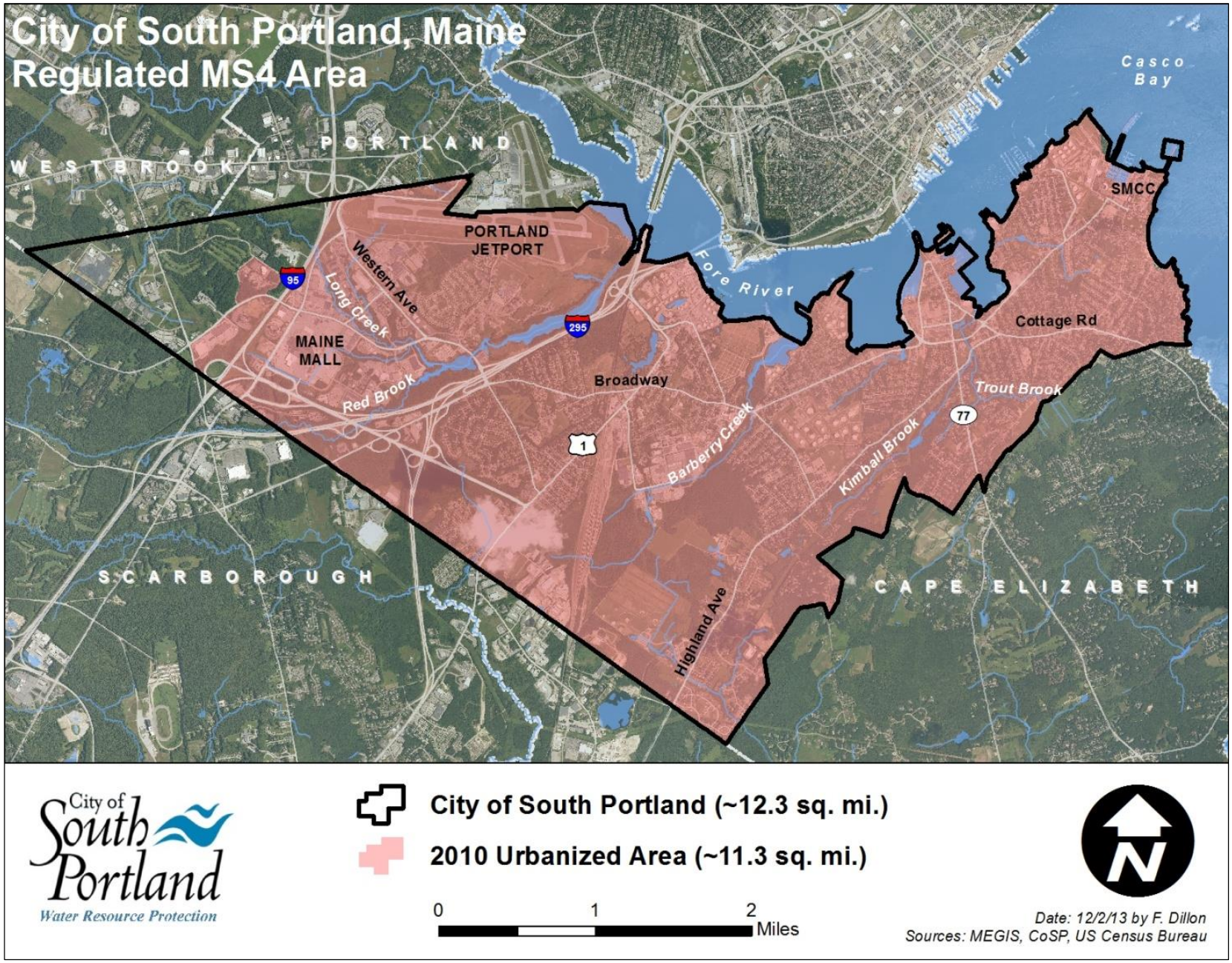
Stormwater Phase II
Annual Report for
Permit Year 4 (2016-17)

City of South Portland
Water Resource Protection

Submitted Electronically to MEDEP on 9/12/17



Cover: StormTree installation at Boothby Ave crossing with Trout Brook (photo credit: Fred Dillon, April 2017)

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ACKNOWLEDGEMENTS

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- **Katherine Bock & Doug Worthley** ~ *Cape Elizabeth High School Senior AP Environmental Science*
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Please direct questions about any aspect of this report to Fred Dillon (207-347-4138 / fdillon@southportland.org)

Introduction

In accordance with Maine's Small Municipal Separate Storm Sewer Systems (MS4) program, the City of South Portland continued its commitment to protect and improve local water resources through the implementation of our Stormwater Program Management Plan. City staff and program partners from the Maine Department of Environmental Protection (MEDEP), Cumberland County Soil & Water Conservation District (CCSWCD), Interlocal Stormwater Working Group (ISWG), the Maine Water Environment Association (MEWEA), the Portland Water District (PWD), Long Creek Watershed Management District (LCWMD), the Friends of Casco Bay (FOCB), the Casco Bay Estuary Partnership (CBEP), the Maine Healthy Beaches Program (MHB) and the South Portland Conservation Commission (SPCC) - among others - all participated in a wide variety of activities to mitigate the adverse effects of stormwater pollution. This annual report documents these activities for the fourth Permit Year (2016-17) in the third five-year General Permit Cycle (2013-18).

Minimum Control Measure 1 – Public Education and Outreach

The City of South Portland fulfilled its requirements for Public Education and Outreach Minimum Control Measure primarily through continued collaboration with the Interlocal Stormwater Working Group (ISWG) and the ongoing funding to the ISWG for Public Education and Outreach services. **Appendix 1** provides detailed summaries for the activities completed by ISWG in support of MCM1. The City also continued its ongoing partnerships with the Maine Department of Environmental Protection, Portland Water District, Maine Healthy Beaches Program (Figure 1), Friends of Casco Bay, South Portland Conservation Commission, and South Portland & Cape Elizabeth Public Schools (among others) to increase public awareness about stormwater pollution. WRP staff provided numerous presentations about the City's water resource protection efforts to local schools, at professional conferences and workshops, and submitted articles for publication in the City's biweekly electronic newsletter.

