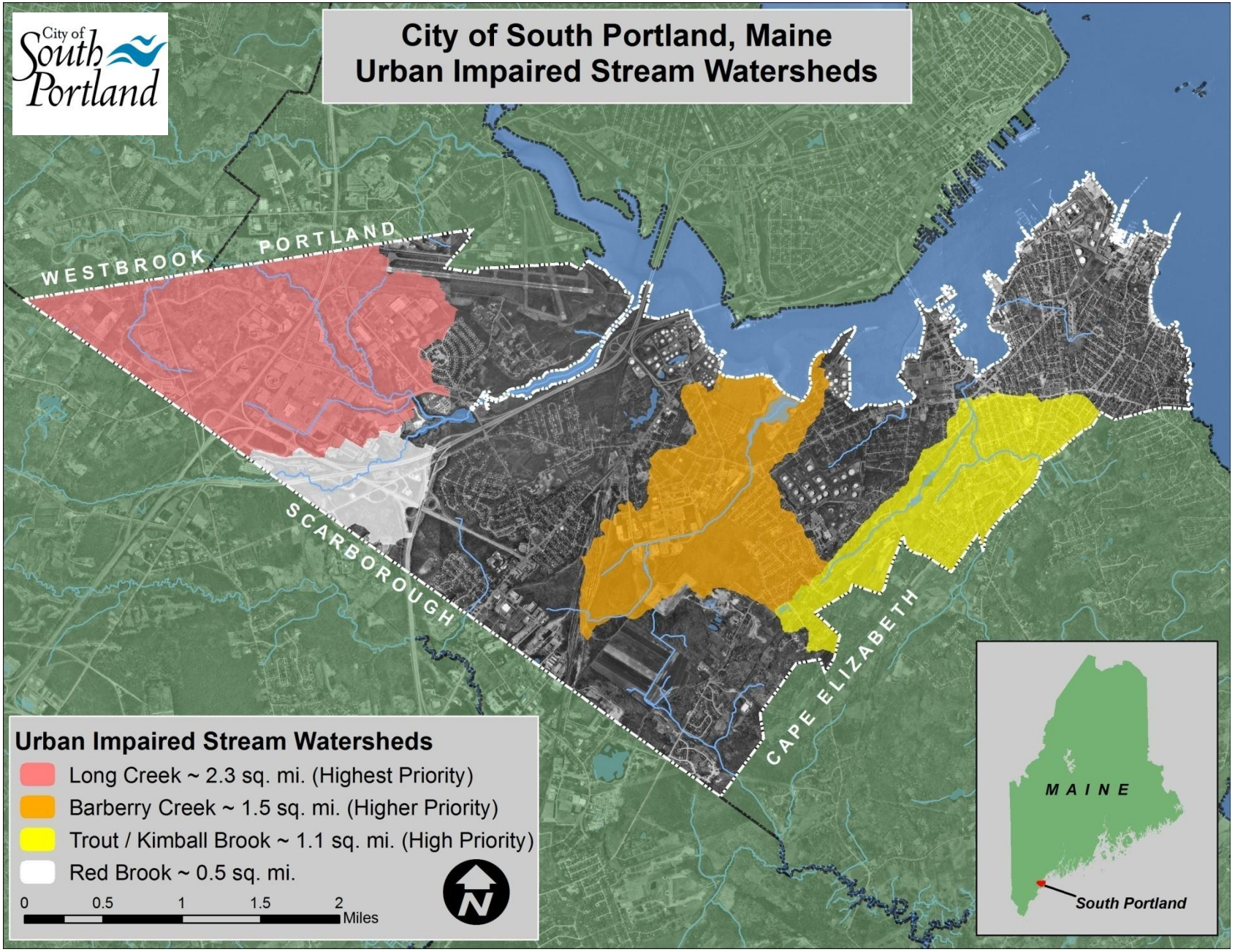
Stormwater Phase II Annual Report for Permit Year 1 (2008-09)

City of South Portland

Water Resource Protection


City of South Portland
City of South Portland, Maine
Urban Impaired Stream Watersheds
WESTBROOK
PORTLAND
SCARBOROUGH
CAPE ELIZABETH
Urban Impaired Stream Watersheds
Long Creek ~ 2.3 sq. mi. (Highest Priority)
Barberry Creek ~ 1.5 sq. mi. (Higher Priority)
Trout / Kimball Brook ~ 1.1 sq. mi. (High Priority)
Red Brook ~ 0.5 sq. mi.
0
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1
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South Portland

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ACKNOLEDGEMENTS

This report was prepared collaboratively by the City of South Portland Water Resource Protection Department's (WRPD) staff consisting of the following individuals:

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WRPD staff would also like to thank the following individuals for their assistance in developing this report:

- ***Tex Haeuser*** ~ South Portland Planning & Development Department
- ***Steve Puleo*** ~ South Portland Planning & Development Department
- ***Dave Kasik*** ~ South Portland Planning & Development Department
- ***Sarah Neuts*** ~ South Portland Parks & Recreation Department
- ***Maurice Amaral*** ~ South Portland Community Television
- ***Tamara Lee Pinard*** ~ Cumberland County Soil and Water Conservation District
- ***Jami Fitch***~ Cumberland County Soil and Water Conservation District
- ***Christine Rinehart*** ~ Wright-Pierce Engineers
- ***Tom Burns*** ~ GIS Mapping & Analysis

Introduction and Report Summary

The City of South Portland continued its commitment to protect and improve local water resources through its ongoing participation in Maine's Small Municipal Separate Storm Sewer Systems (MS4) program. City staff and program partners from the Interlocal Stormwater Working Group (ISWG) participated in a wide variety of activities to mitigate the effects of stormwater pollution. This annual report documents these activities for the first Permit Year in the second five year General Permit Cycle (2008-2013).

A brief summary of the six required Minimum Control Measures (MCMs) along with the corresponding Best Management Practices (BMPs) is provided below. BMPs for all Minimum Control Measures were completed successfully as planned. The full report that follows includes a description of actions completed for the measurable goals of each BMP along with permit compliance status, an assessment of the appropriateness of identified BMPs, progress achieving identified measurable goals for each of the MCMs, and progress achieving the goal of reducing the discharge of pollutants to the maximum extent practicable. Also included are the results of information collected and analyzed during the reporting period, a summary of stormwater activities the City will complete in the 2009-2010 reporting cycle, and an estimate of annual expenditures for permit compliance for the reporting period and projected budget for the following year.

Minimum Control Measure 1 – Public Education and Outreach

- ☑ BMP 1.1 - Continue Awareness and Outreach Efforts from Previous Permit Cycle
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- ☑ BMP 1.3 - Develop and Implement Stormwater Awareness Plan
- ☑ BMP 1.4 - Continue Targeted Best Management Practices Adoption Efforts from Previous MS4 Permit Cycle
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Minimum Control Measure 2 – Public Involvement and Participation

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- ☑ BMP 3.2 - Non-Stormwater Discharge Ordinance
- ☑ BMP 3.3 - Develop Dry Weather Outfall Inspection Program

- ☒ BMP 3.4 - Open Ditch Illicit Discharge Program Within the Highest Priority Watershed: *no measureable goals specified for Permit Year 1, though the City has already begun developing 2' contour data to assist in identifying all relevant drainage ditches.*
- ☑ BMP 3.5 - Household Hazardous Waste Collection (including pharmaceuticals)
- ☑ BMP 3.6 - Support the Friends of Casco Bay Mobile Vessel Pumpout Service
- ☑ BMP 3.7 - Public Complaint Hotline
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- ☑ BMP 4.1 - Notification to Construction Site Developers and Operators of Registration Requirements under Maine Construction General Permit or Chapter 500 – Management for the Discharge of Stormwater Associated with Construction Activities
- ☑ BMP 4.2 - Develop and Implement a Mechanism to Annually Document Every Construction Activity that Disturbs One or More Acres Within the Urbanized Area
- ☑ BMP 4.3 - Develop and Implement a Construction Site Inspection Program
- ☑ BMP 4.4 Promote Certified Contractors in Erosion Control Practices

Minimum Control Measure 5 – Post-Construction Stormwater Management in Development and Redevelopment

- ☑ BMP 5.1 - Implement Ordinance or Similar Measure
- ☑ BMP 5.2 - Develop and Implement a Method to Track Post-Construction BMPs that are Installed Within the Urbanized Area, and Develop and Implement a System to Track Annual Certifications that are Required by the Owner or Operator of the Post-Construction BMPs
- ☒ BMP 5.3 - BMP Dependent on Language Contained in Post-Construction Ordinance or Other DEP-Approved Measure: *City's recently amended ordinance specifies the use of third-party inspectors to document that all applicable post-construction BMPs are adequately maintained and properly functioning. Therefore, this BMP will be omitted from the City's Stormwater Program Management Plan for future reporting years.*

Minimum Control Measure 6 – Pollution Prevention / Good Housekeeping for Municipal Operations

- ☑ BMP 6.1 - Operations at Municipally Owned Grounds and Facilities
- ☒ BMP 6.2 - Municipal Employee Training: *no measureable goals specified for Permit Year 1*
- ☑ BMP 6.3 - Street Sweeping
- ☑ BMP 6.4 - Cleaning of Stormwater Structures Including Catch Basins
- ☑ BMP 6.5 - Maintenance and Upgrading of Stormwater Conveyances and Outfalls
- ☑ BMP 6.6 - Stormwater Pollution Prevention Plans (SWPPPs)

City of South Portland Storm Water Phase II

Permit Year 1 Annual Report for Permit Cycle 2

(June 1, 2008 – May 31, 2009)

Minimum Control Measure 1 – Public Education and Outreach

The City of South Portland fulfilled its requirements for Public Education and Outreach Minimum Control Measure through participation in the Interlocal Stormwater Working Group (ISWG) and the continued funding to the ISWG for Public Education and Outreach services.

The overall goals for this Minimum Control Measure are:

1. To raise awareness that stormwater pollution is the most significant source of water quality problems for Maine's waters;

2. To motivate people to use BMPs which reduce stormwater pollution; and

3. To reduce stormwater pollution as a result of increased awareness and utilization of BMPs.

BMP 1.1 Continue Awareness Outreach Efforts from Previous Permit Cycle

Responsible Party: Water Resource Protection *Additional Party: ISWG Coordinator*

FUNCTION

To promote and increase awareness about the issues associated with stormwater pollution, which is the most significant source of water quality problems in the state.

METHODOLOGY

Collaborate with Interlocal Stormwater Working Group (ISWG) to increase public awareness of stormwater management issues.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 1.1.1*** – continue to provide thinkbluemaine.org link on City's website
- ***Measureable Goal 1.1.2*** – ISWG continues to use Think Blue Maine ducky logos on all YardScaping materials to reinforce connection between lawn care activities and stormwater issues
- ***Measureable Goal 1.1.3*** – ISWG continues to provide informational material in municipal buildings to build awareness of stormwater management issues.

Actions Completed During Permit Year 1

The City continued to provide the thinkbluemaine.org link on its website and educational materials in municipal buildings to help promote public awareness of local and regional stormwater management issues. The City also continued its collaboration with the ISWG in a variety of awareness outreach efforts as described in **Appendix 1**. Therefore, all goals associated with this BMP were completed successfully as planned.

BMP 1.2 Work with Existing Partners and Seek Out New Partners to Help Raise Awareness of Stormwater Issues

Responsible Party: ISWG Education Coordinator *Additional Party: N/A*

FUNCTION

To increase impact and effectiveness of public education and outreach stormwater awareness efforts through enlistment of additional partners.

METHODOLOGY

Collaborate with Interlocal Stormwater Working Group (ISWG) to enlist additional partners to help raise awareness of stormwater management issues.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 1.2.1*** – partner with Think Blue Maine, Casco Bay Estuary Partnership, Maine Board of Pesticide Control, MEDEP and University of Maine Cooperative Extension.

Actions Completed During Permit Year 1

The City continued its collaboration with the ISWG to enlist new partners for increased public awareness of stormwater issues as described in **Appendix 1**. Additionally, the City continued to promote public awareness of its partnerships with various organizations committed to addressing stormwater pollution issues. One notable example is the placement of Think Blue Maine's logo on the side and back of the City's television inspection van. Therefore, the goal associated with this BMP was completed successfully as planned.

BMP 1.3 Develop and Implement Stormwater Awareness Plan

Responsible Party: ISWG Education Coordinator *Additional Party: N/A*

FUNCTION

To increase homeowner awareness of stormwater issues through the development of a systematic and concerted program among MS4 clusters and other interested parties throughout the state.

METHODOLOGY

Continue participation in the ISWG to develop a variety of educational outreach materials.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 1.3.1*** – assess or utilize existing assessments of the target audience to document a baseline level of awareness by which the implementation of the Awareness Plan can be measured.
- ***Measureable Goal 1.3.2*** – by March 2, 2009 submit a plan 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).

Actions Completed During Permit Year 1

Through the City's continued participation in and collaboration with the ISWG, a Stormwater Awareness Plan was developed and approved by DEP in June 2009 as described in **Appendix 1**. Therefore, all goals associated with this BMP were completed successfully as planned.

BMP 1.4 Continue Targeted Best Management Practices Adoption Efforts from Previous MS4 Permit Cycle

Responsible Party: ISWG Education Coordinator *Additional Party: N/A*

FUNCTION

To increase homeowner awareness about the types of Best Management Practices that can be employed to address stormwater issues at the individual parcel level.

METHODOLOGY

Continue participation in the ISWG to promote the use of Best Management Practices through a

variety of educational outreach materials and activities.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 1.4.1*** – the ISWG will continue to refine YardScaping materials, as needed, based on either new research or feedback from users. It will offer YardScaping Adult Education classes to change lawn care practices and build local support for implementation of YardScaping practices. ISWG will also 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.

Actions Completed During Permit Year 1

The City continued its collaboration with the ISWG to promote the adoption of Best Management Practices by homeowners and other interested parties as described in **Appendix 1**. Therefore, the goal associated with this BMP was completed successfully as planned.

BMP 1.5 Develop and Implement BMP Adoption Plan

Responsible Party: ISWG Education Coordinator *Additional Party: N/A*

FUNCTION

To change homeowner landscaping behaviors for decreased usage of lawn fertilizers, pesticides and herbicides; and to promote the adoption of BMPs that minimize stormwater pollution (e.g., higher / less frequent mowing, water conservation, lawn seeding in the fall, etc.).

METHODOLOGY

Continue participation in the ISWG to develop a BMP Adoption Plan for approval by MEDEP.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 1.5.1*** – 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.
- ***Measureable Goal 1.5.2*** – by March 2, 2009 submit a plan to encourage targeted audience to adopt or practice specific BMPs that will reduce stormwater pollution.

Actions Completed During Permit Year 1

The City continued its collaboration with the ISWG to develop a BMP Adoption Plan as described in **Appendix 1**. Therefore, the goals associated with this BMP were completed successfully as planned.

BMP 1.6 School Outreach

Responsible Party: ISWG Education Coordinator *Additional Party: N/A*

FUNCTION

To promote increased awareness about stormwater pollution issues in the City's school system.

METHODOLOGY

Continue participation in and support of the ISWG to conduct a variety of educational outreach activities as described below.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 1.6.1*** – implement the incorporation of "It's all connected" school curriculum in elementary and/or middle schools.

Actions Completed During Permit Year 1

The City continued its collaboration with the ISWG to conduct educational outreach activities at Skillin and Dyer Elementary Schools as well as at Mahoney Middle School. A total of 918 students from South Portland participated in lesson topics totaling 3,332 hours. Topics included:

- The amount of water in the world, conservation, and the water cycle;
- Where rivers begin, how they flow and watersheds;
- Stormwater sources and effects;
- Construction of landscape models to learn about impervious/pervious surfaces, nonpoint source pollution, and best management practices;
- Coastal ecology;
- Various lessons included information about nonpoint source pollution, human impact, watershed characteristics, stormwater, low impact development, and behavior change; and.
- Southern Maine Children's Water Festival.*

As a result of these numerous and varied activities, the goal associated with the School Outreach BMP was completed successfully as planned.

**** NOTE**: the Southern Maine Children's Water Festival is a one-day event that occurs annually each May, drawing about 800 middle school students from all over Southern Maine to learn about water resources. Students attend classroom presentations, a water-based stage show, "Dripial Pursuit" competitions, and tour many exhibits in the exhibit hall. Activities focus on non-point source pollution and ways in which students can be part of the solution.*

BMP 1.7 Continue to Broadcast Water Quality Videos on Community Television

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To promote increased awareness about stormwater pollution issues among South Portland residents and other interested parties.

METHODOLOGY

Use the City's Community Television system to broadcast educational videos about water quality issues and considerations.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 1.7.1*** – continue to air videos related to water quality on South Portland's Community Television system.

Actions Completed During Permit Year 1

The City's Community Television system continued to extensively air educational videos highlighting a wide variety of water quality related topics. During the permit period, over 50 hours of video was broadcast specific to stormwater issues in South Portland (~45 hours for the Long Creek Watershed Restoration Project and ~10.5 hours for the "After the Storm" video). Over 9 hours of video was shown for career opportunities in the water resource protection profession and just over 7 hours of video was shown for water quality management issues specific to Sebago Lake.

Broadcasts from the South Portland Land Trust, which are often closely related to water quality, totaled nearly 50 hours, while just under an hour's worth of short segment public service announcements were shown to summarize various aspects of household hazardous waste disposal. Literally hundreds of additional hours of programming were devoted to more general water related topics including a variety of segments on recreational activities, such as canoeing and kayaking (~360 hours), Hurricane Katrina (~13 hours), climate change (~10 hours), and invasive species.

Additionally, the Water Resources Department has had recent discussions with Community Television staff about producing a video highlighting changes in turf management practices at some of the City's athletic fields (i.e., use of organic fertilizers, pesticides and herbicides rather than their synthetic counterparts). This video may be produced in the fall of 2009. The City is also considering the production of a video that details the importance of illicit discharges to South Portland's surface waters and how residents can report suspected illicit discharge incidents using the City's anonymous website and phone hotline. As a result of these activities, the goal associated with this BMP was completed successfully as planned.

Minimum Control Measure 2 – Public Involvement and Participation

The City of South Portland fulfilled its requirements for the Public Involvement and Participation Minimum Control Measure through collaboration with the Interlocal Stormwater Working Group (ISWG) and the continued funding to the ISWG for Public Involvement and Participation services. The overall goal of this MCM is to involve the public in both the planning and implementation process of improving water quality and reducing stormwater quantity via the implementation of the City's Stormwater Program.

BMP 2.1 Public Notice Requirement

Responsible Party: ISWG Stormwater Program Coordinator *Additional Party: Water Resource Protection*

FUNCTION

To adequately provide appropriate public notice for meaningful involvement and participation in the planning and implementation of the City's Stormwater Program.

