applicable to the operation:
 - (1) Proper use, storage and disposal of petroleum and non petroleum products, hazardous materials, waste materials, pesticides and fertilizers including minimizing the use of these products, and an alternative product analysis;
 - (2) Spill response and prevention;
 - (3) Vehicle and equipment storage, maintenance and fueling;
 - (4) Amount of deicing materials used each deicing season
 - (5) Landscaping and lawn care including, where applicable, an evaluation of reduced mowing frequencies, establishing and maintaining buffers, cutting vegetation within 100 feet of a stormwater conveyance or surface water;
 - (6) Erosion and sedimentation control;
 - (7) Feeding gulls, waterfowl or other wildlife.
- b. Reporting: Annual reports to DEP each year of the permit will include a status report on the development of the inventory and the development and implementation of the operations and maintenance procedures.
- c. Responsible Party: Bob Leeman, Public Buildings Director; Doug Sherwood, School Dept. Facilities Manager; Tom Civiello, Parks & Open Space Manager

2. Municipal employee training.

- a. Actions
 - i. By end of Permit Year 2 identify training needs and materials.
 - ii. In Permit Years 3-5 implement municipal employee training program to reduce stormwater pollution potential from municipal operations. Topics

to be covered by the training program may include, but not be limited to:

(1) Maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural stormwater controls to reduce pollutants discharged from the separate storm sewers.

(2) Controls for reducing or eliminating the discharge of pollutants into the separate storm sewers from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations, snow disposal areas, and waste transfer stations.

(3) Procedures for disposing of waste removed from the separate storm sewers and areas listed above in accordance with all regulatory requirements (such as dredge spoil, accumulated sediments, floatables, and other debris).

- b. Reporting: Annual reports to DEP each year of the permit will include a status report on the development of the training program, the types of trainings presented, number of employees and contract staff that received training, the length of the training and training effectiveness.
- c. Responsible Party: Department of Public Services and Department of Human Resources

3. Street sweeping.

- a. Each permit year the City of Portland will continue a program to sweep all publicly accepted paved streets and publicly owned paved parking lots maintained by the City at least once a year as soon as possible after snowmelt.
- b. Reporting: Annual reports to DEP each year of the permit will include a status report on street and parking lot sweeping.
- c. Responsible Party: John Emerson, Wastewater Facilities Coordinator

4. Cleaning of stormwater structures including catch basins.

- a. Each permit year the City will continue a program to evaluate and, if necessary, clean catch basins and other stormwater structures that accumulate sediment at least once every other year and dispose of the removed sediments in accordance with current state law. The City will clean catch basins more frequently if inspections indicate excessive accumulation of sediment. Excessive accumulation is greater than or equal to 50 percent filled.
- b. Reporting: Annual reports to DEP each year of the permit will include a

status report on cleaning of catch basins and other stormwater structures.

- c. Responsible Party: John Emerson, Wastewater Facilities Coordinator

5. Maintenance and upgrading of stormwater conveyances and outfalls.

a. Actions

- i. As mapping is conducted, document condition ratings of catch basins and stormwater conveyances.
- ii. Track opportunistic upgrades to catch basins, conveyances and outfalls as they occur as part of the City's overall wastewater system maintenance program.
- iii. By the end of Permit Year 4 evaluate and implement a prioritized schedule, as necessary, for repairing or upgrading the conveyances, structures and outfalls of the City's MS4.

- b. Reporting: Annual reports to DEP each year of the permit will include a status report on the maintenance and upgrading of stormwater conveyances and outfalls.

- c. Responsible Party: John Emerson, Wastewater Facilities Coordinator

6. Stormwater Pollution Prevention Plans (SWPPP's)

a. Actions

- i. In permit Year 1 the City will inventory all public works facilities, transfer stations, and school bus maintenance facilities operated by the City within its regulated area, with the exception of any facilities regulated under Maine's Industrial Stormwater Program and determine which facilities have existing SWPPPs.
- ii. The City will develop and implement SWPPPs for each applicable facility by the end of Permit Year 2. The SWPPPs will outline sources of potential stormwater pollutants and the methods by which these pollutants will be reduced or prevented from entering Waters of the State, other than groundwater, or to the City's MS4. The SWPPPs will identify a team of facility personnel as well as a team leader who is ultimately responsible for SWPPP implementation. In Permit Years 3 - 5 the City will continue to implement its facility SWPPPs. The City will collaborate with DEP on developing a training program to provide to municipal facility staff informing them on the requirements of the SWPPP and how to effectively implement their plans.

- b. Reporting: Annual reports to DEP each year of the permit will include a status report on the development of the SWPPP's.
- c. Responsible Party: Doug Roncarati, Associate Engineer

C. *Additional Best Management Practices*

1. Stormwater Utility Study

- a. In Permit Year 1, the City will host a seminar to discuss whether it makes sense for the City to create a stormwater utility.
- b. The City will utilize the results of the seminar in conducting a study regarding the creation of a stormwater utility.