Figure 1: Meagan Sims with the Maine Healthy Beaches Program demonstrates water quality sampling techniques at the Children's Water Festival (May 2017)

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 that reduce stormwater pollution; and
3. To reduce polluted stormwater runoff as a result of increased awareness and utilization of BMPs.

BMP 1.1 Continue Awareness Outreach Efforts from Previous MS4 Permit Cycle

Responsible Party: Stormwater Program Coordinator *Additional Party: ISWG Education Coordinator*

INTENT

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

Beginning July 1, 2013, the City continued its collaboration with the Interlocal Stormwater Working Group (ISWG) to conduct outreach efforts for increasing public awareness of stormwater management issues.

MEASURABLE GOALS

- ***Measureable Goal 1.1.1*** – engage in efforts to increase awareness about stormwater pollution including through ongoing collaboration with the Interlocal Stormwater Working Group.

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued collaborating with the ISWG and provided Think Blue Maine and YardScape links on its website and educational materials in municipal buildings to help promote public awareness of local and regional stormwater management concerns.

BMP 1.2 Develop and Implement Stormwater Awareness Plan

Responsible Party: Stormwater Program Coordinator *Additional Party: CCSWCD for ISWG*

INTENT

To raise awareness of polluted stormwater runoff issues for a target audience outside of municipal government.

METHODOLOGY

Continue collaboration with the Interlocal Stormwater Working Group (ISWG) to develop and implement a **Stormwater Public Awareness Plan**.

MEASURABLE GOALS

- ***Measureable Goal 1.2.1*** – by February 1, 2014, develop new or revise existing **Stormwater Public Awareness Plan** to raise awareness of stormwater issues for target audience outside of municipal government. Plan's goal will be to raise awareness of polluted stormwater runoff issues such as the path stormwater runoff takes, sources of stormwater pollution, and the impact that polluted stormwater runoff has on local water resources.
- ***Measureable Goal 1.2.2*** – by December 1, 2013 submit draft **Stormwater Public Awareness Plan** to Maine DEP for review and approval; draft Plan will be considered approved by February 1, 2014 unless DEP indicates otherwise. **Stormwater Public Awareness Plan** must identify:
    a. The target audience

b. The outreach tool(s) to be used
c. The message
d. The distribution system
e. The time line and implementation schedule
f. The person(s) responsible for implementation
g. An impact evaluation protocol
h. A plan modification protocol (including DEP approval of significant plan modifications)
i. The goals (e.g., the targeted level of change sought as a result of the education and outreach effort)

- ***Measureable Goal 1.2.3*** – provide review of **Stormwater Public Awareness Plan** in each annual report that specifies process indicators to assess execution of the Plan and includes impact indicators according to the following schedule (unless otherwise indicated in Plan):
  - Permit Year 3: conduct cursory evaluation and assessment on both the progress of implementing the Plan and the impact on the target audience
  - Permit Year 5: provide in-depth assessment of both implementation and impact of Plan
- ***Measureable Goal 1.2.4*** – include comprehensive review of **Stormwater Public Awareness Plan** in PY5 Report that includes an analysis of process and impact indicators.

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued to collaborate with the ISWG to implement the **Stormwater Public Awareness Plan**, as described in **Appendix 1**. Additionally, Stormwater Program staff continued providing presentations and conducting activities on the sources and impacts of polluted stormwater runoff (Table 1).

Table 1: school presentations & activities provided by City Stormwater Program staff during PY2015-16

Date	School	# Students (approx)	Contact	Subject	Comments
11/3/16	Maine College of Art	15	Mitch Rasor	Ecology of Urban Spaces	Presentation on general storrmwater concepts and urban stormwater retrofitting considerations
11/7/16	Cape Elizabeth High School	30	Kathy Bock & Doug Worthley	AP Senior Env. Sci.	Presentation on development impacts to macroinvertebrates & macro id exercise
11/22/16	University of Southern Maine	20	Rachel Bouvier	Env. Economics	Presentation on general stormwater concepts and policy considerations
4/28/17	Portland High School	20	Cyndy Martin	Honors Senior Env. Sci.	Presentation w/ Portland's SW Coord on general stormwater concepts and policy considerations
5/3/17	South Portland High School	100	Jane Eberle	SP & CE Career Fair	Discussions with students on prospective careers in clean water professions
5/19/17	Children's Water Festival	100	Stuart Rose (DEP)	WQ monitoring display	Demonstrated bacteria sampling techniques
5/23/17	Presumpscot Elementary	40	Heidi Nichols	Grade 5 science	Presentation on general WQ & stormwater concepts
5/30/17	Mahoney Middle School	60	Judy Pitt	Grade 6 science	Presentation on general WQ & stormwater concepts
5/31/17	Mahoney Middle School	30	Julie Pitt & Sarah Plummer (PWD)	PWD trout release / Grade 6 science	"Stormwater walk" to identify potential pollution sources in residential n'hood
6/1/17	Mahoney Middle School	30	Julie Pitt & Sarah Plummer (PWD)	PWD trout release / Grade 6 science	"Stormwater walk" to identify potential pollution sources in residential n'hood
	Total Students (approx.):	***445***			

Among these educational activities was the ongoing and very productive partnership with Cape Elizabeth High School teachers Kathy Bock and Doug Worthley and their Advanced Placement Senior Environmental Science classes. With the help of retired high school science teacher (and PhD biochemist) Tom Mikulka, CEHS students have been helping to identify trends in the aquatic macroinvertebrate community of Trout Brook, one of the City's five urban impaired streams.

The City also continued to participate in the popular and successful Portland Water District-sponsored trout release event at the Trout Brook Nature Preserve in South Portland (Figure 2). Additionally, Water Resource Protection Department staff participated in a very well attended Career Fair sponsored by the South Portland / Cape Elizabeth Community Chamber of Commerce (Figure 3). For the third year in a row, Stormwater Program and Maine Healthy Beaches Program staff also partnered on the DEP's Children's Water Festival.

Figure 2: Mahoney Middle School teacher Julie Pitt watches as one of her students releases a trout fry into Trout Brook (June 2017)

Figure 3: Stormwater Program Coordinator Fred Dillon at the South Portland & Cape Elizabeth High School Career Fair (May 2017)

The City's Stormwater Program Coordinator made numerous presentations on what South Portland is doing to address the adverse effects of polluted stormwater runoff at conferences and various community events.