METHODOLOGY

Continue participation in the ISWG and conform with applicable MEDEP and City of South Portland public notice requirements.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 2.1.1*** – ISWG and/or its members 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 DEP website.
- ***Measureable Goal 2.1.2*** – ISWG and/or its members will follow state and local Public Notice requirements when involving stakeholders in the implementation of the General Permit.

Actions Completed During Permit Year 1

In April 2009, the City completed a revision of its municipal zoning and subdivision ordinances to require performance standards for stormwater management. The process to complete these revisions involved numerous public meetings, all of which were accompanied by public notices inviting participation from South Portland residents and other interested parties. Additionally, the City participated closely in the Long Creek Restoration Project, which also involved numerous public meetings accompanied by public notices inviting stakeholder input. These included:

- January 22, 2009 – Long Creek stakeholder meeting to solicit input for finalization of Long Creek Watershed Management Plan (at Marriott)

- Monday, May 18, 2009 – South Portland City Council Workshop to discuss City's financial support of Long Creek program start up
- Thursday, May 28, 2009 – Meeting for all watershed municipal councils and staff to discuss interlocal agreement for establishment of Long Creek Watershed Management District
- Monday, June 8, 2009 – South Portland City Council Workshop & emergency meeting to discuss approval of $500K for Philbrook Avenue project

As a result of these numerous activities, the goals associated with this BMP were completed successfully as planned.

BMP 2.2 Host Public Event

Responsible Party: ISWG Education Coordinator *Additional Party: Water Resource Protection*

FUNCTION

To increase public awareness of stormwater pollution issues for a target audience in a segment of the urbanized area.

METHODOLOGY

Provide highly visible opportunities for members of the public to meaningfully participate in activities to reduce impacts from stormwater pollution.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 2.2.1*** – ISWG and/or the City will annually host/conduct or participate in at least one public event such as storm drain stenciling, stream cleanup, household hazardous waste collection day, 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 urbanized area population that the City wishes to reach. The ISWG and/or the City will consult with DEP to ensure the event will satisfy the requirements for this BMP.

Actions Completed During Permit Year 1

Household Hazardous Waste Collection

The City organized a Household Hazardous Waste Cleanup Day on October 20, 2008. The event was held at the Water Resource Protection Department's Wastewater Treatment Facility and resulted in the collection of a variety of wastes including pharmaceuticals, batteries (lead acid, nickel cadmium and lithium), fluorescent lights, various solvents, liquid pesticides, and paints, among other

materials (**Appendix 2**). The City will also develop a resident questionnaire for this year's Household Hazardous Waste Cleanup Day.

Watershed Tours

In May of 2009, the City hosted two very well-attended watershed tours for the New England Interstate Water Pollution Control Commission's 20th Annual Nonpoint Source Pollution Conference. The Long Creek Watershed was the subject of one tour and included a discussion of ongoing restoration efforts as described in the City's Watershed Management Plan; the impending MEDEP permit to regulate stormwater discharges from certain properties in the watershed; and visits to key sites in the watershed to review current and future structural and non-structural stormwater treatment practices. The other watershed tour consisted of a visit to Anthoine Creek and the Pleasantdale Mud Flats to discuss issues and impacts associated with high inorganic nitrogen levels discharging from the Creek to the Fore River. Participants also learned about the Friends of Casco Bay's long-term nitrogen monitoring efforts and legislative proposals to limit the amount of nitrogen entering the bay. As a result of these numerous and varied activities, the goal associated with this BMP was completed successfully as planned.

BMP 2.3 Encourage Municipal Involvement in Public Outreach

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To increase the role of other City departments in promoting awareness of local and regional stormwater pollution issues.

METHODOLOGY

Continue communications with and provide educational materials for other municipal departments (e.g., Planning & Development, Code Enforcement, Public Services, School, etc.) to disseminate to the pubic, contractors, developers and other interested parties.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 2.3.1*** – continue to participate in public outreach (e.g. serving on local water resource committees, participating in public/school events, writing water quality/stormwater articles) or encourage other municipal involvement, as appropriate.

Actions Completed During Permit Year 1

Members of the Water Resource Protection Department (WRPD) staff continued their close involvement in and commitment to local water resource protection concerns by serving in various capacities on the boards of regional organizations. The Director of the Water Resource Protection Department is currently serving on the Casco Bay Estuary Partnership's (CBEP) Executive Board. The mission of CBEP is to protect and restore the water quality, and fish and wildlife habitat of the Casco Bay ecosystem, while ensuring compatible human uses. Additionally, the Collection Systems Manager serves on the Interlocal Stormwater Working Group (ISWG), which consists of 14 communities in the Greater Portland area working in collaboration to address stormwater management concerns in the region. The WRPD also recently hired a Stormwater Program Coordinator, who will be joining the ISWG and will be presenting on the Long Creek Restoration Project in September and October of 2009 to the Portland Chapter of the American Society of Civil Engineers and the New Hampshire Watershed Manager's Roundtable, respectively.

Educational brochures are available at several municipal locations throughout the City. The Planning & Development, Code Enforcement and Public Services departments all provide Maine Erosion and Sedimentation Control Law brochures to contractors, construction site owners or operators, members of the general public and other interested parties. The City has also provides informational materials on stormwater management and water resource protection at numerous locations throughout South Portland (**Appendix 3**). As a result of these numerous and varied activities, the goal associated with this BMP was completed successfully as planned.

Minimum Control Measure 3 – Illicit Discharge Detection & Elimination

The City of South Portland fulfilled its requirements for the Illicit Discharge Detection & Elimination (IDDE) Minimum Control Measure through a variety of activities as described below. The overall goal of this MCM is to implement and enforce a program to detect and eliminate illicit discharges and non-stormwater discharges.

BMP 3.1 Develop a Watershed Based Storm Sewer System Infrastructure Map

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To provide a current, detailed and accurate digitally-based map of the City's storm drain infrastructure to assist in stormwater management and planning.

METHODOLOGY

Continue to contract with consultant and hire summer intern for GPS data collection and GIS mapping of all stormwater related infrastructure in the City.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 3.1.1*** – review current storm sewer system map as well as other existing information sources for storm sewer infrastructure and revise and/or incorporate relevant data as necessary.
- ***Measurable Goal 3.1.2*** – develop a schedule of targeted mapping percentages to be accomplished each permit year, including a target schedule for completing mapping in the highest priority (Long Creek) watershed.

Actions Completed During Permit Year 1

The City has completed nearly all of the digital mapping (~90%) for the publically-owned stormwater infrastructure and is currently in the process of assigning unique identifiers to each individual stormwater structure within a watershed framework. As part of this process, existing major watersheds and subwatersheds based on 5-foot contours will be refined through the acquisition of the 2-foot contours developed for South Portland in 2006 by FEMA to provide a hydrologically-based method for operating and maintaining all stormwater infrastructure. To assist in this endeavor, 2-foot contours are anticipated to be developed for the Long Creek Watershed, an area not covered by the recent FEMA topographic update. It is expected this work will be completed in 2010. As a result of these activities, the City is considerably ahead of schedule for the goals of this BMP.

BMP 3.2 Non-Stormwater Discharge Ordinance

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To prohibit unpermitted or un-allowed non-storm water discharges to the storm drainage system through municipal ordinance and to establish the legal authority and procedures to carry out all inspection, monitoring and enforcement activities necessary to ensure compliance with this ordinance.

METHODOLOGY

Use the authority granted by the ordinance to enforce the provisions therein.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 3.2.1*** – continue to enforce the Non-Stormwater Discharge Ordinance.

Actions Completed During Permit Year 1

The City maintained a Stormwater Violations Hotline and Online Complaint Report form (**Appendix 4**) to allow concerned citizens to anonymously report any suspected incidents of non-stormwater discharge violations to the publicly owned storm drain system. The production of a video for the local Community Access Television station on Illicit Discharge Detection and Elimination is also being considered for 2009-10 reporting year. Therefore, the goal associated with this BMP was completed successfully as planned.

BMP 3.3 Develop Dry Weather Outfall Inspection Program

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To identify potential sources of illicit non-stormwater discharges for elimination.

METHODOLOGY

Physically inspect stormwater outfalls in priority subwatersheds during dry weather periods.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 3.3.1*** – prioritize the sub-watersheds within the highest priority watershed (Long Creek).
- ***Measurable Goal 3.3.2*** – develop or modify a standard operating procedure (SOP) for the dry weather outfall inspection program. The SOP will include inspection forms and a policy/procedure or protocol that identifies the steps that must be taken when an illicit discharge is encountered during routine and opportunistic inspections.
- ***Measureable Goal 3.3.3*** – develop or modify an existing data collection system to document the dry weather inspections.
- ***Measureable Goal 3.3.4*** – train inspectors on how to conduct and record dry weather inspections.
- ***Measureable Goal 3.3.5*** – conduct dry weather outfall inspections in the two highest priority sub-watersheds within the highest priority watershed. A minimum of 25 dry weather inspections will be conducted per year, which may include opportunistic inspections.

Actions Completed During Permit Year 1

The City based its prioritization of subwatersheds in the Long Creek watershed on the recommendations made in the Long Creek Watershed Management Plan, which prioritized subwatersheds for restoration activities based on the best opportunities for structural stormwater retrofits.

The field data collection form for conducting dry weather inspections of stormwater outfalls was derived directly from the format provided in *Guidelines and Standard Operating Procedures for Stormwater Phase II Communities in Maine* (**Appendix 5**). This form was then converted into a digital format through the use of a handheld Trimble Juno GPS unit, which City staff employed to conduct all stormwater outfall inspections. Data from the Juno can be exported in a variety of formats for seamless integration with traditional electronic document formats (e.g., Excel, Access, etc.).

City staff were trained in the use of the Juno and inspected all but six of the approximately ninety stormwater outfalls in the Long Creek watershed during the months of April and June (**Appendix 6**). However, given the unusually wet weather during this period, the City intends to revisit all of the outfalls in the Long Creek watershed again in September and early October of 2009 to conduct the inspections under drier conditions. As a result of these numerous and varied activities, the City is considerably ahead of schedule for the goals of this BMP.

BMP 3.4 Open Ditch Illicit Discharge Program Within the Highest Priority Watershed

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To identify potential sources of illicit discharge from open drainage ditches that serve as part of the City's stormwater collection and conveyance system.

METHODOLOGY

Identify the extent, location and hydrologic connectivity of drainage ditches in the Long Creek watershed in relation to the City's stormwater collection system and develop an IDDE strategy for all relevant ditches.

PERMIT YEAR 1 MEASURABLE GOALS: none specified / required

Actions Completed During Permit Year 1

Although this BMP does not have any goals specified for Permit Year 1, the City is currently in the process of developing 2-foot contours for the entire municipality that will be used to assist in identifying all relevant drainage ditches. This work is expected to be completed in 2010.

BMP 3.5 Household Hazardous Waste Collection

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To provide a means for residents to dispose of household hazardous waste.

METHODOLOGY

Host an annual Household Hazardous Waste collection day.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 3.5.1*** – provide a reasonable means for residents to dispose of hazardous materials by continuing to host an Annual Household Hazardous Waste (HHW) collection day.

Actions Completed During Permit Year 1

The City organized a Household Hazardous Waste Cleanup Day on October 20, 2008. The event was held at the Water Resource Protection Department's Wastewater Treatment Facility and resulted in the collection of a variety of wastes including pharmaceuticals, batteries (lead acid, nickel

cadmium and lithium), fluorescent lights, various solvents, liquid pesticides, and paints, among other materials (**Appendix 2**). The cost to the City for this one day event was $13,476. The City's Household Hazardous Waste (HHW) Collection Day for 2009 will take place on October 17th and will include a participant survey questionnaire to measure resident awareness of general HHW considerations to help gauge the effectiveness of the program. Therefore, the goal associated with this BMP was completed successfully as planned.

BMP 3.6 Support the Friends of Casco Bay Mobile Vessel Pumpout Service

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To support the Friends of Casco Bay's mobile vessel pumpout service.

METHODOLOGY

Annual financial contribution to pumpout program.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 3.6.1*** – as funding is available, continue to financially support the mobile vessel pumpout service.

Actions Completed During Permit Year 1

In recognition of the valuable role the mobile vessel pumpout service plays in South Portland's coastal environment, the City continued its ongoing support of the Friends of Casco Bay's program (**Appendix 7**). Therefore, the goal associated with the BMP was completed successfully as planned

BMP 3.7 Public Complaint Hotline

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To provide a confidential method for residents to report suspected illicit discharges to the City's stormwater system.

METHODOLOGY

Use voicemail and online system for residents to anonymously report suspected illicit discharges and conduct follow up inspections to document findings from resident reports.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 3.7.1*** – continue to provide an easy and confidential method for individuals to report suspected illicit connections or illegal dumping via the voice mail system and / or the online complaint form for the Water Resource Protection Department.

Actions Completed During Permit Year 1

The City maintained a Stormwater Violations Hotline and Online Complaint Report form (**Appendix 4**) to allow concerned citizens to anonymously report any suspected incidents of non-stormwater discharge violations to the publicly owned storm drain system. There was only 1 reported incident for the 2008-09 reporting year and the follow up inspection did not identify any illicit discharge(s). The City is currently considering the production of a video through the Community Access Television station to promote increased public awareness of the Stormwater Violations Hotline and Online Complaint Report form. Therefore, the goal associated with this BMP was completed successfully as planned.

BMP 3.8 Storm Drain Stenciling

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To provide a visible reminder to residents about the close connections between their activities, the stormwater collection / conveyance system and local surface waters.

METHODOLOGY

Continue ongoing annual catch basin stenciling program.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measureable Goal 3.8.1*** – continue to annually stencil catch basins in conjunction with catch basin cleaning.

Actions Completed During Permit Year 1

The City continued to stencil catch basins as part of its annual catch basin cleaning program (e.g., half of the catch basins that were cleaned were also stenciled). Nearly all of the City's approximately 2,000 catch basins are cleaned on an annual basis and approximately 50% of these are stenciled depending on how worn the paint is from previous stencil applications. Additionally, the City has been in recent discussions with the Friends of Casco Bay to help coordinate a storm drain stenciling program with the local schools. Therefore, the goal associated with this BMP was completed successfully as planned.

Minimum Control Measure 4 – Construction Site Stormwater Runoff Control

The City of South Portland fulfilled its requirements for the Construction Site Stormwater Runoff Minimum Control Measure through a variety of activities as described below. The overall goals of this MCM are to develop, implement, and enforce a program that reduces pollutants in any stormwater runoff to the City's regulated small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre.

BMP 4.1 Notification to Construction Site Developers and Operators of Registration Requirements under Maine Construction General Permit or Chapter 500 – Management for the Discharge of Stormwater Associated with Construction Activities

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To reduce the amount of stormwater runoff pollution by ensuring that construction site developers and operators use appropriate stormwater BMP practices and are aware of their obligations under applicable state regulations.

METHODOLOGY

Use existing municipal notification procedures through development application and review process.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 4.1.1*** – continue notification procedures currently in place through the permitting process. Notification is primarily accomplished through the application process and site plan review. Additionally, notification is provided to building permit applicants that meet the one acre threshold.
- ***Measureable Goal 4.1.2*** – evaluate current system and modify, if necessary.

Actions Completed During Permit Year 1

During the site plan review process the City confirmed that projects needing the Maine Construction General Permit (MCGP) sent in their Notice of Intent (NOI) before receiving approval from the South

Portland Planning Board. The City also confirmed that the MEDEP had all applicable projects on file. All building permit applicants disturbing greater than one acre received a copy of the NOI to comply with the MCGP.

Also, all projects that triggered the one acre threshold went through site plan review; these applicants were provided with an information packet on appropriate erosion and stormwater control practices from the City. The City also required any project with more than 15,000 square feet of fill to receive special approval from the Planning Board. These projects were subject to a modified site plan approval process, which carefully considered sediment and erosion control practices.

The City hired third party engineers to review proposed site plans. Each site plan was reviewed to ensure that proposed construction phasing included soil erosion and sedimentation control components. Site plans that lacked appropriate soil erosion and sediment control components were brought to the attention of the City and design engineer for further action. As a result of these numerous and varied activities, the goals associated with this BMP were completed successfully as planned.

BMP 4.2 Develop and Implement a Mechanism to Annually Document Every Construction Activity that Disturbs One or More Acres within the Urbanized Area

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To annually document all construction activities disturbing one or more acres within the urbanized area for use in the construction site inspection program (BMP 4.3) and thereby reduce the amount of stormwater pollution entering the City's water resources.

METHODOLOGY

Establish documentation procedures to ensure conformance with local and state stormwater laws (South Portland Ordinance § 27-153.1 and Maine Construction General Permit and Chapter 500, respectively).

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 4.2.1*** – implement a tracking system to record every activity that disturbs greater than or equal to one acre. This system will track and differentiate construction activities within an urban impaired stream watershed, priority watershed(s), and all other watersheds. The system will be used to summarize data to be included in the annual report submitted to the DEP.

Actions Completed During Permit Year 1

The City's erosion and sediment control tracking system for construction sites greater than or equal to 1 acre was based upon the report format established by the consulting firm Wright-Pierce, which conducted many of the third party inspections (**Appendix 8**). Completed site inspection forms and accompanying photos were submitted to the City in electronic format and incorporated into an Excel file by City staff for project tracking and differentiation based on watershed location (i.e., urban impaired stream, highest priority or high priority).

The City is currently exploring the use of handheld devices to automate the tracking system workflow process by allowing for a seamless integration of field inspection results directly into a searchable database. The anticipated deployment of this system is 2010. In the mean time, the current method fully satisfies the goal associated with this BMP, which was completed successfully as planned.

BMP 4.3 Develop and Implement a Construction Site Inspection Program

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To establish a program for conducting regular and consistent construction site inspections to reduce the amount of stormwater pollution entering the City's water resources.

METHODOLOGY

Develop and implement construction site inspection program in accordance with local and state stormwater laws (South Portland Ordinance § 27-153.1 and Maine Construction General Permit and Chapter 500, respectively).

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 4.3.1*** – continue or modify procedures for construction site inspections which meet the terms and conditions of the General Permit. Inspections will be performed by a contracted third party.
- ***Measurable Goal 4.3.2*** – develop or modify a standardized inspection form to ensure documentation of all required inspections.
- ***Measurable Goal 4.3.4*** – inspect construction sites located in the watershed of an urban impaired stream a minimum of three times, and inspect construction sites located in all other watersheds a minimum of two times. For all construction sites, at least one of the required inspections will be at project completion.

Actions Completed During Permit Year 1

The City continued to use third party consultants (Wright-Pierce and Sebago Technics) to perform erosion and sediment control inspections on construction sites greater than or equal to 1 acre of disturbed area. The consultants were notified about qualifying projects following site plan approval and instructed to begin the site inspection process once construction activities commenced. Site contractors also occasionally conducted self-inspections. Six projects were inspected 30 times over the course of the permit year (Table 1). The Jetport Apron project was located in the estuarine portion of the Long Creek watershed (which is not listed by MEDEP as an Urban Impaired Stream); the Hannafords Trailer Parking Expansion project was located in the Barberry Creek watershed (high priority UIS); and the four remaining projects were located in watersheds that are not on the State's Urban Impaired Streams or 303(d) lists (**Appendix 9**).