2. Alternative Deicing Materials

- a. The City will explore alternative materials to utilize in deicing the City's roads.
- b. Reporting: The City will include any alternate materials utilized in the annual report.
- c. Responsible party: Department of Public Services

3. NEMO Presentation

The City will host a presentation by Maine NEMO, Nonpoint Education for Municipal Officials, on October 30, 2008.

4. Certification of Inspectors

The City will seek Erosion & Sedimentation Control certification for DPS inspection staff and construction crews.

5. O&M Protocols for Snow Dump Site

The City will develop specialized operations and maintenance protocols for the Snow Dump / Salt storage site on outer Congress St.

**SECTION 4
GENERAL REQUIREMENTS**

I. Required Signature

"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: _____
Joseph E. Gray, Jr.

Title: City Manager

II. Plan Availability

This Plan will be retained by the City's principal executive officer for the duration of the permit period and copies will be available and retained by municipal officials or employees responsible for implementation of the Plan. The City will make a copy of the Plan available to the following immediately upon request:

- A. The Commissioner of the Department;
- B. In the case of a regulated small MS4 adjacent to or interconnected with the City's storm sewer system, to the operator of that regulated small MS4; and
- C. In the case of a regulated small MS4 stormwater discharge to a water supply watershed, to the public water supply company.

FIGURES

Figure 2.1
Figure 2.2

Location Map
Urbanized Area Map



**Figure 2.1 Location Map
City of Portland, Maine**



City of Portland, Maine
Department of Public Services
December 19, 2008



Area of Focus:



**NPDES Phase II Stormwater Program
Automatically Designated MS4 Areas
Portland, Maine**

-  Portland Town Boundary
-  Regulated Area (2000 Urbanized Area)

Town Population: 64,249
Regulated Population: 63,110



0 0.4 0.8 1.2 Miles

Data Sources: Urbanized Areas from US Census Bureau (2000). Political boundaries from ME Office of GIS. Hydrography from NHD. Transportation data from GDT at 1:24,000. Map Updated: 12/18/02; US EPA-New England GIS Center L:\projects\stormwater\phase2\maine\new2\

FIGURE 2.2

APPENDICES

- A. Notice of Intent
- B. Capisic Brook Watershed Plan

APPENDIX A
NOTICE OF INTENT

**NOTICE OF INTENT TO COMPLY WITH MAINE GENERAL PERMIT FOR THE DISCHARGE OF
STORMWATER FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS**

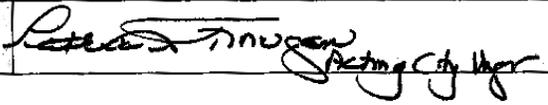
PLEASE TYPE OR PRINT IN **BLACK INK ONLY**

Municipality:	City of Portland	Mailing Address:	389 Congress St.	
Town/City:	Portland	State:	Maine	Zip Code: 04101
Name and title of chief elected official or principal executive officer:	Joseph Gray City Manager	Mailing Address:	389 Congress St	
Town/City:	Portland	State:	Maine	Zip Code: 04101
Name of primary contact person responsible for MS4 stormwater management program:	Katherine Earley	Mailing Address:	Dept. Of Public Services 55 Portland St.	
Town/City:	Portland	State:	Maine	Zip Code: 04101
Daytime phone: (with area code)	207-874-8830	Email if available:	kas@portlandmaine.gov	
Estimate of the area in square miles of the Urbanized Area:	21.0 sq. miles	Prior DEP Permit Number (if applicable):	MER04124	
Name of stream(s), wetland(s) or waterbody(ies) to which the regulated Small MS4 discharges and a list of impaired waterbody(s) which receive stormwater from the Regulated Small MS4 (attach additional sheets as necessary):	Capisic Brook (impaired: Cat. 5-A), Dole Brook ("Unnamed Brook", impaired: Cat. 5-A), Fall Brook (impaired: Cat. 5-A), Long Creek (impaired: Cat. 5-A), Nason's Brook (impaired: Cat. 5-A), Presumpscot River (impaired: Cat. 4-C), Stroudwater River (impaired: Cat. 5-A), Back Cove, Casco Bay, Fore River, Portland Harbor			

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement knowingly made in the submitted information may be punishable as a criminal offense, in accordance with Maine General Statutes.

I certify that this permit registration is on complete and accurate forms as prescribed by the Department without alteration of the text.

I also certify under penalty of law that I have read and understand all requirements of the General Permit. I certify that all requirements for authorization under the general permit are met and that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit for the municipality. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowingly making false statements.

Signature of chief elected official or principal executive officer:		Date:	June 27, 2008
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This NOI registration form must be filed with the Department at the following address:
 Stormwater Coordinator
 Maine Department of Environmental Protection
 Bureau of Land & Water Quality
 17 State House Station
 Augusta ME 04333-0017

OFFICE USE ONLY	Ck.#	Date	Staff	Staff	After Photos
NOI #	FP		Acc. Date	Def. Date	

APPENDIX B

CAPISIC BROOK WATERSHED PLAN

A. Purpose

Portland has three identified Urban Impaired Stream watersheds as defined by Appendix B of the MeDEP General Permit for Small Municipal Separate Storm Sewer Systems issued in July 2008. During this permit cycle, the City of Portland will focus additional efforts on the Capisic Brook watershed. If time and resources permit, similar measures may be implemented in additional impaired stream watersheds during this permit cycle.