- **8/8/16: South Portland City Council** – *"Stormwater Runoff & Pesticides: What Monitoring Done Elsewhere May Suggest for South Portland" (presentation with Maine Board of Pesticide Control's Mary Tomlinson and Beyond Pesticide's Jay Feldman)*
- **10/6/16: Protect South Portland** – *Overview of City's newly enacted Pesticide Use Ordinance*
- **10/19/16: Osewantha Garden Club** – *"South Portland's Water Resource Protection Programs"*
- **11/9/16: Watershed Manager's Roundtable** – *"MS4 System Bacteria Source Tracking Approaches in the Willard Beach Watershed" (presentation with Gretchen Anderson, Windham & Gorham Stormwater Compliance Officer)*
- **11/9/16: Watershed Manager's Roundtable** – *"Trout Brook Restoration Project: From Farms to Urban YCC" (presentation with DEP's Wendy Garland)*

- **1/18/17: South Portland City Council** – *"South Portland's Stormwater Permit & Local Water Resource Protection"*
- **3/1/17: Maine Landscapers & Nursery Association** – *"Pesticide Use Ordinance: The Basics" (presentation with Julie Rosenbach, South Portland Sustainability Director)*
- **3/27/17: Waterfront Alliance** – *"South Portland's Stormwater Permit & Local Water Resource Protection" (presentation and panel discussion with Nancy Gallinaro, City of Portland Water Resources Protection Director and Mike Doan & Ivy Frignoca with Friends of Casco Bay)*
- **4/26/17: Brooks to Bay Healthy Streams for a Clean Casco Bay** – *"Local Water Resource Protection Efforts in South Portland" (presentation and panel discussion with DEP's Wendy Garland, Friends of Casco Bay's Mike Doan, Casco Bay Estuary Partnership's Matt Craig and South Portland Conservation Commission's Bob McKeagney)*
- **5/27/17: South Portland Conservation Commission –** *Kimball Brook Stream Walk to discuss restoration challenges and opportunities*

BMP 1.3 Develop and Implement Permit Awareness Plan

Responsible Party: Stormwater Program Coordinator *Additional Party: ISWG Education Coordinator*

INTENT

To raise awareness of polluted stormwater runoff and MS4 program requirements for municipal staff including municipal employees, volunteers, Council members and other elected officials.

METHODOLOGY

Continue collaboration with the Interlocal Stormwater Working Group (ISWG) to develop and implement a **Permit Awareness Plan**.

MEASURABLE GOALS

- ***Measureable Goal 1.3.1*** – by January 6, 2014, submit draft **Permit Awareness Plan** to Maine DEP for review and approval; draft Plan will be considered approved by March 1, 2014 unless DEP indicates otherwise and implementation shall begin within one week of approval. The **Permit Awareness Plan** must identify:
    a. The target audience
    b. The outreach tool(s) to be used
    c. The distribution system
    d. Method to address turnover of employees, elected officials and volunteers
    e. The time line and implementation schedule
    f. The person(s) responsible for implementation
    g. An impact evaluation protocol
    h. A plan modification protocol (including DEP approval of significant plan modifications)
    i. The goal (e.g., the target level of awareness for each audience)
- ***Measureable Goal 1.3.2*** – by March 1, 2014 or within one week of DEP approval, the **Permit**

Awareness Plan will be implemented to raise awareness of stormwater issues including MS4 permit requirements for municipal employees, elected officials and volunteers within municipal government. The **Permit Awareness Plan's** goal is to raise awareness of polluted stormwater runoff such as the sources of stormwater pollution, the path polluted stormwater runoff takes from the pollution sources to waters of the State, the impact polluted stormwater runoff has on the community, potential measures to reduce or eliminate pollution sources, and General Permit obligations and responsibilities to ensure permit compliance.

- ***Measureable Goal 1.3.3*** – Provide review of **Permit Awareness Plan** in Annual Reports that includes process indicators to assess execution of Plan according to the following schedule (unless otherwise indicated in the Plan):
    - Permit Year 3: evaluate and assess both the progress of Plan implementation and impact efforts are having on target audience
    - Permit Year 5: provide in-depth assessment of both the implementation and impact of **Permit Awareness Plan**

ACTIONS COMPLETED DURING PERMIT YEAR

In addition to collaborating with ISWG to implement the **Permit Awareness Plan** (**Appendix 1)**, the Stormwater Program Coordinator also provided two presentations to the City Council. The first presentation on 8/8/16 was given in support of the City's efforts to establish a Pesticide Use Ordinance and provided a brief overview of how stormwater pollution is generated in relation to the City's stormwater system. The second presentation was provided on 1/18/17 and described how stormwater pollution is generated and the State's Small MS4 General Permit requirements. On 5/27/17 the Stormwater Program Coordinator conducted an "urban impaired stream walk" for the South Portland Conservation Commission and members of the public to discuss the suspected impairment sources and restoration strategies for Kimball Brook.

BMP 1.4 Continue Targeted BMP Adoption Efforts from Previous MS4 Permit Cycle

Responsible Party: Stormwater Program Coordinator *Additional Party: ISWG Education Coordinator*

INTENT

To continue outreach efforts from the previous MS4 General Permit while developing or revising a new **Targeted BMP Adoption Plan**.

METHODOLOGY

Continue collaboration with the Interlocal Stormwater Working Group (ISWG) to develop a new or revised **Targeted BMP Adoption Plan** with the goal of promoting behavior change through the implementation of at least one specific BMP targeted for focused outreach.

MEASURABLE GOALS

- ***Measureable Goal 1.4.1*** – beginning July 1, 2013, continue outreach efforts from the previous MS4 General Permit while developing or revising a new **Targeted BMP Adoption Plan**.