Table 1: qualifying projects for construction site inspections.

Project Name	**Watershed**	**Number of Site Visits**
100 Waterman Drive	Turners Island	10
Mill Cove Landing	Mill Creek	6
Jetport Apron	Long Creek (estuary – not listed as UIS/High Priority)	6
Bet Ha'am Congregation	Nonesuch River	4
Broadway Business Park	Anthoine Creek	3
Hannaford's Trailer Parking	Barberry Creek (UIS/High Priority)	1
	Total Number of Visits:	**30**

Inspections were conducted monthly, after every 1/2 inch 24-hour storm event or as directed by the City Planner. Inspectors generally used the field data form developed by Wright-Pierce (**Appendix 8**) to document potential sources of stormwater pollution and recommend follow up actions. Following each site visit, individual inspection reports and supporting photographs were transmitted to the City in electronic format for any necessary follow up actions. City staff then incorporated all field inspection forms into an electronic database for record keeping and project tracking. As mentioned above, the City is also considering the use of handheld devices to conduct construction

site inspections. Additionally, in August 2009 City staff began using the same inspection protocols to document construction activities occurring on sites less than 1 acre.

The inspections identified a variety of erosion and sediment control issues at some sites, including inadequate protection of catch basins, improper installation of silt fence, the presence of sediment-laden trackout from the site entrance / exit, and the inadequate stabilization of stockpiles, among others. All of these issues were corrected by the site contractors following notification from the inspectors. As a result of these various activities, the goals associated with this BMP were completed successfully as planned.

BMP 4.4 – Promote Certified Contractors in Erosion Control Practices

Responsible Party: Water Resources Protection *Additional Party: Community Planner*

FUNCTION

To encourage contractors to receive MEDEP certification (or equivalent training) in erosion control practices as a means of reducing the amount of stormwater pollution into the City's water resources.

METHODOLOGY

Provide informational materials from the MEDEP's Nonpoint Source Training and Resource Center to contractors and developers as part of the project proposal and site plan review process.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 4.4.1*** – continue to encourage contractors to be certified in erosion and sediment control through the DEP Non-Point Source Training and Resource Center or its designee.

Actions Completed During Permit Year 1

The City continued to provide information materials (Maine Erosion and Sedimentation Control Law) to contractors on the as part of the project proposal and site plan review process. Therefore, the goal associated with this BMP was completed successfully as planned.

Minimum Control Measure 5 – Post-Construction Stormwater Management of Development and Redevelopment

The City of South Portland fulfilled its requirements for the Post-construction Stormwater Management of Development and Redevelopment Minimum Control Measure through a variety of activities as described below. The overall goals of this MCM are to develop and implement a program that addresses stormwater runoff from new development and redevelopment projects greater than or equal to one acre in size, including projects less than one acre that discharge to the MS4 and are part of a larger common plan of development or sale; implement local ordinance regulations to ensure the adequate long-term operation and maintenance and proper functioning of post-construction BMPs; and to annually document all related post-construction activities for inclusion the City's annual stormwater report.

BMP 5.1 Implement Ordinance or Similar Measure

Responsible Party: Water Resources Protection *Additional Party: Community Planner*

FUNCTION

To develop local regulations that support and enhance state stormwater pollution regulations (MEDEP Chapter 500 and *General Permit for the Discharge of Stormwater From Small Municipal Separate Storm Sewer Systems*) by ensuring the appropriate and adequate use of structural and nonstructural BMPs for new development and redevelopment projects.

METHODOLOGY

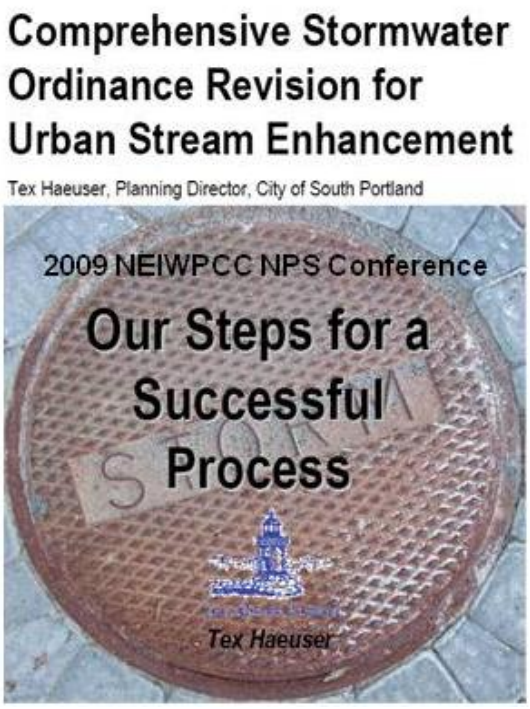
Create a local regulatory mechanism or ordinance to address post-construction stormwater runoff from new development and redevelopment projects greater than or equal to one acre in size, including projects less than one acre that discharge to the MS4 and are part of a larger common plan of development or sale.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 5.1.1*** – collaborate with ISWG to determine if participants will rely on State permit process (Chapter 500) for the installation of post-construction BMPs.
- ***Measureable Goal 5.1.2*** – adapt model post-construction stormwater discharge ordinance or develop another DEP-approved measure to meet the desired format.
- ***Measureable Goal 5.1.3*** – enact post-construction stormwater ordinance or develop another DEP-approved measure that ensures long-term operation and maintenance of post-construction BMPs.

Actions Completed During Permit Year 1

The City amended its Zoning Ordinance (Section 27-153.1) in April 2009 to require performance standards for stormwater management (**Appendix 10**). Specifically, the local ordinance now requires construction projects exceeding 15,000 square feet to have an accompanying Post-Construction Stormwater Management Plan that adequately addresses the quantity and quality of stormwater runoff from the site. The ordinance provides site developers of qualifying projects with the option of either meeting the MEDEP's Chapter 500 standards or City performance standards. The City has also incorporated provisions for stormwater management in its Subdivision Ordinance (Chapter 24) and other applicable sections of its zoning ordinance. The MEDEP has referenced the City's ordinance amendments as a possible model for other ISWG communities. Therefore, the goals associated with this BMP were completed successfully as planned.



BMP 5.2 Develop and Implement a Method to Track Post-Construction BMPs in Urbanized Area and Develop and Implement Tracking System for Annual Certifications required by Owner / Operator of Post-Construction BMPs

Responsible Party: Water Resources Protection *Additional Party: Community Planner*

FUNCTION

To develop a method to ensure that post-construction BMPs are adequately operated and maintained.

METHODOLOGY

Use site plan review process to impose post-construction BMP inspection and O&M requirements as specified in the recently amended municipal ordinance (Chapter 27-153.1).

PERMIT YEAR 1 MEASURABLE GOALS

Measurable Goal 5.2.1 – within one year of adopting local stormwater ordinance with provisions for post-construction stormwater management, develop tracking systems for post-construction BMPs

and annual certifications to document that owners / operators are adequately operating and maintaining approved stormwater BMPs on their sites.

Actions Completed During Permit Year 1

The City adopted stormwater management performance standards into its ordinance in April 2009 and has established systems to track post-construction BMPs and annual certifications from owners / operators to document their proper functioning, operation and maintenance. Specifically, the site plan review process requires the use of post-construction BMPs for qualifying projects as a condition of approval. Site owners or operators are required to submit certified annual reports documenting the proper functioning and maintenance of stormwater BMPs by July 15th each year. Since the adoption of the municipal stormwater ordinance in April 2009, two projects have completed this process and three are currently under review. Therefore, the goal associated with this BMP has been completed successfully as planned.

BMP 5.3 Per the City's Local Stormwater Ordinance, Hire Qualified Third-Party Inspectors to Document That Post-Construction BMPs are Adequately Maintained and Functioning as Intended

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To develop a method to ensure that post-construction BMPs are adequately operated and maintained.

METHODOLOGY

Hire third-party inspector(s) to confirm that post-construction BMPs are adequately maintained and functioning as intended as specified in the recently amended municipal ordinance (Chapter 27-153.1).

PERMIT YEAR 1 MEASURABLE GOALS – none specified (see below)

Actions Completed During Permit Year 1

The City's incorporation of stormwater performance standards into its local ordinance also included a requirement for owners and operators of post-construction BMPs to hire certified third party contractors to conduct inspections and document that these BMPs are adequately operated and maintained. As such, City staff will not be directly involved in conducting stormwater BMP

inspections and BMP 5.3 will henceforth be eliminated from the City's Stormwater Program Management Plan.

Minimum Control Measure 6 – Pollution Prevention / Good Housekeeping for Municipal Operations

The City of South Portland fulfilled its requirements for the Pollution Prevention / Good Housekeeping for Municipal Operations Minimum Control Measure through a variety of activities as described below. The overall goals of this MCM are to develop an inventory of all municipal operations that have the potential to generate stormwater pollution; conduct a municipal employee training program; develop a sweeping program for all publicly owned streets and parking lots; develop a cleaning and maintenance program for all City-owned catch basins and other stormwater structures; evaluate and implement a prioritized schedule for maintaining and upgrading the City's stormwater system; and develop Stormwater Pollution Prevention Plans (SWPPPs) for all applicable municipal facilities and operations.

BMP 6.1 Operations at Municipally Owned Grounds and Facilities

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To identify all applicable activities at municipally owned or operated facilities that have the potential to generate stormwater pollution.

METHODOLOGY

Develop a GIS-based inventory of all City properties with a list of associated municipal activities that have the potential to generate stormwater pollution.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 6.1.1*** – develop an inventory of all municipal activities conducted in, on, or associated with City-owned or operated facilities, buildings, golf courses, cemeteries, parks and open spaces that have the potential to generate stormwater pollution.

Actions Completed During Permit Year 1

The City developed a searchable GIS-based inventory of all City owned or operated properties with a list of associated activities conducted by municipal staff that have the potential to generate stormwater pollution. Properties were distinguished on the basis of the following seven land use types:

- **Civic / Institutional**: municipal buildings, schools, libraries, etc.
- **Water Resource Protection**: wastewater pumping stations, water pollution control facility
- **Recreational Field / Golf**: high intensity public use areas
- **Park / Green Belt**: moderate intensity public use areas
- **Undeveloped Fields**: low intensity public use areas
- **Road / Parking**: traffic circles and municipal parking areas
- **Vehicle Maintenance**: facilities where municipal vehicles are maintained

Each property also had various types of maintenance activities associated with it, such as landscaping, trash and pet waste removal, pavement management, athletic field management, catch basin cleaning, snow removal and sanding / salting, sweeping, and vehicle maintenance and washing (**Appendix 11**). Also of note is the City's recent switch from using synthetic fertilizers, pesticides and herbicides to organic alternatives for the Wainwright Farms Recreational Complex and high school athletic fields. Additionally, the City is now using an eco-friendly VOC-free paint for field striping. Combined, these areas account for over 150 acres of intensively managed athletic turf. As a result of these various activities, the goal associated with this BMP has been completed successfully as planned.

BMP 6.2 Municipal Employee Training

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To provide relevant and timely training for all applicable municipal employees to assist in the effective implementation of the City's Stormwater Program Management Plan and ultimately the elimination of stormwater pollutants from all municipal operations.

METHODOLOGY

Develop and deliver targeted training materials and resources for all relevant municipal operations (e.g., street and pavement maintenance, landscaping, vehicle maintenance, snow removal, etc.).

PERMIT YEAR 1 MEASURABLE GOALS – none specified

BMP 6.3 Street Sweeping

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To continue (and refine as needed) the City's ongoing pavement sweeping program for all municipally owned or operated streets and parking areas.

METHODOLOGY

Annually assess the effectiveness of the City's ongoing pavement sweeping program and refine as needed based on the latest research and available funding.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 6.3.1*** – continue or modify as needed the City's ongoing pavement sweeping program for all municipally owned or operated streets and parking areas and ensure that sweeping is conducted at least once a year as soon as possible after snowmelt.

Actions Completed During Permit Year 1

The City continued its ongoing sweeping program for all municipally owned or operated streets and parking areas. For the 2009 calendar year through the end of June, approximately 1,712 tons of street sweepings material were recovered. Therefore, the goal associated with this BMP has been completed successfully as planned.

BMP 6.4 Cleaning of Stormwater Structures Including Catch Basins

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To ensure that all municipally owned or operated stormwater structures and catch basins are properly functioning and maintained and that the materials removed from them are disposed of appropriately per applicable state law.

METHODOLOGY

Conduct annual cleaning activities for stormwater structures and catch basins to ensure their proper functioning and dispose of associated materials appropriately.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 6.4.1*** – continue or modify as needed the City's ongoing stormwater structure and catch basin cleaning program with cleaning frequencies determined by sediment accumulation rates. At a minimum, all stormwater structures and catch basins should be cleaned every other year.

Actions Completed During Permit Year 1

The City continued its ongoing stormwater structure and catch basin cleaning program for all municipally owned or operated stormwater infrastructure. For the 2008 calendar year, all of the approximately 2,000 City-owned catch basins were cleaned and 396 tons of material (including just over 3 tons from the School Department's catch basins) were disposed of at Commercial Recycling in Scarborough. The tipping fee for grit disposal was $49 / ton. Therefore, the City exceeded the goal associated with this BMP by cleaning twice as many catch basins as specified in the Stormwater Program Management Plan.

BMP 6.5 Maintenance and Upgrading of Stormwater Conveyances and Outfalls

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To ensure that all municipally owned or operated stormwater conveyances and outfalls are properly functioning and maintained.

METHODOLOGY

Conduct ongoing annual inspection and maintenance program to identify condition of stormwater conveyances and outfalls and repair, replace or install new infrastructure as needed.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 6.5.1*** – continue to maintain and upgrade conveyances, structures and outfalls of MS4 system through general maintenance, repairs and new construction and as part of the combined sewer system separation program.

Actions Completed During Permit Year 1

The City continued its ongoing inspection and maintenance program for its stormwater conveyances. For the 2008-09 reporting year, the City spent nearly $100,000 on a variety of stormwater system repair and replacement activities. Examples include catch basin replacement, installation of curb inlets, pipe repair, installation of new storm drain structures, replacement of rip rap, and drainage ditch maintenance, among many others (**Appendix 12**). Additionally, the City's ongoing television inspection and hydraulic cleaning programs also include areas where the sanitary sewer and storm drain systems are combined. Therefore, a significant portion of these activities can be considered part of the MS4 maintenance program. A new electronic data collection system is currently being developed that will enable distinctions between projects conducted on the sanitary sewer system, the stormwater system, and combined sewer / stormwater systems. Therefore, the goal associated with this BMP has been completed successfully as planned.

BMP 6.6 Stormwater Pollution Prevention Plans (SWPPPs)

Responsible Party: Water Resources Protection *Additional Party: N/A*

FUNCTION

To ensure that all applicable municipal facilities (public works, transfer station, school bus maintenance, etc.) in the urbanized area have current Stormwater Pollution Prevention Plans (SWPPP).

METHODOLOGY

Conduct an inventory of applicable municipal facilities to determine which ones need updated or new SWPPPs. Develop SWPPPs for all applicable facilities.

PERMIT YEAR 1 MEASURABLE GOALS

- ***Measurable Goal 6.6.1*** – inventory all City owned or operated public works facilities, transfer stations and school bus maintenance facilities (with the exception of those regulated under Maine's Industrial Stormwater Program) to determine which facilities have existing and current SWPPPs.

Actions Completed During Permit Year 1

The City conducted an inventory of all applicable municipally owned or operated facilities and determined that they all need new SWPPPs. Potentially qualifying facilities include:

- Municipal Transfer Station

- Vehicle Maintenance Facilities (Public Services, School, WRP, Public Safety)
- Schools / Libraries / City Hall
- Water Pollution Control Facility
- Wainwright Farm Recreation Complex and high school athletic fields
- Municipal golf course

Therefore, the goal associated with this BMP has been completed successfully as planned.

Summary of Stormwater Activities for 2009-10 Reporting Year

BMP 1.1 Continue awareness outreach efforts from the previous MS4 permit cycle.
Responsible Party: Water Resource Protection in cooperation with ISWG Education Coordinator.

BMP 1.2 Work with existing partners and seek out partners to help raise awareness of stormwater issues.
Responsible party: ISWG Education Coordinator

Measurable Goal 1.2.2: By the end of Permit Year 2, investigate potential partnerships with organizations identified in the Awareness Plan (to be developed in Permit Year 1 under BMP 1.3).

BMP 1.3 Develop and implement Stormwater Awareness Plan.
Responsible party: ISWG Education Coordinator

Permit Year 2: Implement the Awareness Plan and report process indicators.

BMP 1.4 Continue targeted best management practices adoption efforts from previous MS4 permit cycle.
Responsible party: ISWG Education Coordinator

BMP 1.5 Develop and implement BMP Adoption Plan.
Responsible party: ISWG Education Coordinator

Permit Year 2: Implement the BMP Adoption Plan and report process indicators.

BMP 1.6 School outreach
Responsible party: ISWG Education Coordinator

Measurable Goal 1.6.2: 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.

BMP 1.7 Continue to broadcast water quality videos on Community Television.
Responsible party: Collection System Manager, Water Resource Protection

Measureable Goal 1.7.1: In Permit Years 1-5, the City will continue to air related to water quality issues on South Portland's Community Television.

BMP 2.1 Public notice requirement.
Responsible party: ISWG Stormwater Program Coordinator or Water Resource Protection

Reporting: The annual report will describe compliance with public notice requirements including documentation of meetings and attendance, where applicable.

BMP 2.2 Host public event.
Responsible party: ISWG Stormwater Program Coordinator or Water Resource Protection

Measurable Goal 2.2.1: ISWG and/or the City will annually host/conduct or participate in at least one public event such as storm drain stenciling, stream cleanup, household hazardous waste collection day, 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 urbanized area population that the City wishes to reach. The ISWG and/or the City will consult with DEP to ensure the event will satisfy the requirements.

BMP 2.3 Encourage municipal involvement in public outreach.
*Responsible Party***:** Water Resource Protection

Measurable Goal 2.3.1: During Years 1-5, the City will continue to participate in public outreach (e.g. serving on local water resource committees, participating in public/school events, writing water quality/stormwater articles) or encourage other municipal involvement, as appropriate.

BMP 3.1 Develop a watershed based storm sewer system infrastructure map.
Responsible Party: Engineer, Water Resource Protection

Reporting: The annual report will include a status update of mapping efforts undertaken during the Permit Year.

BMP 3.2 Non-stormwater discharge ordinance.
Responsible Party: Water Resource Protection

Measureable Goal 3.2.1: In Permit Years 1-5, the City will continue to enforce the Non-Stormwater Discharge Ordinance. This ordinance is referenced in the South Portland Code of Ordinances as Chapter 22 Sewer and Drains, Article XIV Non-Stormwater Discharge (§§22-200 -- 22-209) which was passed on September 8, 2004.