B. Goals

To control, to the maximum extent practicable, the discharge of stormwater runoff from the City's infrastructure and operations to the Capisic Brook watershed.

To identify and educate land owners within the Capisic Brook watershed as to the affect their actions have on the watershed in which they live and/or work and actions they can take to reduce their impact.

C. Best Management Practices

1. Data Collection

a. Actions

- i. In Permit Year 1 the City will identify and create an inventory of City facilities and operations within the Capisic Brook watershed (hereinafter the "watershed").
- ii. In permit Year 1 the City will identify land owners within the watershed.
- iii. In Permit Year 1 the City will survey landowners within the watershed and create a baseline of land owners' knowledge regarding stormwater management.
- iv. The City will Partner with Maine DEP to map individual catchment areas for each outfall within the watershed and to more accurately define the watershed boundaries.
- v. The City will work with Maine DEP to identify "hot spots" within the watershed.

- b. Responsible parties: Nicole Clegg, Communications Director, Bob Leeman, Public Buildings Director; Doug Sherwood, School Dept. Facilities Manager; Tom Civiello, Parks & Open Space Manager; Benjamin Ouellette, GIS Coordinator

2. Public Education and Outreach

- a. Actions
 - i. In Permit Years 1 and 2 the City will place informational signs regarding the watershed at parks and schools.
 - ii. In Permit Year 2, the City will develop an awareness plan that builds upon the results of the land owner survey.
 - iii. The City will explore options regarding the placement of additional trash bins in certain locations.
 - iv. The City will seek partnerships with the City of Westbrook, neighborhood groups, and Deering High School to assist with Awareness Plan.
- b. Responsible Parties: Nicole Clegg, Communications Director and the Department of Public Services

3. Public Involvement and Participation

- a. Actions
 - i. In Permit Year 2 the City will host a public meeting for land owners within the watershed.
 - ii. In Permit Year 2 the City will host a presentation on the Maine Stream Team Program for land owners within the watershed and encourage the creation of a Stream Team for Capisic Brook.
 - iii. The City will explore the creation of a Watershed Stewards program within the four schools in the watershed (Deering, Longfellow, Hall, Lincoln).
 - iv. In Permit Year 2 the City will create a volunteer stenciling program within the watershed.
 - v. The City will explore the creation of a voluntary downspout

disconnection program in the watershed.

- b. Responsible Parties: Department of Public Services, Portland School Department.

4. Illicit Discharge Detection and Elimination

a. Actions

- i. By the end of Permit Year 1 the City will identify (based on existing available information) the amount of open ditch stormwater system within the Capisic Brook watershed.
- ii. The City will monitor base flow conditions in Capisic Brook.
- ii. The City will continue watershed assessment and data collection activities in partnership with the MeDEP
- iii. The City will partner with Westbrook to map the watershed, including the engineered systems along the shared border.
- iv. The City will inspect combined system and private outfalls in the watershed.
- v. The City will develop a list of septic systems in the watershed that are 20 years old or greater by the end of Permit Year 2. By the end of Permit Year 3, the City will determine if malfunctioning systems would have the potential to discharge directly or indirectly into the MS4. By the end of Permit Year 5, the City will ensure that all septic systems in the watershed that are at least 20 years old that have the potential to discharge directly or indirectly into the MS4 are functioning as intended.

- b. Responsible Parties: Department of Public Services, GIS, Department of Planning and Urban Development.

5. Construction Site Stormwater Runoff Control

a. Actions

- i. The City will add an additional inspection to construction projects within the watershed that is tied to a rain event.

- ii. The City will explore the viability and effectiveness of various kinds of LID techniques and determine which should be included as stormwater management options in the development ordinance.
- b. Responsible party: Department of Planning and Urban Development

6. Post-Construction Stormwater Management

- a. Actions
 - i. The City will propose an amendment to its Stream & Watercourse Protection Ordinance that would require expanded stream and drainage channel buffers.
 - ii. The City will identify the BMP's that the City owns or has easements to and will develop operation and maintenance protocols for those structures.
 - iii. The City will gather information on the effectiveness of existing Low-impact Development BMPs, evaluate the costs associated with maintaining the BMPs, and use this information to inform future revisions to its development review ordinance.
 - iv. The City will continue to partner with Maine Turnpike Authority as they begin to evaluate a future widening project through Portland, particularly to encourage and develop LID techniques to be retrofitted or installed within the Capisic Brook area.
- b. Responsible Parties. Department of Public Services, Corporation Counsel, Department of Planning and Urban Development.

7. Pollution Prevention/Good Housekeeping for Municipal Operations

- a. Actions
 - i. The City will vacuum sweep streets in the Capisic Brook watershed once a year after snowmelt and assess the volumes collected.
 - ii. The City will sweep publicly owned roads and parking lots in identified "hot spots" at a frequency greater than once per year.
 - iii. The City will clean catch basins in the watershed annually and assess the volume of material collected.
- b. Responsible Party: Department of Public Services