- ***Measureable Goal 1.4.2*** – by November 1, 2013, submit draft **Targeted BMP Adoption Plan** to DEP for review and approval; Plan will be considered approved by January 15, 2014 unless DEP indicates otherwise and implementation shall begin within one week of approval. The **Targeted BMP Practices Adoption Plan** must identify:
  a. The BMP
  b. The target audience
  c. The outreach tool(s) to be used
  d. The message
  e. The distribution system
  f. The time line and implementation schedule
  g. The person(s) responsible for implementation
  h. An impact evaluation protocol
  i. A plan modification protocol (including DEP approval of significant plan modifications)
  j. The goal (e.g., the target level BMP adoption for each audience)
- ***Measureable Goal 1.4.3*** – by January 15, 2014, implement new or revised **Targeted BMP Adoption Plan** that promotes behavior change through the implementation of BMPs; emphasize at least one specific BMP to target for adoption by at least 15% of the segmented audience.
- ***Measureable Goal 1.4.4*** – include review of **Targeted BMP Adoption Plan** in Annual Reports that includes process indicators to assess Plan execution; also include impact indicators according to the following schedule (unless otherwise indicated in the Plan):
  - Permit Year 1: assess target audience to set baseline and inform development of **Targeted BMP Adoption Plan**
  - Permit Year 3: conduct preliminary evaluation and assessment of Plan implementation progress and impact efforts are having on target audience
  - Permit Year 5: provide final assessment of Plan implementation and impact; include comprehensive review of Plan with analysis of process and impact indicators

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued to collaborate with the ISWG to implement the **Targeted BMP Adoption Plan**, which established a goal to reduce the amount of lawn chemicals (fertilizers and pesticides) used by 15% of college-educated homeowners aged 35-55 as further described in **Appendix 1**. Consistent with these efforts (and as briefly described above), the Stormwater Program Coordinator provided a presentation to the City Council on 8/8/16 entitled *"Stormwater Runoff & Pesticides: What Monitoring Done Elsewhere May Suggest for South Portland"* to support the passage of a Pesticide Use Ordinance. Beginning in June 2015, the Stormwater Program Coordinator worked intensively with the Sustainability Director and Parks & Recreation Department Superintendent to draft the ordinance that was enacted in September 2016. Documents describing and summarizing this process can be found on the City's Pesticide Use webpage. The Stormwater Program Coordinator also serves on the Pest Management Advisory Committee, which was created to provide guidance to the Sustainability Director and Council on the implementation of the Pesticide Use

Ordinance. The Stormwater Program Coordinator is also currently working closely with the Sustainability Director and PMAC to implement an Education & Outreach Plan that will prepare residents and businesses for pesticide use restrictions beginning in May 2018. South Portland's Pesticide Use Ordinance has been widely recognized as among the most restrictive in the State and similar provisions are currently being considered for enactment by the City of Portland. Once fully implemented, the ordinance should significantly reduce the amount of pesticides being discharged into local water resources.

BMP 1.5 Enhance Education & Outreach Effort

Responsible Party: Stormwater Program Coordinator *Additional Party: ISWG Education Coordinator*

INTENT

To target a specific activity for an impaired waterbody that if successfully addressed will improve and/or protect water quality in the priority or impaired watershed; alternately, identify common regional or statewide stormwater pollution issue with the goal of reducing or eliminating pollutant(s) of concern.

METHODOLOGY

Continue collaboration with the Interlocal Stormwater Working Group (ISWG) to either target specific activity for improving and/or protecting water quality in priority / impaired watershed or identify common regional or statewide stormwater pollution issue for pollutant load reduction or elimination.

MEASURABLE GOALS

- ***Measureable Goal 1.5.1*** – by July 1, 2014, provide draft **Education & Outreach Plan** to DEP for either targeted activity or regional / statewide stormwater issue that addresses the following element:
  a. Identify the specific stormwater activity or pollutant to be addressed
  b. The target audience(s)
  c. The outreach tool(s) to be used
  d. The message and the BMPs to be encouraged
  e. The time line and implementation schedule
  f. The person(s) responsible for implementation
  g. The goal of the outreach effort
  h. An impact evaluation protocol
- ***Measureable Goal 1.5.2*** – by November 1, 2014, provide final **Education & Outreach Plan** to DEP; Plan will be considered approved by January 5, 2014 unless DEP indicates otherwise with implementation to begin immediately.
- ***Measureable Goal 1.5.3*** – annual reports will include progress and results of targeted outreach efforts; permit year 5 report will include analysis of the process and impact indicators for implementation of the **Education & Outreach Plan.**

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued to collaborate with the ISWG to implement the **Education & Outreach Plan** as described

in **Appendix 1**. Additionally, the Stormwater Program Coordinator continued to serve as Co-Chair for the Maine Water Environment Association (MEWEA) Stormwater Committee. The Committee held three meetings during the 2016-17 Permit Year, which covered the following major topics:

7/18/16

- Develop and refine MS4 Program Flyer for dissemination at various events throughout the State
- Continue discussion on developing State-wide construction site inspection form
- Continue to solicit speakers and develop topics on stormwater management strategies to reduce nutrients for MEWEA conferences

12/13/16

- Discussion considering benefits of joining National Municipal Stormwater Alliance to enhance understanding of and involvement with stormwater issues at national level
- Discuss sponsorship of 2017 Maine Stormwater Conference
- Discuss preparations for renewal of Small MS4 General Permit

6/7/17

- In-depth considerations & discussion about Small MS4 General Permit renewal provisions
- Confirmation that two presentations on nutrients will be provided at 2017 Fall MEWEA Conference
- Confirmation that MEWEA will be sponsoring 2017 Maine Stormwater Conference

Participants on the Committee include representatives from all of Maine's MS4 clusters along with numerous other environmental, legal and private sector interests.

Minimum Control Measure 2 – Public Involvement and Participation

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 City's stormwater program. The City addresses these requirements for Public Involvement and Participation primarily through continued collaboration with the Interlocal Stormwater Working Group (ISWG) and the continued funding to the ISWG for Public Involvement and Participation services, most notably including the Urban Runoff and Green Neighbor Family Fest (**Appendix 1**).