BMP 3.3 Develop dry weather outfall inspection program.
Responsible Party: Water Resource Protection

Measureable Goal 3.3.6: In Permit Years 2-5, the City will continue dry weather outfall inspections in additional sub-watersheds within the **highest priority watershed**. After which the City will begin outfall inspections in the **second highest priority watershed**. By the end of Permit Year 5, outfall inspections will have been conducted in all subwatersheds of the **highest priority watershed** and in one or more subwatersheds of the **second highest priority watershed**. As additional outfalls are identified or if follow-up is needed, these outfalls will be added to the inspection list. The City will document and make use of opportunistic inspections.

BMP 3.4 Open ditch illicit discharge program within the highest priority watershed.
Responsible Party: Water Resource Protection

Measureable Goal 3.4.1: By the end of Permit Year 2, the City will identify the approximate length of open ditch that is located within its **highest priority watershed**.

BMP 3.5 Household hazardous waste collection.
Responsible Party: Water Resource Protection

Measureable Goal 3.5.1: In Permit Years 2-5, as funding allows, the City will provide a reasonable means for residents to dispose of hazardous materials by continuing to host its Annual Household Hazardous Waste (HHW) collection day.

BMP 3.6 Support the Friends of Casco Bay mobile vessel pumpout service.
Responsible Party: Water Resource Protection

Measureable Goal 3.6.1: During Permit Years 1-5, or as funding is available, the City will continue to financially support the mobile vessel pumpout service.

BMP 3.7 Public Complaint Hotline.
Responsible Party: Water Resource Protection

Measureable Goal 3.7.1: During Permit Years 1-5, the City will continue to provide an easy and confidential method for individuals to report suspected illicit connections or illegal dumping via the voice mail system for the Water Resource Protection Department and the online complaint form.

BMP 3.8 Storm drain stenciling.
Responsible Party: Water Resource Protection

Measureable Goal 3.8.1: During Permit Years 1-5, the City will continue to annually stencil its catch basins in conjunction with catch basin cleaning.

BMP 4.1 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.
Responsible party: Water Resource Protection

Measureable Goal 4.1.2: By the end of Permit Year 1, evaluate current system and modify, if necessary.

BMP 4.2 Develop and implement a mechanism to annually document every construction activity that disturbs one or more acres within the Urbanized Area.
Responsible party: Water Resource Protection

Reporting: The number of construction activities disturbing greater than or equal to one acre will be included under MCM 4, BMP 4.3, Develop and implement a construction site inspection program.

BMP 4.3 Develop and implement a construction site inspection program.
Responsible party: Water Resource Protection

Measurable Goal 4.3.3: By the end of Permit Year 2, the City will develop a process for tracking and notifying the site developer or contractor of noncompliance issues. The inspector will complete an inspection report that will be transmitted to the City, and necessary enforcement will be the responsibility of the City. Sites that are not in compliance will be issued a written letter from the Planning and Development Department requiring the site to come into compliance within a specified time period. If the violation continues, following the inspection by City staff or duly designated person, a recommendation to the Planning Board would be made to call (use) the performance guarantee to correct the problem. Continued non-compliance will be reported to the DEP with supporting documentation.

Measurable Goal 4.3.4: During Permit Years 1-5, the City will inspect construction sites located in the watershed of an urban impaired stream a minimum of three times, and will inspect construction sites located in all other watersheds a minimum of two times. For all construction sites, at least one of the required inspections will be at project completion.

BMP 4.4 Promote certified contractors in erosion control practices.
Responsible party: Community Planner, Planning and Development

Measurable Goal 4.4.1: During Permit Years 1-5, the City will continue to encourage contractors to be certified in erosion and sediment control through the DEP Non-Point Source Training and Resource Center or its designee.

BMP 5.1 Implement ordinance or similar measure
Responsible Party: Community Planner, Planning and Development

Measurable Goal 5.1.4: In Permit Years 2-5, the City will implement the post-construction ordinance or other DEP approved measure.

BMP 5.2 Develop and implement a method to track post-construction BMPs that are installed within the Urbanized Area, and develop and implement a system to track annual certifications that are required by the owner or operator of the post-construction BMP(s).
Responsible Party: Water Resource Protection

Reporting: In Permit Years 1-2, the annual report will include a status update on the development of the method of tracking post-construction BMPs and annual certifications.

BMP 6.1 Operations at municipally owned grounds and facilities.
Responsible Party: Water Resource Protection

Measurable Goal 6.1.2: By the end of Permit Year 2, the City will develop and implement written operation and maintenance (O&M) procedures that include 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 for its **highest priority watershed**.

BMP 6.2 Municipal employee training.
Responsible Party: Water Resource Protection
No goals specified until Permit Year 3

BMP 6.3 Street sweeping.
Responsible Party: Water Resource Protection

Measurable Goal 6.3.1: During Permit Years 1-5, the City will continue or modify, 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.
Reporting: The annual report will include a status update on street sweeping.

BMP 6.3 Street sweeping.
Responsible Party: Water Resource Protection

Measurable Goal 6.3.1: During Permit Years 1-5, the City will continue or modify, 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.
Reporting: The annual report will include a status update on street sweeping.

BMP 6.4 Cleaning of stormwater structures including catch basins.
Responsible Party: Water Resource Protection

Measurable Goal 6.4.1: During Permit Years 1-5, the City will continue or modify, 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 considered when the sump is greater than or equal to 50 percent filled.

Reporting: The annual report will include a status update on cleaning of stormwater structures.

BMP 6.5 Maintenance and upgrading of stormwater conveyances and outfalls.
Responsible Party: Water Resource Protection

Measurable Goal 6.5.2: During Permit Years 2-5, the City will evaluate and implement a prioritized schedule, as necessary, for repairing or upgrading the conveyances, structures and outfalls of the its MS4.

BMP 6.6 Stormwater Pollution Prevention Plans (SWPPPs)
Responsible Party: Water Resource Protection

Measurable Goal 6.6.2: By the end of Permit Year 2, the City will develop and implement a SWPPP for each applicable facility as determined under Measurable Goal 6.6.1. In Permit Years 3-5, the City will continue to implement its facility SWPPP(s). 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 it.

Stormwater Program Budget Summaries for 2008-09 and 2009-10 Reporting Years

Description	2008-09	2009-10[1]
Salaries / Wages[2]	$143,600	$218,600
Stormwater System Maintenance Construction Supplies	$57,900	$57,900
Solid Waste Disposal: FOCB Pumpout ($5K); HHW ($14K); Catch Basins ($18K)	$37,000	$37,000
Sweeping	$19,950	$19,950
Phase II ISWG	$8,600	$8,600
Training	$3,000	$3,000
Travel	$1,500	$1,500
Books / Publications	$400	$400
Totals:	**$271,950**	**$346,950**

1. All items in 2009-10 Permit Year level funded except for Salaries & Wages (see comment 2).

2. Increase in 2009-10 Salaries & Wages budget line item reflects hiring of new Stormwater Program Coordinator.

APPENDICES

Appendix 1: Interlocal Stormwater Working Group Permit Year 1 Annual Report

Permit Year 1 Report: Minimum Control Measure 1

BMP 1.1 - Continue Awareness Outreach Efforts from the Previous MS4 Permit Cycle.
Measurable Goal 1.1.1 – In Permit Year 1, the ISWG will continue to provide a thinkbluemaine.org link on their individual municipal websites to raise awareness of stormwater issues.

Measurable Goal 1.1.2 – All YardScaping and stormwater outreach materials proximately feature the Think Blue Maine ducky logo.

Measureable Goal 1.1.3 – In Permit Year 1, the ISWG will continue to provide informational material in municipal buildings to raise awareness of stormwater issues.

Reporting: documentation of available stormwater information on municipal website and list of display materials (fact sheets, brochures and display board) and location(s) for permit year one.

BMP 1.2 – Work with existing partners and seek out partners to help raise awareness of stormwater issues.
Cooperative efforts with Maine YardScaping Partnership (Maine Board of Pesticides Control, Friends of Casco Bay, Casco Bay Estuary Partnership, University of Maine Cooperative Extension, Maine DEP, etc.):

- YardScaping Display at the Portland Flower Show, March 12-15; assisted with booth set up; provided pertinent YardScaping fact sheets(mow better, water wisely, overseed, grubs); staffed the booth. This was an excellent opportunity to work cooperatively to reach a large segment of our target audience. Approximately 1400 YardScaping book marks were distributed at the event, and they provided a good "hook" to draw people into the booth to discuss their lawn care habits. This was also an excellent opportunity to collect some anecdotal information. For example, one gentleman stopped by the booth and said he had attended a YardScaping adult education class. He decided to maintain a portion of his lawn as recommended in the class –aerating, topdressing with compost and overseeding with YardScaping seed mix. He said that portion of his lawn was noticeably improved over the area that was not "YardScaped." He was so pleased with the results that he decided to continue the process on the remainder of his lawn.

- Back Cove Demonstration Project – Provided assistance with the planning and installation of approximately 300 native perennials, shrubs and trees for the establishment of four demonstration landscapes at Back Cove in Portland. The demonstration landscapes were created in response to the need to provide a publicly accessible demonstration that showcases appropriate plantings for both urban and rural settings in a beautiful, homeowner-doable way in order to convince people that they can reduce their impact on the environment while still retaining a look that is appealing. The implementation phase of this project started in June 2008, and already people are starting incorporate some of the recommendations into their own landscapes. An architect designing a LEED-certified home in Portland contacted the Maine YardScaping Partnership to tell them that his client took him to the demonstration site. The client said he wanted his landscape to be similar to the demonstration site. The project has also generated press coverage both in the *Portland Press Herald* and on television.

- YardScape certification for yard care professionals – Worked with the Maine Board of Pesticides

Control, UMCE, Maine Landscape & Nursery Association (MeLNA), and yard care professionals to begin exploring the establishment of a certification program for yard care practitioners. Two meeting were held with partners to discuss potential program structure and administration. Details are still being fleshed out, but preliminary discussions centered on an educational program offered through UMCE and a test and certification administered through MeLNA. There was also discussion of requiring a site visit to ensure certified individuals/companies are following the YardScape principles. Development of this program will continue into the future.

A database of regional partners has been started. The database includes contact information for conservation commissions, drinking water utilities, non-governmental organizations and school service learning coordinators. The database will be complete during Permit Year 2.

BMP 1.3 – Develop and implement Stormwater Awareness Plan.

Plan Development

The Stormwater Awareness Committee, which included representatives from each MS4 area/cluster, Maine Department of Environmental Protection (MDEP), and the University of Maine Cooperative Extension (UMCE) determined that existing assessments of the target audience (statewide Omnibus survey and Bangor Area Stormwater Group's intercept survey) offered sufficient data to determine a baseline level of awareness. Based on the two surveys referenced, 35% of our target audience already understands that stormwater impacts water quality.

ISWG education staff developed the Statewide Awareness Plan in conjunction with the Stormwater Awareness Committee. The plan was submitted to MDEP on March 2, 2009. MDEP's comments were incorporated and the plan was resubmitted on April 30, 2009. The plan was approved by MDEP on May 27, 2009.

Plan Implementation

Message Development & Testing

The ISWG education coordinator, on behalf of the MS4 communities statewide, developed potential messages to convey the following goal of the Statewide Awareness Plan: *Homeowners will understand that water does run off their property, not all is absorbed, and it will carry with it pollutants, such as lawn chemicals, pet waste and oil drops. This polluted water will enter the storm drain system, and discharge, untreated, directly to waterbodies used for drinking, fishing and swimming.*

Draft poster for "Follow the flow"

Two unique messages ("Follow the flow" and "What happens in your yard doesn't stay in your yard") were tested against products from an existing awareness campaign from North Carolina ("Know where it goes"). To aid in testing, MDEP, University of Maine Cooperative Extension (UMCE), and ISWG staff developed standardized message testing forms. The forms asked people to describe, in their own words, the take away message for each of the poster options. They also asked people to rank, on a scale from one to five, the clarity of the message, the anticipated community response to the poster and the overall quality of the message. The forms were distributed to representatives from all of the MS4 communities with instructions to collect feedback from the target audience. The data gathered was entered into a database and analyzed to determine which option best conveyed our message.

Analysis showed that North Carolina's "Know where it goes" campaign was slightly favored over the other options, with a mean

clarity rating of 4.00. However, because "Follow the flow" was only slightly lower (mean clarity rating of 3.87), and the open answer responses indicated that the message more closely summarized the goal stated in the Statewide Awareness Plan, the final message selection was "Follow the flow."

Feedback associated with the "Follow the flow" option indicated that the original graphic, showing runoff from a residential property entering a local water body, was too busy and difficult to understand. An artist was hired to take the original concept and simplify it. The new image was modified to show a traditional New England-style home and more potential pollutants. It also more clearly shows the water flowing into a storm drain. The image will be tested with the target audience to ensure it is clearer than the original image.

Outreach Materials

Website:

The ISWG education coordinator, on behalf of all MS4 communities, began to redesign and update the ThinkBlueMaine.org website. The new design is more user-friendly and better organized, making the information contained on the site easier to find. The new look of the site is cleaner and more appealing. It also prominently features the image of the rubber ducky.

Newly redesigned www.thinkbluemaine.org website.

The new website has a new section – the stormwater managers' toolbox. This page serves as a clearinghouse for all educational materials developed. All materials will be available for download to assist in the distribution of materials statewide.

The redesigned site was staged on Cumberland County Soil & Water Conservation District's (CCSWCD) website (www.cumberlandswcd.org/thinkbluemaine) in order for MDEP and the MS4 communities to view the site and provide comments before it went live on www.ThinkBlueMaine.org.

Ducky Ad:

CCSWCD staff worked with a media buyer to purchase ad space to run the Think Blue Maine ducky ads. Staff secured financial commitments from all MS4 communities/clusters and MDEP to purchase the ad space on local stations statewide. The ads will run the final three weeks in August.

Partner Networks:

A database of statewide partners has been started. The database includes contact information for conservation commissions, drinking water utilities, non-governmental organizations and school service learning coordinators.

Press:

- August 18, 2008 – *Portland Press Herald*, John Richardson, "Rains wash pollutants into ocean, prompt advisories"
- November 22, 2009 – *Portland Press Herald*, John Richardson, "The scoop on what to do, and not do, with poo"
- June 13, 2009 – *Portland Daily Sun*, Casey Conley, "Grate Expectations"

BMP 1.4 - Continue Targeted Best Management Practices Adoption efforts from previous MS4 permit cycle.

Grants Submitted

The ISWG Education Coordinator worked in cooperation with the Bangor Area Stormwater Group and the

seven other regulated MS4s to submit a grant proposal to the Maine Outdoor Heritage Fund to support the statewide expansion of the point of sale program. Unfortunately, this grant was not funded.

Outreach Materials

- Developed YardScaping four-step brochure – timing of recommendations is aligned with conventional four-step programs. This was developed based on feedback from staff at point of sale stores who suggested a natural four-step program would help the YardScaping program compete with conventional lawn care practices. See more information about the four-step in the point of sale section below.
- Revised fact sheets: aerate, ants, compost tea, fertilizer, grubs, lawn care calendar, mow better, overseed, topdressing, water wisely, why YardScape?
- Developed additional fact sheets: common weeds, groundcovers, compost tea instructions, soil test instructions
- Developed visual aids for adult education classes
- Designed posters for point of sale stores to advertise program
- Updated adult education instructor manual
- Established online mailing list
- Updated YardScaping website (www.cumberlandswcd.org/yardscape). New additions include listing of point of sale stores, fact sheet page, and events calendar

Point of Sale

This permit year straddles the second and third years of the point of sale program. Sixteen stores in 10 communities (nine of which are MS4s) participated in the program these years. At the end of the second pilot year, staff met with representatives from each store individually to solicit feedback on the program and discuss possibilities for the future.

Point of sale poster

Feedback from participating stores indicated that additional outreach and advertisement of the program would be beneficial. Large posters were designed for in-store promotion of "ducky approved" items. The posters were distributed to participating stores at the beginning of the third pilot year (which straddles permit years one and two). The stores were asked to display the posters in store windows or near lawn care products. A listing of participating stores was added to the CCSWCD YardScaping website (www.cumberlandswcd.org/yardscape). Links to store websites were added when available.

Staff began to address the need for a more robust tracking system for the point of sale program. While stores indicated after the end of the second pilot year that they would be willing to offer a coupon on recommended products, each store wanted the coupon to be slightly different. This delayed the coupon tracking system while staff work with stores to develop an acceptable coupon.

Tracking product sales as an indicator of behavior change is also being explored. In preparation of the third pilot year, staff asked stores to provide three years of information on product sales, specifically grass seed, weed and feed and fertilizer. Most stores have a computerized inventory and sales system, which makes it easy for them to provide this information. The hope is to develop a baseline of sales information and hopefully see a change in sales trends as the program continues.

Feedback from participating stores also indicated the need for a comprehensive list of recommended products. Staff worked in conjunction with the Maine Board of Pesticides Control to review product catalogs and identify preferred products. Staff then inventoried stores to determine what products stores already carry. A database of this information has been created in Access, and the goal is to make this available on the YardScaping website. Currently the database is being provided to stores so they have the information they need when ordering products.

Representatives from many of our partner stores have suggested that a YardScaping four-step program be developed to rival the conventional four-step lawn care systems. They felt that in order for the YardScaping program to be truly successful, a similar program would be needed because most homeowners are familiar with and follow a conventional four-step approach. Staff took the Yard Care Calendar, which was developed during permit year five, and boiled it down to four steps, the timing of which mirrors conventional four step programs. While the conventional program essentially consists of buying four different products and applying the fertilizer-pesticide combination four times throughout the summer months, the YardScaping four-step consists of the following steps:

Front
Back

1. Spring Greening (April – June)
    - Topdress with compost
    - Seed bare spots
    - Mow at 2-inches to start then increase to 3-inches for the remainder of the season
    - Leave the clippings
2. Water Wisely (June – early August)
    - Water only when needed
    - Apply compost tea (optional)
3. Bugs Out! (August – September 15)
    - Apply beneficial nematodes for grub control
    - Overseed after August 15
    - Fertilize with slow-release nitrogen
4. Simply Soil (September 15 – October 15)
    - Test soil pH
    - Apply calcium rich lime if pH is less than 6.0

The four-step information was distributed to point of sale stores in June, and follow up with stores indicates that people are having a positive response to it. According to one store representative, "People seem to be really excited to see a natural four-step option, but because most people bought all four steps of the conventional program in the spring, not many people have been taking the information. I expect more people follow the YardScaping four-step next spring."

Point of sale in-store promotional efforts:

- April 18, 2009 – location: O'Donal's Nursery, Gorham; event: Organic Gardening Day; audience: predominately residents of Gorham, Westbrook and Scarborough, but also included people from neighboring communities. The YardScaping display that was designed by the State YardScaping Partnership was used. All fact sheets were available to attendees. O'Donal's allowed compost tea kits to be sold at the event, which proved to be very popular. This event was very well attended, with

staff interacting with approximately 65 people.

- April 25, 2009 – location: Estabrook's Greenhouses, Yarmouth; event: open house; audience: predominately Yarmouth residents. This event was pretty slow; very few people were shopping that day, and even fewer stopped by the YardScaping display (staff interacted with approximately 10 people). There were some good conversations with attendees, but they were few and far between. Staff has a similar experience with this event the previous year, but the low turnout was attributed to the date (it was Easter weekend) and poor weather. This year's event did not coincide with Easter and the weather was sunny and warm, yet there was still a disappointing turn out. Staff will likely research another weekend if this store requests another in-store appearance.

Adult/Community Education

Because of the past success of the adult education classes, they were continued in the fall and spring of permit year one. The following classes were held in the fall: Scarborough – 9/18 (7 students); South Portland – 9/20 (5 students); Gorham – 9/23 (5 students); Cumberland – 9/25 (9 students); Cape Elizabeth – 10/22 (7 students). Additional classes were scheduled in Windham, Biddeford and Yarmouth but had to be cancelled due to low registration. In-store classes offered at point of sale stores have been quite successful in the fall. In recognition of low adult education class registrations in the fall, staff are planning to hold fall classes in partnering stores rather than going through adult education departments. The hope is to get more class attendance and help promote our partner stores by drawing people to the class.

For the spring classes, staff scheduled classes in fewer communities, but advertised them in multiple community education bulletins. This increased the cost effectiveness of the program. The following classes were held in the spring: Scarborough – 3/12 (4 students); Cumberland – 3/26 (5 students); Gorham – 4/1 (3 students); Portland 4/2 – (6 students); Cape Elizabeth – 5/6 (30 students).

The Cape Elizabeth class held on May 6th was the best attended class to date. Following this class, the CCSWCD YardScaping website experienced its greatest volume of traffic permit year one. The class evaluation for this course was revised to include an area for participants to indicate if they would be willing to host a YardScaping Social in their neighborhood. Three participants indicated that they would be interested and requested more information. Staff are hopeful the adult education classes will serve as a mechanism for developing the neighborhood social model.

Staff are also exploring other venues for adult education. For example, a National Semiconductor employee visited the YardScaping booth at Windham Summerfest in June 2009. He was very interested in YardScaping and felt many of his co-workers would be as well. Staff have scheduled a "lunch & learn" at National Semiconductor in South Portland for August 2009. This opportunity will allow the program to reach many in our target audience, since National Semiconductor employs people from all over the Greater Portland area. Staff is exploring this opportunity with other large employers in the area.

A number of materials used for adult education classes were revised or created. As mentioned previously, the final class evaluation was revised to include an area for participants to indicate that they would be willing to host a YardScaping social in their neighborhood. In addition, the instructor notes were revised to improve the flow of the class and emphasize practical concepts more. Visual aids were created to better illustrate key concepts presented in the class. Visuals were also created to help participants identify common weeds in their lawns, since this is a question that is frequently discussed in the classes.

Fall 2008 class highlights:

- Eleven of the class participants documented on the evaluation that they use weed and 10 indicated that they were going to stop.
- Most participants (31 of 33 responses) indicated that they thought there was a connection between lawn care and water quality.

Fall 2008 YardScape class statistics from the completed evaluation forms:

Table 1. Fall 2008 YardScape class statistics

Lawn Care Practice	Plan to implement	Currently do not implement	% planning to implement
Set Mower to a height of 3"	18	19	95
Leave grass clippings	10	12	83
Sharpen mower blades	16	20	80
Aerate	30	32	94
Topdress	28	33	85
Overseed	29	29	100
Use low maintenance seed	34	36	94
Get a soil test	31	35	89
Use nitrogen-only fertilizer	26	30	87
Use compost tea	25	34	74

Spring 2009 class highlights:

- Ten of the class participants documented on the evaluation that they use weed and feed and each indicated that they were going to stop.
- Most participants (39 of 44 responses) indicated that they thought there was a connection between lawn care and water quality.

Spring 2009 YardScape class statistics from the completed evaluation forms:

Table 2. Spring 2009 YardScape class statistics

Lawn Care Practice	Plan to implement	Currently do not implement	% planning to implement
Set Mower to a height of 3"	24	24	100
Leave grass clippings	17	18	94
Sharpen mower blades	19	19	100
Aerate	28	32	88
Topdress	35	38	92
Overseed	34	36	94
Use low maintenance seed	33	34	97
Get a soil test	31	33	94
Use nitrogen-only fertilizer	28	35	80
Use compost tea	22	34	65

Data on the actual number of people who adopted the practices indicated has not yet been collected. Follow up phone calls will be made in the fall of 2009 to allow class participants time to implement the recommended practices.

Fall 2008 follow up:
Based on follow up phone calls from previous rounds of adult education classes, it appeared that many people did not follow through with plans to have their soil tested prior to making lawn care decisions. In the fall of 2008, staff called participants from spring 2008 classes to determine if they had indeed done a soil test. Surprisingly, approximately 71% of people reached stated that they did follow through with having a soil test done for their lawn. When asked what they did with the results of the soil test, an overwhelming majority (80%) stated that they found the recommendations confusing and were not sure how to proceed. This points to the need for resources to assist landowners with interpreting the recommendations from their soil test. Staff will explore resources available or create new materials if none exist.

YardScaping & Natural Lawn Care Press

- July 24, 2008 – *American Journal*, Leslie Bridges, "Looking at lawns from the ground up, Q&A with Courtney O'Neil"
- September 7, 2009 – *Portland Press Herald*, Tom Atwell, "You can tell it's bugs when there are obvious chew marks"
- February 20, 2009 – Press release publicizing adult education classes submitted to local newspapers
- April 5, 2009 – *Maine Sunday Telegram*, Tom Atwell, "Natives make sense, garden speakers say"
- April 19, 2009 – *Maine Sunday Telegram*, Tom Atwell, "The lawn ranger"
- May 21, 2009 – Press release submitted to *The Forecaster* for their garden and landscaping issue
- May 29, 2009 – *Portland Press Herald*, Tom Atwell, "Gunning for grubs? Here's what you need to know"
- June 28, 2009 – *Portland Press Herald*, Tom Atwell, "Plot thickens as demonstration garden fills up with plants"
- June 28, 2009 – *Portland Press Herald*, Ray Routhier, "Just add water"

BMP 1.5 – Develop and implement BMP Adoption Plan

The ISWG Education Coordinator and MDEP determined that data collected through a 2006 phone survey offered sufficient data to determine the target audience's baseline lawn care practices. Based on this survey, one-third of the target audience is using weed and feed products, and one-quarter of the target audience is over fertilizing (fertilizing more than once per year).

ISWG Education Coordinator developed BMP Adoption Plan as part of the 5-year MS4 municipal permit. The plan includes budget and timeline of activities for March 2008 through June 2013. The plan was submitted to the Maine Department of Environmental Protection (MDEP) on March 2, 2009. MDEP's comments were incorporated and the plan was resubmitted on May 28, 2009. The plan was approved by MDEP on June 23, 2009.

BMP 1.6 –School Outreach

The following is a summary of education activities completed in each ISWG community during the 2008-2009 school year. Activities were provided by the following and are noted by the organization's acronym:

CCSWCD: Sarah Plummer, Education Coordinator, Cumberland County Soil & Water Conservation District, sarah-plummer@cumberlandswcd.org, 207-892-4700 x 107

YCSWCD: Melissa Brandt, District Manager, York County Soil & Water Conservation District, melissabrandt@yorkswcd.org, 207-324-0888 x 214

PWD: Lynne Richard, Education Coordinator, Camilla Fecteau and Benjamin Davison, Environmental Educators, Portland Water District, lrichard@pwd.org, 207-774-5961 x 3324

<u>Biddeford</u>
Total students: 45
Total contact hours: 45
Lesson topics: Build landscape models to learn about impervious/pervious surfaces, nonpoint source pollution, and best management practices.
Schools: Biddeford Intermediate School
Educator: YCSWCD

Cape Elizabeth
Total students: 199
Total contact hours: 1,267
Lesson topics: Build landscape models to learn about impervious/pervious surfaces, nonpoint source pollution, and best management practices; bioaccumulation from a pesticide runoff in an aquatic food web; drinking water; various lessons included information about nonpoint source pollution, human impact, watershed characteristics, stormwater, low impact development, and behavior change.
Schools: Cape Elizabeth Middle School, Pond Cove Elementary School
Educators: CCSWCD, PWD

Cumberland
Total students: 196
Total contact hours: 1,365
Lesson topics: Amount of water in the world, conservation, and the water cycle; various lessons included information about nonpoint source pollution, human impact, watershed characteristics, stormwater, low impact development, and behavior change; Envirothon**.
Schools: Greely Middle School, Greely High School, North Yarmouth Memorial School
Educators: CCSWCD, PWD

Falmouth
Total students: 193
Total contact hours: 896
Lesson topics: Watersheds, contour lines, topographic maps, and water flow; watersheds, nonpoint source pollutants, and water quality parameters; amount of water in the world, conservation, and the water cycle; where rivers begin, how they flow, and watersheds; stormwater sources and effects; build landscape models to learn about impervious/pervious surfaces, nonpoint source pollution, and best management practices; stream walk to assess water flow over land and in river, and to examine pervious/impervious surfaces and their ability to absorb water/pollution; tracing water flow and finding watersheds on local watershed maps; research projects focusing on Presumpscot River Watershed stakeholders and the effects of nonpoint source pollutants – projects culminated in public presentations; field trip to 4 locations in the Presumpscot River Watershed; two month long experiment to test the effects of various nonpoint source pollutants on aquatic ecosystems.
Schools: Falmouth Middle School
Educator: CCSWCD

Freeport
Total students: 62
Total contact hours: 84
Lesson topics: Build landscape models to learn about impervious/pervious surfaces, nonpoint source pollution, and best management practices; topography, contour lines, watersheds, water movement and transport of nonpoint source pollutants.
Schools: Mast Landing School
Educator: CCSWCD

Gorham
Total students: 180
Total contact hours: 1,211
Lesson topics: Invasive plants; eutrophication/soil lesson and soil testing of garden; assist with planning and design of perennial/shrub garden with focus on low impact development and best management practices; erosion, erosion control laws, history of conservation districts, BMP slideshow and school site walk; vernal pools; various lessons included information about nonpoint source pollution, human impact, watershed characteristics, stormwater, low impact development, and behavior change.
Schools: Gorham Middle School, Narragansett Elementary School, Village School

Educators: CCSWCD, PWD

Old Orchard Beach
Total students: 65
Total contact hours: 260
Lesson topics: Build landscape models to learn about impervious/pervious surfaces, nonpoint source pollution, and best management practices; bioaccumulation from a pesticide runoff in an aquatic food web; stormwater sources and effects; wastewater.
Schools: Loranger Middle School
Educator: YCSWCD

Portland
Total students: 650
Total contact hours: 1,062
Lesson topics: Stormwater pollution lesson and maze game; waste water treatment – history, background, design experiment to treat wastewater; soil components, testing, amendments, and effect on water quality; watersheds; stormwater; wastewater treatment, combined sewer outfalls, nonpoint source pollution; Southern Maine Children's Water Festival*.
Schools: Lincoln Middle School, Casco Bay High School, Riverton Elementary School, Hall Elementary School, Longfellow Elementary School, King Middle School, Nathan Clifford School, East End Community School
Educators: CCSWCD, PWD

Saco
Total students: 98
Total contact hours: 294
Lesson topics: Water quality field day included water quality sampling, macroinvertebrates, bioaccumulation from a pesticide runoff in an aquatic food web, and stormwater runoff.
Schools: Saco Middle School
Educator: YCSWCD

Scarborough
Total students: 163
Total contact hours: 596
Lesson topics: Nonpoint source pollution overview; water quality testing on local stream; various lessons included information about nonpoint source pollution, human impact, watershed characteristics, stormwater, low impact development, and behavior change.
Schools: Scarborough High School, Scarborough Middle School
Educators: CCSWCD, PWD

South Portland
Total students: 918
Total contact hours: 3,332
Lesson topics: Amount of water in the world, conservation, and the water cycle; where rivers begin, how they flow and watersheds; stormwater sources and effects; build landscape models to learn about impervious/pervious surfaces, nonpoint source pollution, and best management practices; coastal ecology; various lessons included information about nonpoint source pollution, human impact, watershed characteristics, stormwater, low impact development, and behavior change; Southern Maine Children's Water Festival*.
Schools: Skillin Elementary School, Dyer Elementary School, Mahoney Middle School
Educators: CCSWCD, PWD

Westbrook
Total students: 101
Total contact hours: 661
Lesson topics: Hydropower stakeholder meeting; in-class water quality testing; water quality testing at local vernal pools; water quality parameters; various lessons included information about nonpoint source pollution, human impact, watershed characteristics, stormwater, low impact development, and behavior change; Envirothon**.
Schools: Wescott Junior High School, Westbrook High School
Educators: CCSWCD, PWD

Windham
Total students: 244
Total contact hours: 2,237
Lesson topics: Water quality; bioaccumulation of pesticide runoff in an aquatic food chain; local water bodies - current status, concerns, and actions; various lessons included information about nonpoint source pollution, human impact, watershed characteristics, stormwater, low impact development, and behavior change, Southern Maine Children's Water Festival*.
Schools: Windham High School, Windham Middle School
Educators: CCSWCD, PWD

Yarmouth
Total students: 3
Total contact hours: 2.75
Lesson topics: Water quality – helped three students with their research projects of pH, and water quality tests on various water bodies, testing and describing role of phosphorus, nitrogen, eutrophication, and nonpoint source pollution. (Many attempts were made at Yarmouth Elementary and Middle Schools to work in the schools more. Prior contacts initially had time but didn't follow through due to time constraints. New contacts were made at Yarmouth Middle School and will be pursued during the 2009-2010 school year.)
Schools: Yarmouth Elementary School
Educator: CCSWCD

* The **Southern Maine Children's Water Festival** is a one-day event occurs that annually each May, drawing about 800 middle school students from all over Southern Maine to learn all about water. Students attend classroom presentations, a water-based stage show, "Dripial Pursuit" competitions, and tour many exhibits in the exhibit hall. Activities focus on non-point source pollution and ways in which students can be part of the solution.

** The **Envirothon** is an environmental competition conducted throughout Maine in the spring. High school students test their knowledge of natural resources and current environmental issues in an outdoor setting. Teams of three to five students are tested at five stations: Wildlife, Aquatics, Forestry, Soils, and a Current Natural Resources Issue. The top three teams at each regional competition compete in the State competition, with the advancement to a national competition for top-placing teams.

Additional activities for communities as specified below:

Falmouth

- October 22, 2009 – Falmouth Green Expo (interacted with approximately 40 attendees)
- February 2, 2009 – Jami Fitch met with the Falmouth Conservation Commission to discuss their role in education and outreach efforts
- May 14, 2009 – 75 storm drains stenciled by Falmouth Middle School in Falmouth Foreside area with "Keep Water Clean, Drains to Casco Bay."

- May 20, 2009 – 300 door hangers distributed by volunteers and Falmouth High School students throughout Falmouth Foreside.

Freeport

- July 9, 2008 – Royal River Youth Conservation Corps stenciled 108 storm drains in downtown Freeport

Old Orchard Beach

- Think Blue Moments during DPW public meetings (I don't have specific information for these, but I wanted to put it in here as a reminder to take credit for it)

Portland

- July 24, 2008 – Cultivating Community's Boyd Street Bash (interacted with approximately 10 people)
- October 30, 2008 – "Does it Make Sense" workshop with the City of Portland regarding exploration of establishment of a stormwater utility.
- February 8, 2009 – Tu B'shevat Community Day at Deering High School (interacted with approximately 30 attendees)
- Applied for and received funding through the Casco Bay Estuary Partnership's stormwater grants program to conduct a survey of landowners within the Capisic Brook Watershed. The primary goal of the survey is to gain a better understanding of the needs of the watershed in order to tailor outreach efforts. In addition, it is hoped that the materials and process developed will be able to be replicated in other urban stream watersheds throughout the State.
- Efforts were made to work with Hall Elementary School and Lincoln Middle School to stencil storm drains in the Capisic Brook Watershed. Unfortunately, rain caused the event to be cancelled on both the originally scheduled date and the rain date. The Casco Bay Youth Conservation Corps ultimately completed the stenciling in July 2009.

Scarborough

- July 12 & 13, 2008 – YardScaping booth at Scarborough Summerfest (interacted with approximately 70 people). Appearance coincided with a subsequent 600% spike in YardScaping website hits.
- July 16, 2008 – presented at Higgin's Beach Association weekly breakfast. Information was well received; ~80 in attendance. Good questions, all information packets (20), door hangers (100 total – 50 of each variety) and bookmarks (50) were taken.

South Portland

- July 18, 2008 – Long Creek Watershed Tour - 28 participants toured the watershed and viewed areas in need of restoration and sites already addressed by progressive landowners.

Windham

- July 2008 – Presumpscot River Youth Conservation Corps (YCC) distributed door hangers to 40 households in South Windham while storm drain stenciling
- July 2008 – Presumpscot River and Little Sebago Lake YCCs stenciled 186 storm drains along Routes 115, 202 and 302
- June 27, 2009 – YardScaping booth at Windham Summerfest (interacted with approximately 70 attendees). Appearance coincided with a subsequent 50% spike in YardScaping website hits.

Yarmouth

- July 15, 2008 – Royal River Youth Conservation Corps stenciled 256 storm drains in downtown Yarmouth.

Appendix 2: 2008 Household Hazardous Waste Collection Day Flier

CITY OF SOUTH PORTLAND

Household Hazardous Waste

DROP-OFF

The Annual "Household Hazardous Waste Drop-Off" will be held on Saturday, **Saturday, October 18, 2008** at Water Resource Protection, Wastewater Treatment Facility, 111 Waterman Drive from 9:00 a.m. to 1:00 p.m. South Portland Residents ONLY. Proof of residency required.

PLEASE NOTE

TIPS
FOR A SUCCESSFUL TRIP

- **Bring proof of residency**
- **Box up your items and label clearly**

ITEMS NOT ACCEPTED

- **LATEX PAINT--is NOT Accepted**
- **TIRES**
- **PROPANE (LP) CYLINDERS**
- **COMPUTER & ELECTRICAL COMPONENTS**
- **EXPLOSIVES**

(Latex paint and tires may be brought to the Transfer Facility @ 929 Highland Avenue. Their Rules & Regulations are attached for your reference.)