Additionally, the City has established public involvement and participation procedures as part of its development review process (e.g., Planning Board meetings) that provide regular opportunities for members of the public to offer comments on the implementation of stormwater performance standards. City staff and officials have also been appointed to the Long Creek Watershed Management District (a quasi-municipal entity), which has an open process whereby members of the public can participate in implementing the Long Creek Watershed Management Plan (LCWMP). The LCWMP was developed largely in response to the

stormwater pollution impacts from surrounding land uses and was commissioned by the City of South Portland through an EPA 319 grant. The City's Stormwater Program Coordinator was appointed as the LCWMD's Board Chair in May 2017 and will likely serve in that capacity for the next few years. Finally, the City also hosts annual public events that provide the opportunity for local residents to participate in South Portland's Stormwater Management Program. The long-standing Household Hazardous Waste Collection event has been very popular and successful at preventing potential pollutants from entering local water resources. Likewise, the City's collaboration with civic groups, state agencies (Maine Healthy Beaches Program) and local businesses for the "April Stools" Day has continued to gain momentum since the inaugural event in 2014 (Figure 4).

Figure 4: public service announcement for 2017 April Stools Day that ran on South Portland Community TV.

BMP 2.1 Comply with Public Notice Requirements

Responsible Party: Water Resource Protection & Planning Departments

Additional Parties: ISWG Stormwater Program Coordinator & LCWMD Executive Director

INTENT

To comply with applicable state and local public notice requirements by using effective mechanisms for reaching the public; to comply with Maine Freedom of Access Act public notice requirements (1 M.R.S.A. §§ 401 et. seq. – "FOAA") when involving stakeholders in General Permit implementation.

METHODOLOGY

Continue participation in the ISWG and conform to applicable MEDEP, City of South Portland and Long Creek Watershed Management District public notice requirements.

MEASURABLE GOALS

- ***Measureable Goal 2.1.1*** – ISWG, the City and the Long Creek Watershed Management District will follow all applicable state and local Public Notice requirements. Copies of the plans specifying these requirements are available on the City of South Portland and Long Creek Watershed Management District websites.
- ***Measureable Goal 2.1.2*** – ISWG, the City and the Long Creek Watershed Management District will follow state and local Public Notice requirements when involving stakeholders in the implementation of the MS4 General Permit, the City's Stormwater Program Management Plan, the City's Stormwater Management Performance Standards (Ch. 27-1536) and the Long Creek Watershed Management Plan.

ACTIONS COMPLETED DURING PERMIT YEAR

Following the adoption of Stormwater Management Performance Standards by the City in April of 2009, virtually every Planning Board meeting affords the public with an opportunity to participate in efforts to improve local water quality through the reduction of impacts from stormwater pollution. This occurs because nearly every Planning Board meeting consists of new development and redevelopment proposals with provisions for stormwater management. Records of public notices, attendance and minutes for these meetings are maintained by the City's Planning Department and posted on the City's website. The Long Creek Watershed Management District also allows public participation for efforts to reduce impacts from stormwater pollution at each of its regular meetings and posts meeting agendas and minutes on its website.

BMP 2.2 Host, Conduct or Participate in a Public Event

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

INTENT

To increase public awareness by hosting, conducting or participating in a public event for a target audience that includes a pollution prevention and/or water quality theme.

METHODOLOGY

Provide highly visible opportunities for members of the public to meaningfully participate in activities that increase awareness about reducing impacts from polluted stormwater runoff.

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

In addition to the events and activities undertaken by the Interlocal Stormwater Working Group (ISWG) on behalf of the City, several other events were held to increase public awareness of and participation in efforts to reduce adverse impacts from polluted stormwater runoff.

October 8, 2016 – Household Hazardous & Electronic Waste Collection Day

The City continued to provide the popular annual Household Hazardous Waste Collection Day for South Portland residents and partnered with the Public Works Department, Sustainability Office and South Portland Energy and Recycling Committee (ERC) to include Electronic Waste drop-off. The ERC received a $1,000 grant from the New England Grass Roots Environment Fund to help cover the E-Waste disposal costs.

The HHW/E-Waste event resulted in the largest turnout since the City began tracking participation rates in 2009 (Figure 5). Over 400 residents waited patiently in a long but briskly moving line of traffic to drop off a variety of potentially hazardous household products and electronic devices. The most common HHW materials included paints, solvents, pesticides and cleaners while typical E-Wastes consisted of TVs, stereos, computers and printers. Thanks to several volunteers from the ERC, the event was very well received by almost all participants as indicated by the questionnaire results. A considerable number of respondents were familiar with the City's stormwater management efforts, YardScaping and Think Blue Maine (**Appendix 2**). In 2016, the Water Resource Protection and Public Works Departments will be partnering with the Sustainability Office to include electronic wastes as part of the Household Hazardous Waste collection program.

Figure 5: Sustainability Director Julie Rosenbach distributes questionnaires to residents waiting along Waterman Drive to drop off HHW & E-Waste at the City's wastewater treatment facility.

April 22, 2017 – April Stools Day

The City hosted the fourth April Stools Day event in partnership with the South Portland Land Trust (SPLT), Pet Life, the Maine Healthy Beaches Program and the Friends of the Eastern Promenade (a Portland-based neighborhood group). Staff and volunteers were on hand from 9AM – noon at Hinckley Park, Bug Light Park and Willard Beach – some of the most popular destinations for dog owners from South Portland and beyond. The event was held to raise awareness about the adverse effects of improper pet waste disposal, which can occur when rainwater or snow melt carries parasites, bacteria and viruses from dog waste left on the ground into nearby surface waters resulting in health risks to canines and humans. Dog waste can also degrade water quality by promoting algal growth and decreasing dissolved oxygen levels. Staff and volunteers provided free "doggie" bags to numerous dog owners and reminded them why picking up after their dogs is so important and how improper pet waste management can adversely affect local water quality. SPLT volunteers picked up over 50 pounds of dog waste from the trails and woods next to Hinckley Pond (Figure 6).

Figure 6: South Portland Land Trust volunteer removing dog waste next to Hinckley Pond

April 22, 2017 – Urban Runoff & Green Neighbor Family Fest

The City continued its involvement with and support of ISWG's annual Urban Runoff & Green Neighbor Family Fest (**Appendix 1**). The City donated $500 to help fund the effort. This event has proven to be highly

successful at increasing public awareness about the adverse impacts of polluted stormwater runoff.

April 26, 2017 – Brooks to Bay: Healthy Streams for a Clean Casco Bay

Thanks to a $1,500 grant from the Casco Bay Estuary Partnership to the South Portland Conservation Commission (SPCC), the City held a public forum highlighting the challenges and opportunities for the five urban impaired streams and other water resources in the community. In addition to a presentation by the City's Stormwater Program Coordinator, Wendy Garland from the Maine DEP, Matt Craig from the Casco Bay Estuary Partnership, Mike Doan from the Friends of Casco Bay and a Bob McKeagney from the SPCC also provided presentations (Figure 7). The event was widely publicized and fairly well attended by about 50 community members. Prior to the presentations, participants were able to visit numerous displays staffed by several local community groups and governmental organizations (Figure 8) including:

Figure 7: DEP's Wendy Garland discussing the impairment types for the City's five Urban Impaired Streams

- South Portland Land Trust
- South Portland Pest Management Advisory Committee
- Protect South Portland
- Casco Bay Estuary Partnership
- Friends of Casco Bay
- Long Creek Watershed Management District
- Cumberland County Soil & Water Conservation District
- U.S. Fish & Wildlife Service
- University of Southern Maine Environmental Science & Policy Department

Figure 8: numerous organizations provided displays and staff or volunteers for the Brooks to Bay Community Forum

The most significant outcome of the forum was the announcement of a Small Community Grants Program that will be jointly administered by the Water Resource Protection Department and South Portland Conservation Commission. The City's Wetlands Compensation Fund will provide individual grants of up to $2,500 for citizens, community groups, municipal departments (including schools) and local businesses to use in protecting and restoring local freshwater resources. Priority will be placed on proposals that demonstrate strong volunteer leadership with additional preference placed on projects committed to community service missions extending beyond the scope of the grant. The City will begin accepting applications in the late summer / early fall of 2017.

Minimum Control Measure 3 – Illicit Discharge Detection & Elimination

The overall goal of this MCM is to implement and enforce a program to detect and eliminate illicit and non-stormwater discharges.

BMP 3.1 Continue to Keep Watershed-Based Storm Sewer System Infrastructure Map Current and Update Annually

Responsible Party: Water Resource Protection Dept. *Additional Party: N/A*

INTENT

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

METHODOLOGY

Continue updating GIS map layer of storm sewer system and add features as new stormwater infrastructure is constructed and/or as previously unidentified stormwater infrastructure is discovered.

MEASURABLE GOALS

- ***Measurable Goal 3.1.1*** – annually review GIS map layer of storm sewer system and update based on construction of new publicly owned storm sewer infrastructure and/or discovery of previously unidentified storm sewer infrastructure.
- ***Measurable Goal 3.1.2*** – annually incorporate construction of private storm sewer infrastructure into GIS map layer for new development or redevelopment projects as funding allows.

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued to invest considerable time and money in maintaining, updating and improving GIS data layers of the publicly owned stormwater system and likely has one of the most complete and comprehensive spatial datasets for municipal stormwater infrastructure in the State. Of particular note was the addition of over a dozen stormwater treatment systems along Main Street / Route One that were installed as part the Thornton Heights Stormwater Separation Project. Efforts to improve and update the City's GIS data occur on a continuous basis throughout each Permit Year (Table 2).

DATE	UPDATE DESCRIPTION
Sept. 2016	Assisted SMCC with outfall mapping and integrating BMPs into GIS dataset
Oct. 2016	Updated ESRI ArcReader for WRP
Nov. 2016	Mapped Thornton Heights BMPs
Nov. 2016	Provided annual update of sewer & stormwater infrastructure for public GIS viewer (MapGeo)
Dec. 2016	Designed/created ArcGIS Online outfall & ditch inspection applications
Feb. 2017	Produced EPA progress report detailing CSO removal efforts for Consent Decree
May 2017	Updated ESRI ArcReader for WRP
Jun. 2017	Created non-conforming infill constraint map for parcels prohibited from discharging to combined sewer-stormwater system
July 2016-Jun. 2017	Ongoing/continuous updates to reflect changes to storm & sewer systems

Table 2: summary of PY2016-17 updates made to City's GIS data related to Stormwater Management Program.

BMP 3.2 Continue Implementation of Non-Stormwater Discharge Ordinance to Prohibit Unauthorized Discharges into Storm Sewer System

Responsible Party: Stormwater Program Coordinator *Additional Party: Compliance Administrator*

INTENT

To prohibit unauthorized 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; coordinate and cooperate with the Maine DEP, Portland Water District and Interlocal Stormwater Working Group to develop hydrant flushing policies that are protective of local water resources.

MEASURABLE GOALS

- ***Measurable Goal 3.2.1*** – the City of South Portland 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.
- ***Measureable Goal 3.2.2*** – in Permit Year 1, coordinate with the Portland Water District (PWD) via mail or in person to evaluate whether water line and hydrant flushing are significant contributors of pollutants to the City's MS4 system. Evaluation will include the following actions:
    - Provide the PWD with a location map showing the extent of the municipal urbanized area, and the highest priority watershed(s).
    - Gather information from the PWD, specific to the urbanized area and priority watershed(s), including the number and location of hydrants and details on water line or hydrant flushing that outlines procedures, including how often flushing occurs, typical flow rates and duration, where the water is conveyed, what the target or actual chlorine concentrations are, and what best practices are employed to prevent erosion and address potential pollutants.
- ***Measureable Goal 3.2.3*** – by no later than December 30, 2014, unless otherwise approved by the Department, using available GIS or other municipal mapping information, the location of hydrants will be added to the storm sewer system infrastructure map to aid in the evaluation; the City of South Portland will work with the PWD to prioritize the hydrants or water lines that have the potential to cause exceedances of the ambient water quality criterion for chlorine when discharged through the MS4. The City will request a water quality progress report that documents what best management practices are being implemented for flushing activity at the prioritized hydrants as well as the PWD's testing results of the total residual chlorine for any such discharges.
- ***Measureable Goal 3.2.4*** – in Permit Years 3-5, the City will request an annual water quality progress report that documents what best management practices are being implemented for flushing activity

at the prioritized hydrants as well as the PWD's testing results of the total residual chlorine for any such discharges.