Take a Trip through the process--Cars should line up along the right-hand side (water side) on Waterman Drive. (It will be best to enter Waterman from the end of Ocean Street--near Thomas Knight Park). You will be asked to make out a questionnaire with your name, address, materials, and quantity depositing. Then, as you move into the staging

area, you will stop and allow Clean Harbors representatives to remove the materials from your vehicle. Once this is completed, you will be directed through the facility and back out onto Waterman Drive.

Oil-based paints, pesticides, waste oils, cleaners, solvents, batteries, polishes, chemicals, etc. are all examples of household materials that could be hazardous to the environment if used, stored, or disposed of improperly.

.

Here are some ideas for household hazardous waste (HHW) management including ideas on how not to create HHW in the first place.

- **REDUCE** - Buy only the amount needed to do the job, that way you won't have extra to get rid of. Also, use only the amount indicated on the label needed to do the job - using more does not mean that it will work that much better!
- **REUSE** - If you have a product that is usable, but you don't need or want to use it, give it to a neighbor or relative who will use it as it is intended and will properly dispose of what is left over.
- **RECYCLE** - Take your take lead-acid batteries back to place of purchase, recycle your oil and oil filters.

If you have any additional questions, feel free to contact Ron LeTarte, Water Resource Protection, 767-7675.

NOTE HHW is also accepted YEARROUND at Riverside Recycling Facility, 910 Riverside St., Ptld., ME 04103 (797-6200). SATURDAYS ONLY from 7 a.m. to 4 p.m. Liquids are $6.50 per gal. and dry material is $3.50 per pound.**

Appendix 3: Examples of Educational Brochures

or the city supplied baggy dispensers
oal parks and beaches. You might want
your own with you when you take your
o the park or walk your pet(s) on the
s. This is a good way to recycle all those
grocery bags. Be prepared and clean up
it's waste or litter you may see at our
nd beaches.

It's as Easy as 1-2-3

1. Bring a bag
2. Clean it up
3. Dispose of it properly
(in trash cans or
the toilet)

To learn more about
how you can help to prevent
stormwater pollution, go to
www.thinkbluemaine.org

think blue
Clean water starts with you!

Water Resource Protection
111 Waterman Drive
South Portland, Maine 04106
Phone: (207) 767-7675
Fax: (207) 767-5697
waterquality@southportland.org
www.southportland.org

City of South Portland
Developed by The City of South Portland

Water Resource Protection

Stormwater Pollution Prevention

Pet Waste
Please Help Prevent
Stormwater Pollution

Water Resource Protection

Stormwater Pollution Prevention

What is Stormwater Pollution?

When rain flows over streets and other surfaces, it picks up pollution and carries them into the stormwater conveyance (storm drain) system. This system is designed to prevent flooding by transporting water away from developed areas.

However, this water is not filtered or treated, and all the contaminants it contains eventually flow to our streams, lakes, and ocean where we swim and fish. Once there, polluted runoff can harm wildlife and habitats.

In some cases, it can even cause beach closures or make fish and shellfish unsafe to eat.

Pet waste is among the many common stormwater pollutants that can degrade water quality. Other examples include paint, oil and automotive fluids, construction debris, yard waste, pesticides, litter, pool chemicals and dirty wash.

Why is it Important to Pick up After your Pet?

During rainfall, pet waste left on lawns, beaches, trails and sidewalks washes into storm drains. These wastes contain pathogens such as (bacteria, parasites, and viruses) then end up flowing directly into streams, lakes, and the ocean where they can harm public health and the environment.

As they decompose, pet wastes demand high levels of oxygen from water. This demand can kill fish and plant life by reducing the amount of dissolved oxygen available to them.

Recent studies have shown dogs and cats are sources of fecal contamination at local beaches. In addition to causing beach closures, this contamination can make people sick with sore throats, intestinal problems, rashes, nausea, eye and ear infections.

What Can I Do?

The next time you're caught outside in the rain, take a good look at what's running off the street, into the gutters, and down storm drains. Clean up pet waste in your yard on a regular basis to prevent polluted runoff.

Why should you YardScape?

- ✓ Saves money.
- ✓ Saves time.
- ✓ Protects you, your family and the environment.

A healthy, natural lawn is more resistant to weeds, bugs, disease and drought!

Call the Conservation District for YardScaping info: 892-4700

Check out: www.cumberlandswcd.org Click on the ducky!

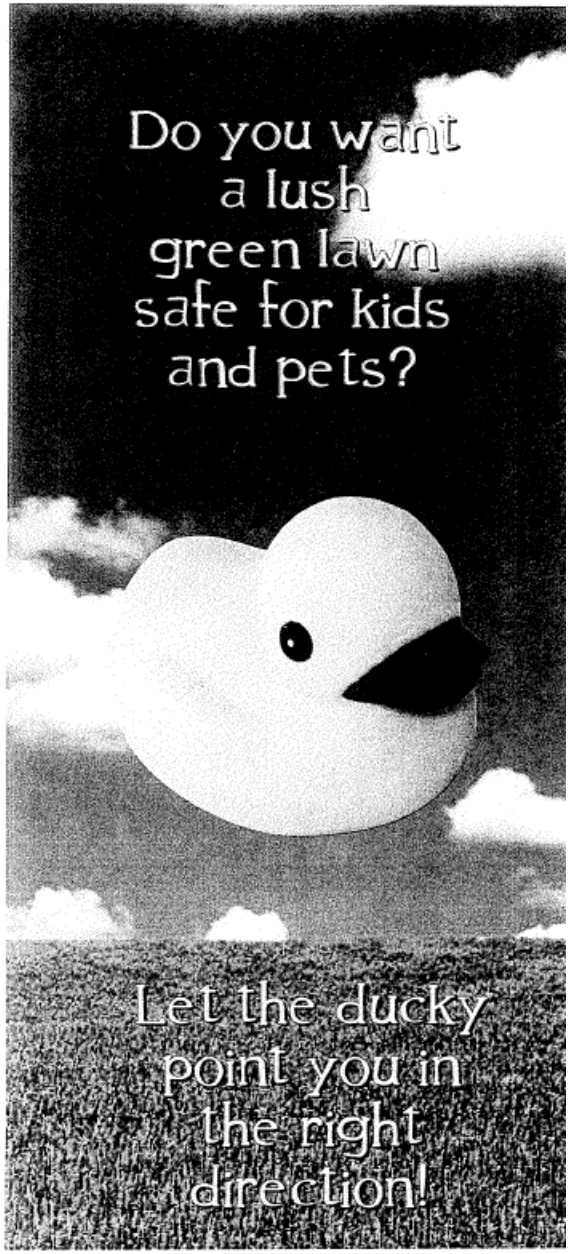
The Maine YardScaping Partnership was formed out of the rising concern over the pollution caused by yard care chemicals washing away into water bodies, as well as the risks of pesticide exposure to people, pets and wildlife.

Local YardScaping Partners:

Cumberland County Soil & Water Conservation District
207-892-4700

City of South Portland

Friends of Casco Bay
Casco BAYKEEPER
207-799-8574



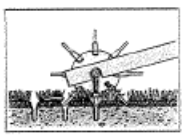
What is YardScaping?

YardScaping is a statewide effort to inspire Maine people to maintain their yards for the safety of kids, pets and the environment by reducing the use of fertilizers, pesticides and herbicides.

YardScaping Tips!

✔ **Mow High:** Three inches is the rule! Longer grass strengthens roots, retains more moisture and makes it difficult for weeds to germinate.

✔ **Aerate:** An aerator loosens up the soil and gets the air, water and nutrients more readily to the roots. Rent one with a neighbor or hire a professional.



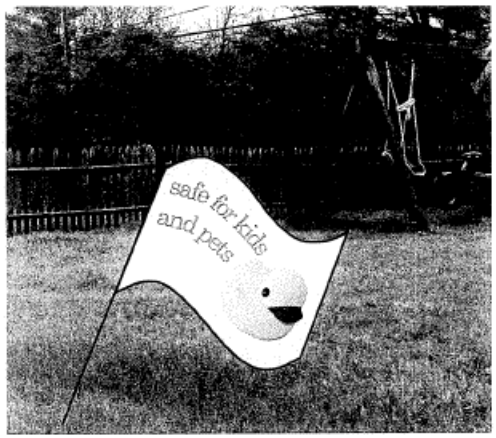
✔ **Overseed:** Throw down more grass seed to give your lawn a natural boost. Ask for a low maintenance mix that is drought tolerant and needs no fertilizer.

✔ **Test the Soil:** A soil test analyzes soil fertility and pH and recommends exactly what your soil needs for growing healthy grass. Test kits available from the Cumberland County Soil and Water Conservation District. Call 892-4700.

More YardScaping Tips Online!

www.cumberlandswcd.org

Click on the ducky!



What do YOU do?

✔ Ask your local hardware store and garden center if they participate in the Ducky Program.

✔ Look for the ducky tag below the products that promote a healthy lawn.

✔ Call the Conservation District for lawncare advice: 892-4700.

✔ Proudly display your free ducky lawn flag so friends and family know you have a safe, natural lawn. Call 892-4700.

South Portland Water Resource Protection

Who We Are

Water Resource Protection is South Portland's water quality utility committed to protecting water resources in Casco Bay. Our customers enjoy clean water through innovative wastewater and stormwater services. Our expanding role into stormwater management, flood management projects, water quality and stream enhancement projects will ensure an improved, healthier, and better managed water resource.

City of South Portland Water Resource Protection

Meeting the Clean Water Challenge for Casco Bay

City of South Portland

Water Resource Protection

New Name Reflects Broader Role

After more than 25 years of service to the community as the City of South Portland Pollution Abatement Department, we became Water Resource Protection.

Why the name change? In 1978 our job was to actively participate in improving water quality in Casco Bay by cleaning wastewater generated from the city prior to discharge to the Fore River. Twenty-five years later our work is more than sewage collection and treatment, it is about caring for water resources in Casco Bay, our local streams and rivers, watersheds, managing flooding, and protecting habitat.

Our new name, Water Resource Protection, reflects our broader role in managing today's water quality needs and planning for the challenges of tomorrow.

Meeting The Clean Water Challenge

Clean water and healthy rivers and streams are a source of community pride. At Water Resource Protection, we are the city department that protects these resources by serving as the community's wastewater and stormwater utility.

Through our wastewater system, we clean more than 2.6 billion gallons per year of wastewater and consistently meet the requirements set forth by utilizing the highest standards, before returning the water to Casco Bay.

We maintain storm drain pipelines, culverts, construct flood management, wastewater treatment and water quality projects. All this adds up to an investment in cleaner water and a cleaner environment. And the investment is paying off. Casco Bay is healthier today than it has been for generations.

Keeping Service High and Costs Low

Water Resource Protection manages the needs of over 23,000 customers in South Portland as part of the Casco Bay watershed. Despite rapid residential growth, rising energy costs, and strict state and federal regulatory requirements, our rates are still 8 cents lower than they were in 1994.

City of South Portland

Appendix 4: Web-Based IDDE Complaint Reporting Form

Appendix 5: Dry Weather Outfall Inspection Form

Dry Weather Outfall Inspection Form

Location Information

Date: _____ **Inspector:** _____

Time: _____

Outfall ID: _____

Outfall Location: _____

Receiving Waterbody: _____

Photo Taken: Yes No **Photo ID:** _____

Weather: Clear Cloudy **Approximate Temp:** _____ **Wind Present:** Yes No

Precipitation in the past 3 days: No Yes _____ inches

Pipe Flow: None Trickle Steady 1/4 pipe flow or more

Seepage Flow: None Trickle Steady 1/4 pipe flow or more

Color (if flow is present): _____

Inspection Information *Select all that are applicable*

Obvious Debris/Pollution:		**Odor:**		**Water Clarity:**	
None	0	None/Natural	0	Clear	0
Foam	3	Musty	5	Cloudy	5
Floating Green Scum	8	Sewage/septic	10	Opaque	10
Oil / Film	9				
Vegetative Mat	9				
Sewage Solids	10				
TOTAL	☐	**TOTAL**	☐	**TOTAL**	☐

GRAND TOTAL SCORE = ═══

Additional Information

Sediment Condition: Open 1/4 Full 1/2 Full 3/4 Full Plugged

Structure Condition: Excellent Good Fair Poor

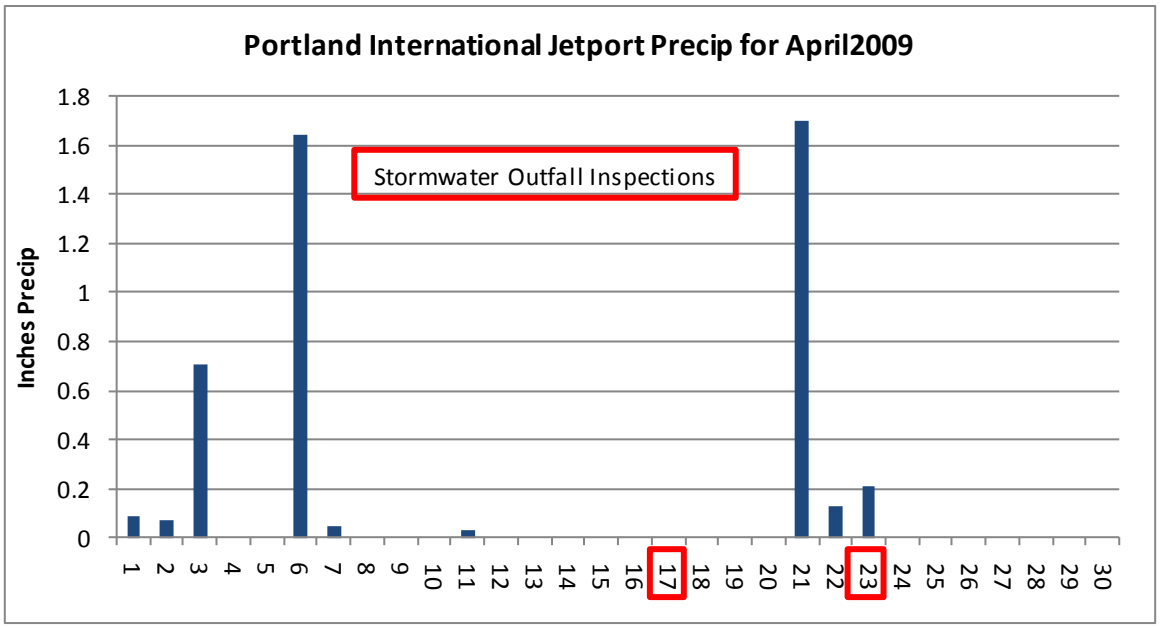
Trash/litter present: Yes No **Yard waste observed:** Yes No

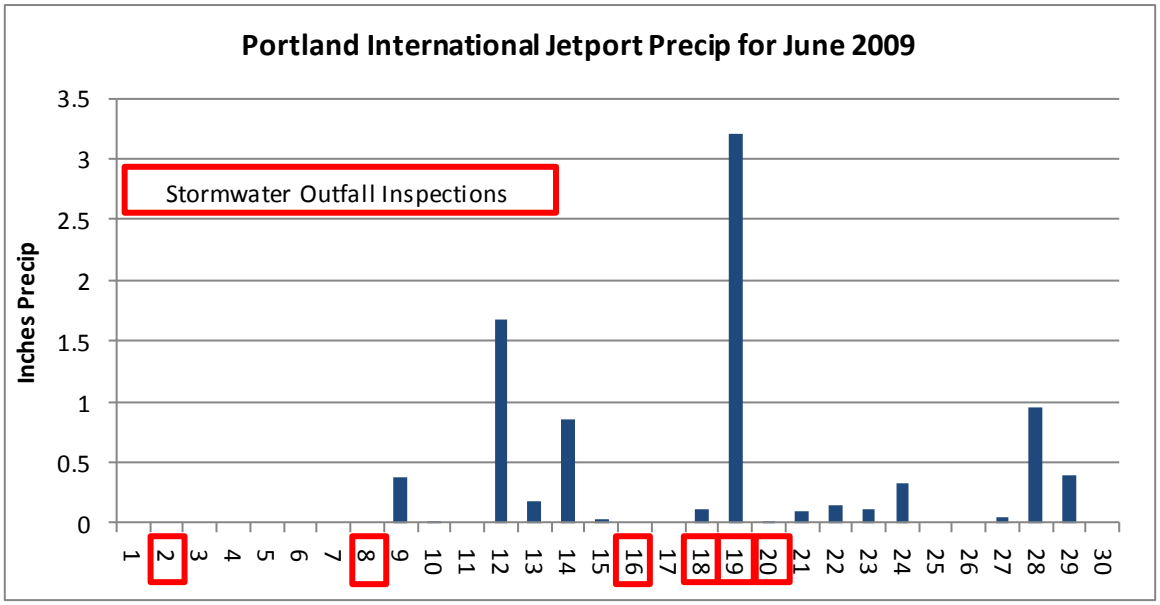
General Comments:

Potential Sources / Actions Taken:

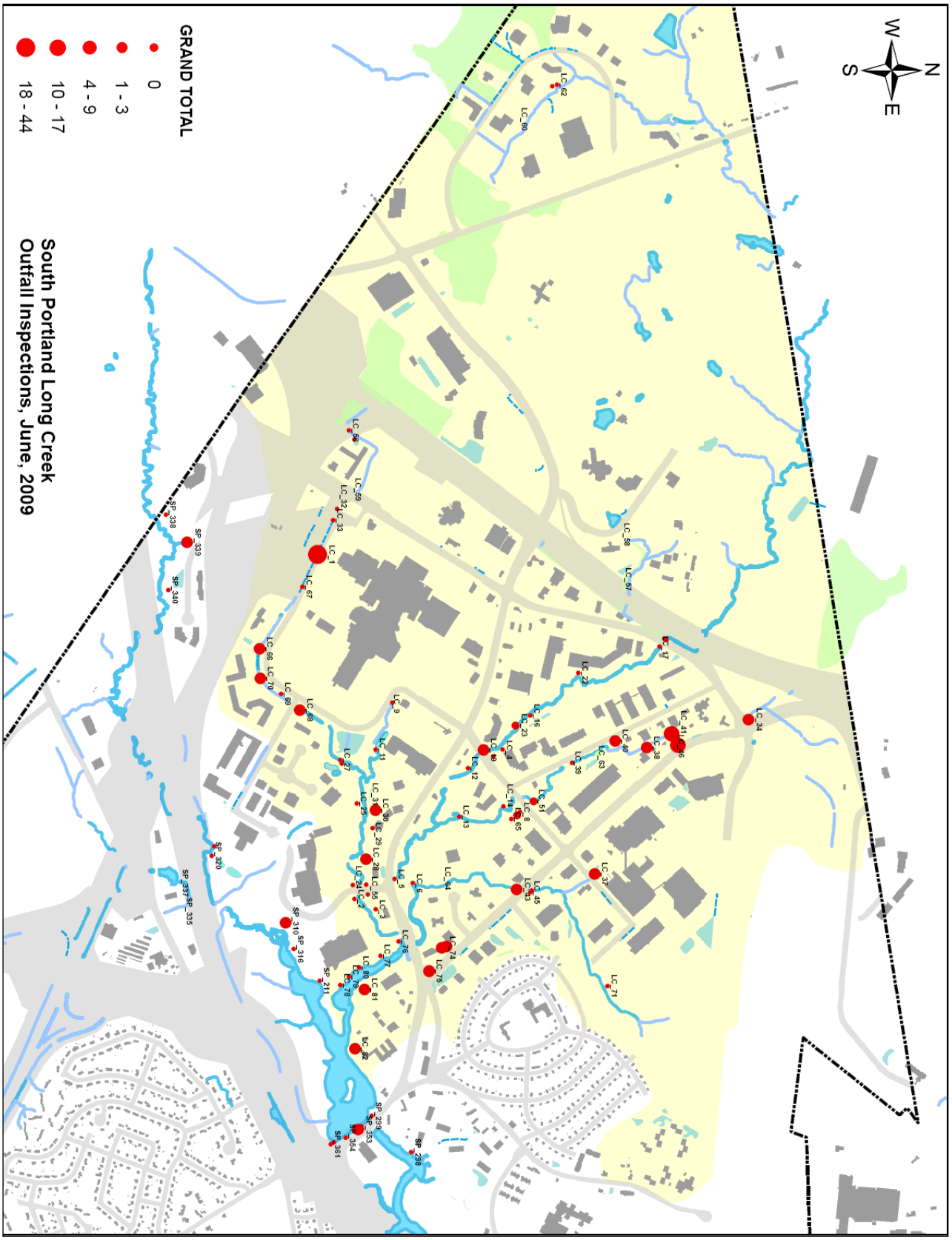
Follow up required: Yes No

Appendix 6: Summary and Map of Dry Weather Outfall Inspections in Long Creek Watershed