- ***Measureable Goal 3.2.5*** – if it is determined by the end of Permit Year 3, that water line or hydrant flushing is a significant contributor of pollutants to the MS4, and the PWD has demonstrated that it will not voluntarily implement BMPs in order to reach ambient water quality criteria for chlorine, the City will, as soon as practicable or by no later than the end of Permit Year 4, update their IDDE ordinance to allow enforcement of discharges that cause exceedances of water quality criteria.

Reporting: the annual report will include a summary of Non-Stormwater Discharge incidents; it will also include a status update on the evaluation of water line and hydrant flushing as a significant contributor of pollutants to the MS4 and an update on subsequent actions.

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued to enforce the Non-Stormwater Discharge Ordinance as specified in the South Portland Code of Ordinances Chapter 22 Sewer and Drains, Article XIV Non-Stormwater Discharge (§§22-200 - 22-209), which was enacted on September 8, 2004. City staff responded to 30 incident reports of potential illicit discharges or spills and followed up on several of these, often in cooperation with Maine DEP staff (Table 3 on next page). In most cases, stormwater pollutants were not discharged to the MS4 system or nearby protected water resources or City staff could not make such determinations because notifications were received a day or more after the reported incidents. Reports, correspondence on follow up actions and/or photos are available for all of these incidents.

The City also continued working with the Maine Healthy Beaches (MHB) Program on bacteria source tracking investigations in the Willard Beach watershed. Paired optical brightener and bacteria samples were collected at several strategic locations during the 2016 and 2017 summer swim beach seasons to isolate potentially problematic subcatchment areas throughout the watershed (Figure 9). Water Resource Protection staff contributed to MHB's 2016 report which included a statistical analysis of data from 2012-16. While the results generally indicated non-point pollution sources as the most likely contributors to elevated bacteria levels in the Willard Beach storm sewer system, there were a few sampling locations with higher bacteria and optical brightener concentrations suggesting possible human sources. While most of these potentially problematic areas have already been televised (both sewer and stormwater systems), South Portland's Collection Systems Division will conduct follow up TV work and may consider replacing or repairing suspect lines in the fall of 2017.

Figure 9: Stormwater Intern Haley Jaramillo collecting a sample from a Willard Beach stormwater outfall.

Table 3: spills or IDDE incidents reported for PY2016-17

Report Date	Incident Location	Description	Did non-SW discharge enter MS4 or WOTUS?	Findings / Follow-up
7/11/16	Ocean Street	Water line break	Unknown	Received report 1 day after incident so unable to establish whether sediment entered MS4 or nearby stream
7/25/16	Broadway	Water line break	MS4	PWD employed proper ESC BMPs upon reporting to break but some sediment had already entered MS4 prior to their arrival
7/26/16	O'Neil St & Cottage Rd	School bus fuel spill	No	Bus driver neglected to replace fill cap and fuel spilled onto pavement while rounding corners; spill cleaned with absorbent material and DEP contacted
8/2/16	DPW O'Neil St	Hydraulic oil spill	No	Truck hydraulic system rupture; all oil contained and no discharge to MS4
8/4/16	Leighton St	Coal tar sealant spill	No	Small section of driveway sealed with coal tar some of which got into privately owned CB; placed pad in CB to remove residual material
8/8/16	Lincoln St	Floor drain dye test	No	Follow up with DEP staff for oil dump in May 2016 to establish if garage floor drains connected to MS4 (they were not)
8/25/16	Westbrook St	Alleged dumping of drug-making chemicals	Unknown	Searched area behind facility but unable to find evidence of suspected drug-making chemical dumping
8/30/16	Highland Ave	School bus hydraulic oil spill	No	Small amount of hydraulic oil from disabled bus leaked onto pavement; spill cleaned promptly with absorbent material
9/14/16	Highland Ave	Oil tank spill	No	Fuel oil leak into basement during tank servicing; oil contained and no discharge to MS4
9/19/16	Broadway	New fuel tank ballast water discharge	No	Installed new fuel tank using ballast water; approved discharge to sewer system
10/5/16	Westbrook St & Broadway	Hydraulic oil spill	Unknown	Utility trailer hydraulic line ruptured and spilled along ~1 mile of paved road; most of spill cleaned with absorbent material though some staining remained; contacted DEP
11/7/16	Maine Mall Rd	Private sewer line backup	No	Small amount of sewage surcharged from private SMH into private CB; no discharge to any additional downstream structures
11/10/16	Broadway	Dry cleaner condensate discharge	No	Investigated boiler condensate discharge following resident complaint; no evidence of discharge to MS4
12/29/16	Lincoln St	Unspecified oil spill	Unknown	Provided SW system map of Lincoln St area to USCG by request in response to reported oil spill; no additional details provided by USCG
12/29/16	Billy Vachon Rd	Salt spill	Yes	Overfilled trucks spilling salt while rounding corners; contacted hauler and requested that trucks not be filled so full
1/20/17	Simmons Rd	Suspected concrete washout	Unknown	Resident reported contractor dumping concrete washout into public CB; unable to confirm discharge
2/6/17	I-295	Fuel spill from overturned tank truck	Yes	Some fuel discharged to Fore River via MDOT drains; State Police, MDOT and DEP spill response teams on site to address cleanup
4/11/17	Lincoln St	Alleged waste oil dumping	Unknown	Followed up in response to alleged report to DEP of waste oil dumping into toilet by placing absorbent pads in sewer and storm drain; unable to confirm presence of oil
4/14/17	Maine Mall Rd	Sewer surcharge	Yes	Grease blockage in private sewer line resulted in sewage discharge into private CB and Long Creek; contacted DEP
4/14/17	Maine Mall Rd	Food waste grease dumping	Yes	Extensive grease spill on pavement behind restaurant apparently related to grease vault repairs; contacted DEP
4/24/17	Waterman Drive	Hydraulic oil or dumpster spill	Unknown	Followed up on staff report of spill on private property; staining but no oil remained following removal with absorbent material
4/25/17	Cummings Rd	Water line break	Yes	Large x-country water main break resulted in sediment discharge to Long Creek's South Branch; PWD on site to repair upon discovery of problem
4/27/17	Southborough Dr	Hydraulic oil spill	Yes	Trash compactor truck hydraulic line rupture directly into private ditch draining to Red Brook
5/8/17	Wentworth Dr	Swimming pool discharge	No	Resident query about pool discharge; recommended sewer system and refered to POTW staff
5/12/17	Gorham Rd	Pavement cleaning wash water dumping	Unknown	City staff observed dumping of washwater into private CB; follow up with letter to owner recommending alternatives
5/16/17	Main St	Sweeper hydraulic line rupture	Unknown	DPW discovered spill along ~1.25 miles of roadway and WRP staff tracked source back to disabled sweeper. DPW cleaned with sand; DEP contacted.
5/19/17	O'Neil St	Gasoline spill	No	Inadvertent gas spill during fueling; cleaned with absorbent material; DPW contacted DEP.
6/13/17	Wallace Ave	Used oil dumping	Unknown	Report from DEP about alleged oil dumping on private property; no MS4 in area nor evidence of oil on public ROW
6/16/17	Gorham Rd	Sediment-laden runoff	No	Silt sacks used in all basins and runoff volume fairly minimal
6/29/17	Latham St	White substance residue and sediment	Unknown	Resident reported white residue on private CB; WRP staff inspection also discovers unprotected loam eroding into private CB; sent letter to property owner(s).