Date	No. Inspected	Dry Weather?	Comments
4/17/09	2	yes	
4/23/09	1	no	0.13" prev. 24 hrs; 1.83" prev. 48 and 72 hrs
6/2/09	23	yes	
6/8/09	25	yes	
6/16/09	21	no	0.89" prev. 48 hrs; 1.07" prev. 72 hrs
6/18/09	14	yes	
6/19/09	1	no	0.12" prev. 24 hrs.
6/20/09	1	no	3.21" prev. 24 hrs.
Total:	**88**		
Dry:	**64**		
Wet:	**24**		


South Portland Long Creek
Outfall Inspections, June, 2009
GRAND TOTAL
0
1 - 3
4 - 9
10 - 17
18 - 44
N
S
E
W

Appendix 7: Friends of Casco Bay Acknowledgement Letter for City's Continued Support of Pumpout Program

Protecting the Bay
Friends of Casco Bay
Casco BAYKEEPER
for 20 years

July 29, 2009

Mr. Patrick Cloutier, Director
Water Resource Protection
City of South Portland
PO Box 9422
South Portland, ME 04116-9422

Dear Pat,

We are delighted to have your continued support! *Thank you* for Water Resource Protection's $5,000 grant to support Friends of Casco Bay's work to improve and protect the environmental health of Casco Bay. Your gift will be applied toward the operation of our Pumpout Program.

As we celebrate our 20th year of protecting the health of Casco Bay, we are especially appreciative of the City of South Portland's partnership over the past ten years. Your support has strengthened our work to protect Casco Bay, the waters that sustain and define our communities.

Pat, thank you again for your generosity and your confidence in our work!

In appreciation,

Will Everitt
Development Director

WE ARE HONORED to have WATER RESOURCE PROTECTION'S support.

Thank you

No goods or services were provided in consideration for the above donation.

43 Slocum Drive • South Portland • Maine 04106 • tel (207) 799-8574 • fax (207) 799-7224 • keeper@cascobay.org
Improving and protecting the environmental health of Casco Bay

Appendix 8: Construction Site Erosion & Sediment Control Inspection Report Form

City of South Portland

INSPECTION REPORT

City of South Portland
Erosion and Sediment Control Inspection
For Construction Sites – Weekly Report

South Portland PID:
Project Name:
Project Location:

Weather:
Temperature:
Quantity of Last Rain Event (inches):

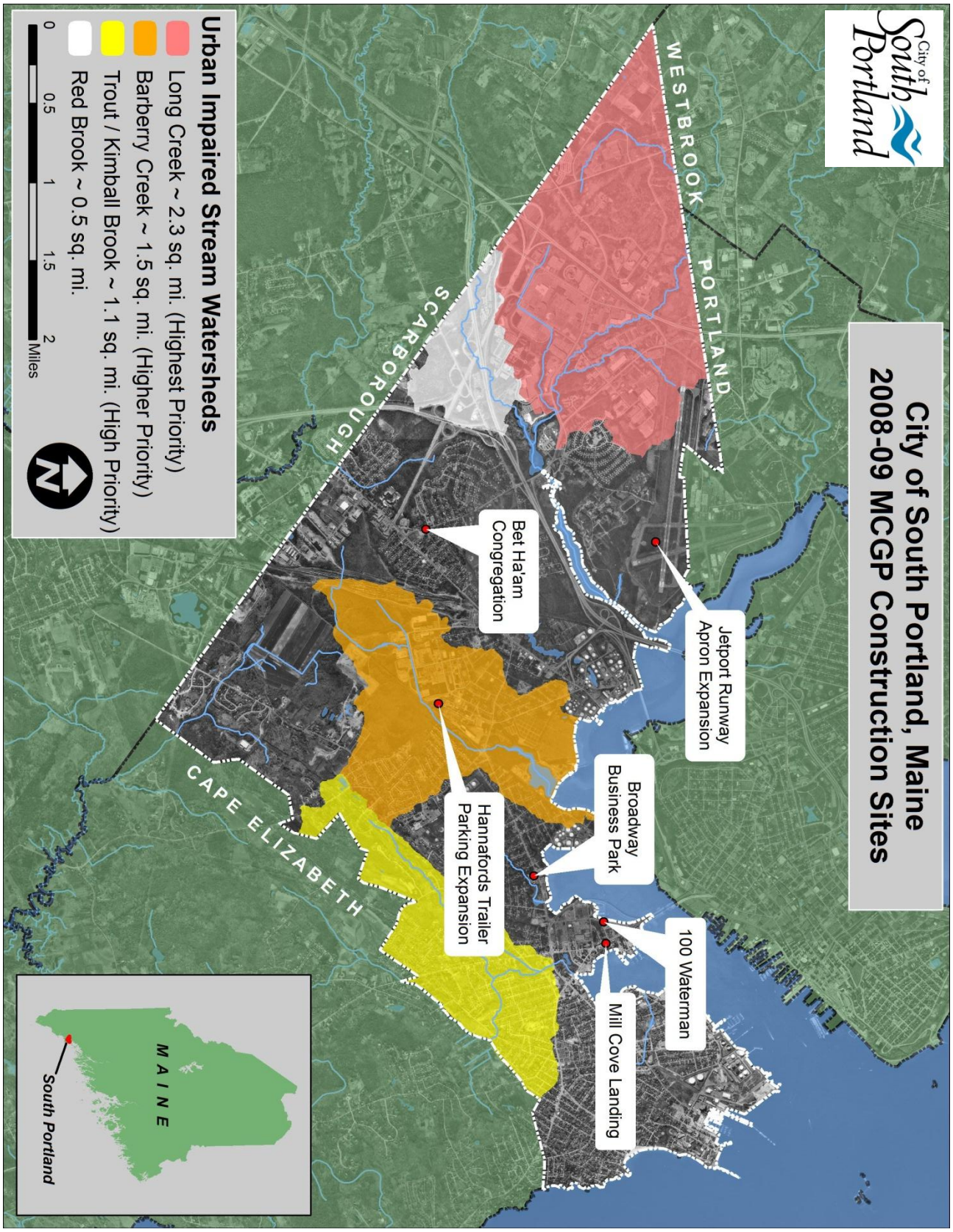
Date:
Scope of Inspection:
Inspector:
Qualifications:
Inspection Duration:
Pictures Taken: Yes/No
Date of Last Rain Event:

Inspection Parameter	Inspection Result[1]	Major Observations/Corrective Action
Culverts / Inlet-Outlet Protection	N/A M P F	
Detention / Sediment Ponds	N/A M P F	
Dewatering Area	N/A M P F	
Ditches / Swales /Channels	N/A M P F	
Dust Control	N/A M P F	
Gabions	N/A M P F	
Hay Bales	N/A M P F	
Level Spreader	N/A M P F	
Material Storage Areas	N/A M P F	
Mats / Mulches / Blankets	N/A M P F	
Riprap Slope Stabilization	N/A M P F	
Silt Fencing / Silt Sock	N/A M P F	
Solid Waste / Hazardous Materials	N/A M P F	
Stabilized Construction Entrance	N/A M P F	
Stone Check Dam	N/A M P F	
Storm Drain Inlet Protection	N/A M P F	
Topsoil Stockpile	N/A M P F	
Vegetated Buffers	N/A M P F	
Vegetated Stabilization (seed/sod)	N/A M P F	
Wood Waste Bark Filter Berms	N/A M P F	
Other Stormwater Controls	N/A M P F	

1. N/A = Not Applicable, M = Maintenance Required, P = Pass, F = Fail

☐ Winter Inspection (Nov. 1 – Apr. 15) ☐ Site permanently stabilized; temporary ESC removed
☐ Additional ESC needed. Describe: _____
General Comments (including erosion observed):

Appendix 9: Locations of Construction Site Inspections



Appendix 10: City of south Portland Stormwater Management Performance Standards

Sec. 27-153.1. Performance standards with respect to stormwater management.

(a) ***Intent.***

Recognizing that development activity increases stormwater runoff by reducing the infiltrative capacity of soils and that stormwater runoff poses dangers of flooding, adds pollution to water resources, and increases erosion and sedimentation, the purpose of this section is to encourage the disposal of stormwater on the land at the site of development and, to the extent practical, to do so through the wise use of the natural features of the site. This policy will preserve the natural drainage system, valuable topsoil, water quality, and wildlife habitat during and after construction through infiltration, detention, or retention of water falling on the site and help assure that the Total Maximum Daily Loads (TMDLs) that have been established by the U.S. Environmental Protection Agency for various waterbodies in the City will be met to the extent practical. The disposal of stormwater shall not constitute a threat to public health, safety and welfare and shall not degrade the quality of South Portland's surface water or groundwater below state or city standards. It shall be the responsibility of the developer to adequately provide for the necessary control of storm water runoff and erosion.

(b) ***Applicable Standards for Stormwater Management.***

The standards for stormwater management vary depending on the type of project and the amount of disturbed area as follows:

(1) Post-Construction Stormwater Management Plan – Major subdivisions and activities subject to site plan review that involve more than fifteen thousand (15,000) square feet of disturbed area must meet the requirements for a Post-Construction Stormwater Management Plan.

(2) Basic Stormwater Management Plan – Minor subdivisions and activities subject to site plan review that are not subject to the requirements for a Post-Construction Stormwater Management Plan must meet the requirements for a Basic Stormwater Management Plan.

(3) Drainage Plan – Activities that are not subject to site plan review that result in the expansion or alteration of an existing building or structure that increases the amount of impervious surface area by more than five thousand (5,000) square feet or the construction of a new principal building or structure must meet the requirements for a Drainage Plan. New principal buildings that are located in a subdivision with an approved Post-Construction or Basic Stormwater Management Plan are not required to comply with the requirement for a Drainage Plan if the approved Stormwater Management Plan contains provisions that adequately address surface drainage related to the construction of the building as determined by the Code Enforcement Officer.

(c) ***Standards for a Post-Construction Stormwater Management Plan.***

(1) Design Standard.

The applicant shall make adequate provision for the management of the quantity and quality of all stormwater generated by the activity through a Post-Construction Stormwater Management Plan. This Post-Construction Stormwater Management Plan shall be designed to meet one of the following:

(a) If the project requires a stormwater permit from the Maine Department of Environmental Protection ("DEP") under its Chapter 500 Stormwater Management Rules, as may be amended from time to time ("DEP Chapter 500 Rules"), the plan must, at a minimum, meet the "basic" and "general" standards of Section 4 of DEP Chapter 500 Rules. The plan shall also meet the "urban impaired stream standard" and "flooding standard" of Section 4 of DEP Chapter 500 Rules and the "other applicable standards" of Section 5, if applicable, as contained in DEP Chapter 500 Rules, and shall comply with the practices described in the manual *Stormwater Management for Maine*, published by the DEP in January 2006, as may be amended from time to time ("*DEP Stormwater Manual*"); or

(b) If the project does not require a stormwater permit from the DEP under its Chapter 500 Rules, the plan may either meet the Chapter 500 standards as set forth in (a) above, or provide for the treatment of 0.5 inches of runoff from ninety percent (90%) of the impervious surfaces on the site, and 0.2 inches of runoff from all disturbed pervious areas of the site using LID design practices and techniques determined by the Planning Board to be appropriate for the site. In addition, the project must met the "other applicable standards" of Section 5, if applicable, as contained in DEP Chapter 500 Rules. The treatment techniques used may include those set forth in Chapter 10 of the *DEP Stormwater Manual, Volume III-BMPs Technical Design Manual*, and/or any City of South Portland LID Manual adopted by the Planning Board after appropriate notice and public hearing. The Planning Board may approve the use of other treatment techniques on a case-by-case basis based upon the recommendation of the

Director of Water Resource Protection that the proposed treatment techniques are appropriate for the site and will provide at least the same level of treatment as the specified techniques. Provisions must be made in the Stormwater Management Plan for all stormwater treatment techniques to be maintained in perpetuity.

(2) Additional Requirements.

(a) The applicant may meet the quantity and quality standards above either on-site or off-site, but where off-site facilities are used, the applicant must submit to the City documentation approved as to legal sufficiency by Corporation Counsel that the applicant has a sufficient property interest in the property where the off-site facilities are located – by perpetual easement or other appropriate legal instrument – to ensure that the facilities will be able to provide post-construction stormwater management for the project and that the property will not be altered in a way that interferes with the off-site facilities.

(b) Where the applicant proposes to retain ownership of the Stormwater Management Facilities shown in its Stormwater Management Plan, the applicant shall submit to the City documentation, approved as to legal sufficiency by Corporation Counsel, that the applicant, his/her/its successors, heirs and assigns, shall have the legal obligation to operate, repair, maintain and replace the Stormwater Management Facilities. Applications requiring Stormwater Management Facilities that will not be dedicated to the City shall enter into a Drainage Maintenance Agreement with the City in a form acceptable to Corporation Counsel.

(c) Whenever elements of the Stormwater Management Facilities are not within the right-of-way of a public street and the facilities will not be offered to the City for acceptance as public facilities, the Planning Board may require that perpetual easements be provided to the City allowing access for maintenance, repair, replacement and improvement of the Stormwater Management Facilities in accordance with the approved Drainage Maintenance Agreement. If an offer of dedication is proposed, the applicant shall be responsible for the maintenance of these Stormwater Management Facilities until such time (if ever) as they are accepted by the City.

(d) In addition to any other applicable requirements of this ordinance, any activity which also requires a stormwater management permit from the DEP under 38 M.R.S.A. Sec. 420-D shall comply with the rules adopted by DEP under 38 M.R.S.A. Sec. 420-D(1), as the same may be amended from time to time, and the applicant shall document such compliance to the Planning Board. Where the standards or other provisions of such stormwater rules conflict with City ordinances, the stricter (more protective) standard shall apply.

(e) At the time of application, the applicant shall notify the Director of Water Resource Protection if its Stormwater Management Plan includes any Stormwater BMP(s) that will discharge to the City's MS4 and shall include in this notification a listing of which Stormwater BMP(s) will so discharge.

(f) Prior to the issuance of a Certificate of Occupancy for the project, the applicant must submit an inspection report to the Code Enforcement Officer documenting that the stormwater facilities have been installed and are functioning as designed and approved and are fully operational. This inspection report must be prepared by a qualified third party inspector as defined in subsection (3)(e).

(3) Requirement for Compliance.

Any person owning, leasing or having control over Stormwater Management Facilities required by a Post-Construction Stormwater Management Plan shall demonstrate compliance with that Plan as follows:

(a) That person shall, at least annually, inspect, clean and maintain the Stormwater Management Facilities, including, but not limited to, any parking areas, catch basins, drainage swales, detention basins and ponds, pipes and related structures, in accordance with all City and State inspections, cleaning and maintenance requirements of the approved Post-Construction Stormwater Management Plan.

(b) That person shall repair any deficiencies found during inspection of the Stormwater Management Facilities.

(c) That person shall, on or by July 15th of each year, provide a completed and signed certification to the Director of Water Resource Protection in a form provided by that Department, certifying that the person has inspected, cleaned and maintained the Stormwater Management Facilities, describing any deficiencies found during inspection of the Stormwater Management Facilities and certifying that the person has repaired any deficiencies in the Stormwater Management Facilities noted during the annual inspection.

(d) The required inspection(s) must be conducted by a qualified third-party inspector employed by the responsible person if the property is subject to a DEP stormwater permit. The third-party inspector shall perform an initial inspection to determine the status of the Stormwater Management Facilities. If the initial inspection identifies any deficiencies with the facilities, the same third-party inspector shall re-inspect the facilities after they have been maintained or repaired to determine if they are performing as intended.

(e) The qualified third party inspector must meet both of the following standards:

1. The inspector must not have any ownership or financial interest in the property being inspected nor be an employee

or partner of any entity having an ownership or financial interest in the property; and

2. The inspector must be on the list of approved third-party inspectors maintained by the Water Resource Protection Department. An individual may request to be included on the list by submitting documentation of his/her qualifications to the Director of Water Resource Protection. The Director shall approve third-party inspectors only if they meet the following criteria:

a. Have a college degree in an environmental science or civil engineering, or comparable expertise;

b. Have a practical knowledge of stormwater hydrology and stormwater management techniques, including the maintenance requirements for Stormwater Management Facilities; and

c. Have the ability to determine if stormwater facilities are performing as intended.

(f) In order to determine compliance with this section and with the Post-Construction Stormwater Management Plan, the Director of Water Resource Protection or his/her designee may enter upon a property at reasonable hours and after making a good faith effort to contact the owner, occupant or agent to inspect the Stormwater Management Facilities. Entry into a building shall only be after actual notice to the owner, occupant or agent.

(4) Submission Requirements.

A Post-Construction Stormwater Management Plan shall conform to the applicable submission requirements of Section 8 of DEP Chapter 500 Rules. The submission for a project that does not require a State stormwater permit, shall provide, as a minimum, the information required for submissions under the General Standards of Chapter 500.

The applicant shall provide the City with an electronic version of the Post-Construction Stormwater Management Plan in a format that is compatible with the City's requirements. Following completion of construction, the applicant shall provide the City with an updated version of the plan showing the Stormwater Management Facilities as actually constructed.

(5) Relationship to Other Provisions.

Post-Construction Stormwater Management Plans are subject to the requirements of subsection (f), Standards for Easements or Rights-of-Way; subsection (g), Material Requirements; subsection (h), Modification of the Standards and Requirements; and subsection (i), Discharge of Stormwater.

(d) *Standards for a Basic Stormwater Management Plan.*

(1) Design Standard.

The applicant shall make adequate provision for the management of the quantity and quality of all stormwater generated by the activity through a Basic Stormwater Management Plan. This Basic Stormwater Management Plan shall be designed to meet one of the following:

(a) The "basic" standard of Section 4 of DEP Chapter 500 Rules and the "other applicable standards" of Section 5 of DEP Chapter 500 Rules and shall comply with the practices described in the *DEP Stormwater Manual*; or

(b) Provide for the treatment of 0.5 inches of runoff from ninety percent (90%) of the impervious surfaces on the site, and 0.2 inches of runoff from all disturbed pervious areas of the site using LID design practices and techniques determined by the Planning Board to be appropriate to the site. The treatment techniques used may include those set forth in Chapter 10 of the *DEP Stormwater Manual, Volume III-BMPs Technical Design Manual*, and/or any City of South Portland LID Manual adopted by the Planning Board. The Planning Board may approve the use of other treatment techniques on a case-by-case basis based upon the recommendation of the Director of Water Resource Protection that the proposed treatment techniques are appropriate for the site and will provide at least the same level of treatment as the specified techniques. Provisions must be made in the stormwater management plan for all stormwater treatment techniques to be maintained in perpetuity.

(2) Additional Requirements.

(a) The applicant may meet the quantity and quality standards above either on-site or off-site, but where off-site facilities are used, the applicant must submit to the City documentation approved as to legal sufficiency by Corporation Counsel that the applicant has a sufficient property interest in the property where the off-site facilities are located - by perpetual easement or other appropriate legal instrument - to ensure that the facilities will be able to provide post-construction stormwater management for the project and that the property will not be altered in a way that interferes with the off-site facilities.

(b) Where the applicant proposes to retain ownership of the Stormwater Management Facilities shown in its Stormwater Management Plan, the applicant shall submit to the City documentation, approved as to legal sufficiency by Corporation Counsel that the applicant, his/her/its successors, heirs and assigns, shall have the legal obligation to operate, repair, maintain and replace the

Stormwater Management Facilities. Applications requiring Stormwater Management Facilities that will not be dedicated to the City shall enter into a Drainage Maintenance Agreement with the City in a form acceptable to Corporation Counsel.

(c) Whenever elements of the Stormwater Management Facilities are not within the right-of-way of a public street and the facilities will not be offered to the City for acceptance as public facilities, the Planning Board may require that perpetual easements be provided to the City allowing access for maintenance, repair, replacement and improvement of the Stormwater Management Facilities in accordance with the approved Drainage Maintenance Agreement. If an offer of dedication is proposed, the applicant shall be responsible for the maintenance of these Stormwater Management Facilities until such time (if ever) as they are accepted by the City.

(d) In addition to any other applicable requirements of this ordinance, any activity which also requires a stormwater management permit from the DEP under 38 M.R.S.A. Sec. 420-D shall comply with the rules adopted by DEP under 38 M.R.S.A. Sec. 420-D(1), as the same may be amended from time to time, and the applicant shall document such compliance to the Planning Board. Where the standards or other provisions of such stormwater rules conflict with City ordinances, the stricter (more protective) standard shall apply.

(e) At the time of application, the applicant shall notify the Director of Water Resource Protection if its Stormwater Management Plan includes any Stormwater BMP(s) that will discharge to the City's MS4 and shall include in this notification a listing of which Stormwater BMP(s) will so discharge.

(3) Requirement for Compliance.

Any person owning, leasing or having control over Stormwater Management Facilities required by a Basic Stormwater Management Plan shall be responsible for maintaining all Stormwater Management Facilities and BMPs so they function as designed and approved.

(4) Submission Requirements.

A Basic Stormwater Management Plan shall conform to the applicable submission requirements of Section 8-C of DEP Chapter 500 Rules.

The applicant shall provide the City with an electronic version of the Basic Stormwater Management Plan in a format that is compatible with the City's requirements. Following completion of construction, the applicant shall provide the City with an updated version of the plan showing the Stormwater Management Facilities as actually constructed.

(5) Relationship to Other Provisions.

Basic Stormwater Management Plans are subject to the requirements of subsection (f), Standards for Easements or Rights-of-Way; subsection (g), Material Requirements; subsection (h), Modification of the Standards and Requirements; and subsection (i), Discharge of Stormwater.

(e) ***Standards for a Drainage Plan***

(1) Design Standard

The plan must demonstrate that the proposed improvements are designed to minimize the amount of stormwater leaving the site. This must include consideration of the design and location of improvements to minimize the total area of impervious surface on the site and stormwater management techniques to minimize both the volume and rate of runoff from the lot. The use of LID practices appropriate for the type of development as set forth in Chapter 10 of the *DEP Stormwater Manual, Volume III-BMPs Technical Design Manual*, and/or any City of South Portland LID Manual adopted by the Planning Board after appropriate notice and hearing is encouraged but not required. The Drainage Plan must also demonstrate that:

(a) any stormwater draining onto or across the lot in its pre-improvement state will not be impeded or re-directed so as to create ponding on, or flooding of, adjacent lots;

(b) any increase in volume or rate of stormwater draining from the lot onto an adjacent lot following the improvement can be handled on the adjacent lot without creating ponding, flooding or other drainage problems and that the owner of the lot being improved has the legal right to increase the flow of stormwater onto the adjacent lot;

(c) any increase in volume or rate of stormwater draining from the lot onto City property following the improvement can be handled without creating ponding, flooding or other drainage problems and that the owner of the lot being improved has the legal right to increase the flow of stormwater onto the City's property; and

(d) any increase in volume or rate of stormwater draining from the lot into the City's separate storm sewer system can be accommodated in the system without creating downstream problems or exceeding the capacity of the storm sewer system.

(2) Submission Requirements

A Drainage Plan must include a written statement demonstrating how the project has been designed to minimize the volume and rate of stormwater leaving the site including provisions for minimizing the area of

impervious surface or the use of LID practices, and a plan and supporting documentation with at least the following information:

(a) The location and characteristics of any streams or drainage courses existing on the parcel and/or abutting parcels.

(b) The existing and proposed grading of the site using one-foot contours.

(c) The location and area of existing and proposed buildings and impervious surfaces on the site.

(d) The existing pattern of stormwater drainage on the site, including points of discharge to the City's storm sewer system or adjacent properties.

(e) The proposed pattern of stormwater drainage after development, including the location and design of any stormwater facilities.

(3) Relationship to Other Provisions.

Drainage Plans are subject to the requirements of subsection (f), Standards for Easements or Rights-of-Way; subsection (g), Material Requirements; subsection (h), Modification of the Standards and Requirements; and subsection (i), Discharge of Stormwater.

(f) ***Standards for Easements or Rights-of-Way.***

Drainage easements or rights-of-way containing components of the storm water runoff system lying outside of public street right-of-way lines shall conform to the following standards:

(1) The minimum width of the easement shall be thirty (30) feet, provided that where a watercourse or retention area is wider than thirty (30) feet, the Planning Board may require a drainage right-of-way of adequate width to conform substantially to the lines of such watercourse or retention area, including additional width to provide for access. The Planning Board may reduce the width of the easement upon the positive recommendation of the Director of Water Resource Protection or his/her designee if the narrower easement will allow the stormwater facilities to be maintained or if the unique characteristics of the site make the creation of a wider easement impractical.

(2) Where a drainage easement will contain an open channel, stream or drainageway, the easement shall be designed and landscaped to further the objectives of the Stormwater Management Plan. The natural landscape shall be retained to the extent practical as determined by the Planning Board or Code Enforcement Officer, as applicable.

(3) Where the easement will contain a closed conduit, the facility shall be constructed in accordance with the approved plan.

(g) ***Requirements for storm sewers.***

(1) Storm sewers shall be designed and constructed in accordance with the Planning Board's Standards for Storm Sewers. The Standards shall be adopted by the Planning Board by regulation upon the recommendation of the Director of Water Resource Protection and following appropriate notice and public hearing.

(h) ***Modification of the Standards and Requirements***

(1) The Planning Board may modify or waive any of the submission requirements for a Post-Construction Stormwater Management Plan or a Basic Stormwater Management Plan if the Planning Board finds that, due to the unique physical characteristics of the site or the scale of the proposed activity, the information is not required to allow the Planning Board to determine if the applicable stormwater management standards are met.

(2) The Planning Board may approve a Post-Construction Stormwater Management Plan that does not comply with the detailed requirements of subsection (c) or a Basic Stormwater Management Plan that does not comply with the detailed requirements of subsection (d) if the Planning Board finds that the proposed plan will provide the same or higher level of water quality protection than strict conformance with the applicable standard or that due to the unique physical characteristics of the site and/or the receiving waters, full conformance with the standard is not warranted to assure that the quality of the receiving waters will not be degraded.

(3) The Code Enforcement Officer may modify or waive any of the submission requirements for a Drainage Plan if the Code Enforcement Officer determines that the information is not required to determine if the drainage standard is met.

(4) The Code Enforcement Officer may approve a Drainage Plan that does not comply with the detailed requirements of subsection (e) if the Code Enforcement Officer determines that full compliance with the standard is not practical given the unique characteristics of the parcel.

(i) ***Discharge of Stormwater***

(1) The volume of stormwater discharged from any parcel must be minimized through the use of on-site retention to the extent practical. When stormwater must be discharged from a parcel, the preferred method is discharge into the natural drainage system. Discharge of stormwater to the City's MS4 shall be allowed only when on-site retention and/or discharge to the natural system is not practical.

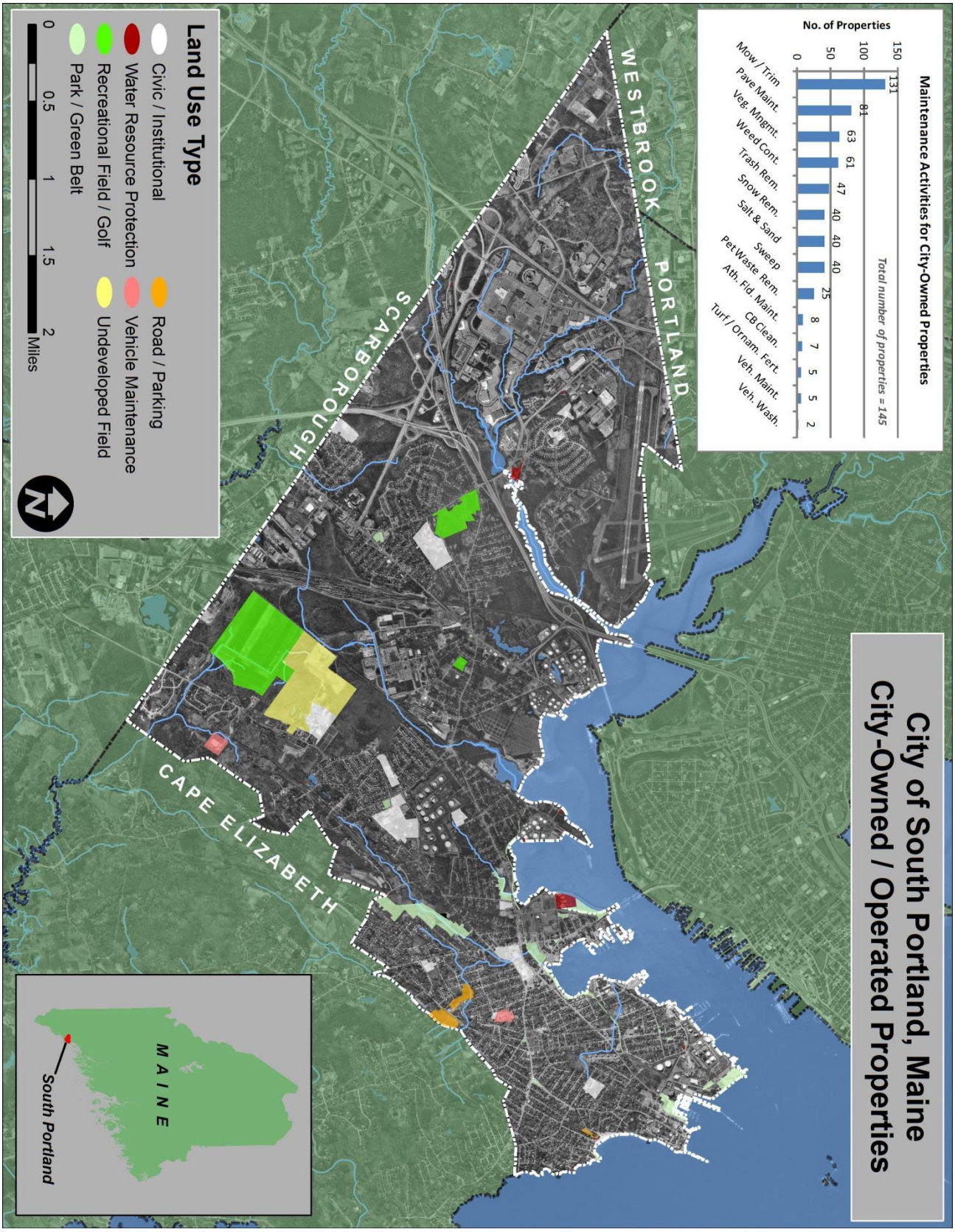
(2) The direct connection of new or expanded Stormwater Management Facilities to a combined sewer is not permitted. In areas served by combined sewers, the preferred method of stormwater management is on-site retention. If on-site retention is not practical, discharge to the natural drainage system is the preferred alternative. If retention and/or discharge to the natural drainage system are not practical, connection to the MS4 is allowed. If connection to the MS4 is not practical, the treatment of one inch of runoff from impervious surfaces and 0.4 inches of runoff from disturbed pervious surfaces through the use of LID BMPs which are disconnected from the combined sewer system may be permitted by the Planning Board or Code Enforcement Officer, as applicable, upon the positive recommendation of the Director of Water Resource Protection. The LID BMPs used may include those set forth in Chapter 10 of the *DEP Stormwater Manual, Volume III-BMPs Technical Design Manual*, and/or any City of South Portland LID Manual adopted by the Planning Board after appropriate notice and public hearing.

(j) ***Additional Requirements in the Long Creek Watershed***

In addition to the requirements set forth in this section, property that is located within the watershed of Long Creek may be subject to additional stormwater management requirements imposed by the U.S. Environmental Protection Agency and administered by the DEP. These additional requirements apply to certain types of both new and existing development within the watershed.

(Ord. No. 19-08/09, 4/22/09 [Fiscal Note: Less than $1000])

Appendix 11: City Properties with Potential to Generate Stormwater Pollution



Appendix 12: Stormwater System Maintenance Activities Summary for 2008-09

Date	Location	Purpose	Project Type	Material Cost	Labor Cost	Total Cost
7/1/08	77 Pine St	Replaced catch basin	Storm	$983	$1,040	$2,023
7/15/08	Grandview Rd	Installed 2 new curb inlets and D frame	Storm	$1,686	$819	$2,505
7/23/08	Charlotte St	Installed dead-end MH, repair Storm	Storm	$1,649	$918	$2,567
7/29/08	Shop	Paved driveway entrance	Storm	$458	$154	$612
7/29/08	Preble @ Smith	Overlaid trench	Storm	$105	$95	$200
7/29/08	Rhode Island	Overlaid trench	Storm	$349	$189	$539
7/29/08	330 Sawyer St	Replaced CB and paved + loamed	Storm	$981	$896	$1,876
7/31/08	Whythburn St	Replaced CB frame and cover	Storm	$515	$284	$799
9/4/08	Angell Ave	Spot repair on storm	Storm	$78	$102	$180
9/5/08	Stillman St	Raised CB + Overlaid trench	Storm	$148	$308	$456
9/5/08	Alfred St	Install CB in edge of sidewalk	Storm	$1,513	$677	$2,190
9/8/08	Fort Rd	Over lay	Storm	$613	$128	$741
9/24/08	Gannett Dr	Removed, plated, raised, hot topped	Storm	$5,392	$5,184	$10,576
9/25/08	Darling Ave	Ditching	Storm	$964	$579	$1,543
10/20/08	Darling Ave	Ditching on side of road	Storm	$1,201	$1,033	$2,233
10/21/08	Kelley St	Installed 2 new curb inlets	Storm	$2,083	$215	$2,298
10/29/08	Fort Rd	Overlaid trench	Storm	$249	$150	$399
10/29/08	Shop access Rd	Replaced culvert, ditching, paving	Storm	$3,556	$2,225	$5,781
10/30/08	Rigby Road	Drainage, install2CB	Storm	$4,276	$2,793	$7,069
10/31/08	Stanley St	Prepped and paved driveway apron	Storm	$365	$301	$666
11/7/08	Lincoln St	Install new CB overlaid trench	Storm	$1,407	$883	$2,290
11/12/08	Stanford St	Installed drainage pipe and CB	Storm	$1,952	$1,435	$3,387
11/18/08	Snowberry Dr	Replace frame and cover on CB	Storm	$352	$105	$457
11/18/08	Rigby Road	Replace frame and cover on CB	Storm	$202	$105	$307
12/16/08	Alfred St	Install new drainage	Storm	$2,255	$3,001	$5,255
11/6/08	Haven Rd	Removed flat top install invert	Storm	$174	$406	$580
3/22/09	Legion Hall	Paved in a washout	Storm	$239	$203	$442
3/25/09	Jhon Roberts Rd	Ditch out swale seeded fer.,mulched	Storm	$318	$376	$694
4/16/09	Gannett Drive	Drainage Dutch	Storm	$4,693	$2,162	$6,855
4/17/09	Augusta St	Drainage	Storm	$7,279	$6,130	$13,409
4/29/09	Alfred St	Installed Storm System	Storm	$5,711	$4,580	$10,291
4/30/09	Boat Ramp	Install CB + drain line	Storm	$2,087	$949	$3,036
5/6/09	Gramby Rd	replaced broken storm leed	Storm	$446	$360	$807
5/14/09	Angell Ave	Repaire 21" storm system	Storm	$915	$743	$1,658
5/22/09	Westbrook St	repair CB + adjusted to grade	Storm	$82	$136	$218
6/12/09	Pleasant Ave	Installed CB + new Curb + Paved	Storm	$1,229	$623	$1,852
6/13/09	Clarks pond parkway	repaired CB and paved	Storm	$617	$558	$1,174
6/22/09	1545 Broadway	dug out swale and outlet	Storm	$333	$232	$565
6/23/09	Park Ave	dug swale + loamed + seeded	Storm	$425	$206	$630
			Total Costs:	**$57,878**	**$41,282**	**$99,160**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Water Resource Protection
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