WRP staff also continued to be closely involved in working with water utilities servicing MS4 communities throughout the state to establish procedures for water line and hydrant flushing. During the spring of 2017, the Stormwater Program Coordinator provided comments on the draft Standard Operating Procedures developed jointly by the Maine Water Utilities Association and Maine Rural Water Association. He also moderated a technical session on the SOPs at the Maine Water Environment Association's Spring Conference in April 2017. The Stormwater Program Coordinator initiated communications on behalf of all Interlocal Stormwater Working Group (ISWG) communities with the Portland Water District (PWD) in the latter half of PY2016-17 to obtain their annual water quality report (**Appendix 3**). PWD provided a report to all ISWG communities documenting that their water line and hydrant flushing SOP successfully prevented pollutant discharge (i.e., total residual chlorine) in concentrations above DEP's stated threshold of 0.05 ppm.

BMP 3.3 Continue Implementation of Prioritized Dry Weather Outfall Inspection Program

Responsible Party: Stormwater Program Coordinator *Additional Party: N/A*

INTENT

To identify potential sources of illicit non-stormwater discharges for elimination in watersheds or sub-watersheds that pose the greatest potential threat to local receiving waters.

METHODOLOGY

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

MEASURABLE GOALS

- ***Measureable Goal 3.3.1*** – continue conducting dry weather outfall inspections in all the subwatersheds of Long Creek (formerly the highest priority watershed for the 2008-13 MS4 permit) and Trout Brook (the highest priority watershed for the 2013-18 MS4 permit). The boundaries of all subwatersheds may be further refined as additional mapping and field assessment is conducted or as development / redevelopment occurs.
- ***Measureable Goal 3.3.2*** – by the end of Permit Year 1, the City will identify the subwatersheds for dry weather outfall inspections within the second highest priority watershed, Barberry Creek. By the end of Permit Year 3, the City will conduct dry weather outfall inspections in all subwatersheds of Barberry Creek. The boundaries of all subwatersheds may be further refined as additional mapping and field assessment is conducted or as development / redevelopment occurs.
- ***Measureable Goal 3.3.3*** – the City will continue using the standard operating procedure (SOP) and data collection system for the dry weather outfall inspection program from the previous permit cycle and modify either as needed. The SOP includes 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.

Reporting: inspection results will be documented in a database management system or other recordkeeping system. The annual report will provide a summary of the inspection results.

ACTIONS COMPLETED DURING PERMIT YEAR

Dry weather outfall inspections for the Long Creek watershed were completed in February and March of 2017 when temperatures remained below freezing for extended periods. Inspections for the Trout Brook Barberry Creek watersheds were conducted in early June of 2017. The inspection summaries for all three watersheds are included in **Appendix 4**. Use of the cloud-based application Fulcrum was discontinued following the creation of a new ArcGIS Online (AGOL) application, which will allow for greater consistency with the City's other GIS-based stormwater system infrastructure.

While there were a number of potential maintenance issues identified, such as erosion and vegetative overgrowth, no obvious occurrences of illicit discharges were detected. The City currently relies on the two volume *Guidelines and Standard Operating Procedures for Stormwater Phase II Communities in Maine* to determine our response to potential or suspected illicit discharges. We are currently in the process of developing a more community-specific IDDE Plan that will provide even more detailed guidance. This document will be completed before the end of the 2017-18 permit year (and start of the next 5-year permit cycle).

BMP 3.4 Continue Development & Implementation of Dry Weather Open Ditch Inspection Program

Responsible Party: Stormwater Program Coordinator *Additional Party: N/A*

INTENT

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 priority watershed in relation to the City's stormwater collection system and develop an IDDE strategy for all relevant ditches.

MEASURABLE GOALS

- ***Measureable Goal 3.4.1*** – continue implementing the inspection program from the previous permit cycle to detect any illicit discharges in the open ditch system of the Long Creek watershed.
- ***Measureable Goal 3.4.2*** – by the end of Permit Year 1, the City will identify the length of open ditches within the highest priority watershed, Trout Brook.
- ***Measureable Goal 3.4.3*** – by the end of Permit Year 2, the City will implement a strategy to detect any illicit discharges in the open ditch system of the Trout Brook watershed.
- ***Measureable Goal 3.4.4*** – by the end of Permit Year 4, the City will identify the length of open ditches within the second highest priority watershed, Barberry Creek.
- ***Measureable Goal 3.4.5*** – by the end of Permit Year 5, the City will implement a strategy to detect any illicit discharges in the open ditch system of the Barberry Creek watershed.

Reporting: inspection results will be documented in a database management system or other recordkeeping system. The annual report will provide a summary of the inspection results.

ACTIONS COMPLETED DURING PERMIT YEAR

In June of 2017, WRP staff inspected and photographed all of the open ditches in the Long Creek watershed. The summary of inspections is included in **Appendix 5**. We continued to use the ArcGIS Online (AGOL) application for data collection (Figure 10). There were no overt signs of illicit discharges observed at the time of inspections. Given the extensive use of piped stormwater systems to provide drainage for the dense residential and commercial areas in the Trout Brook and Barberry Creek watersheds, no open ditches are present in the public right-of-way and therefore no inspections were necessary.

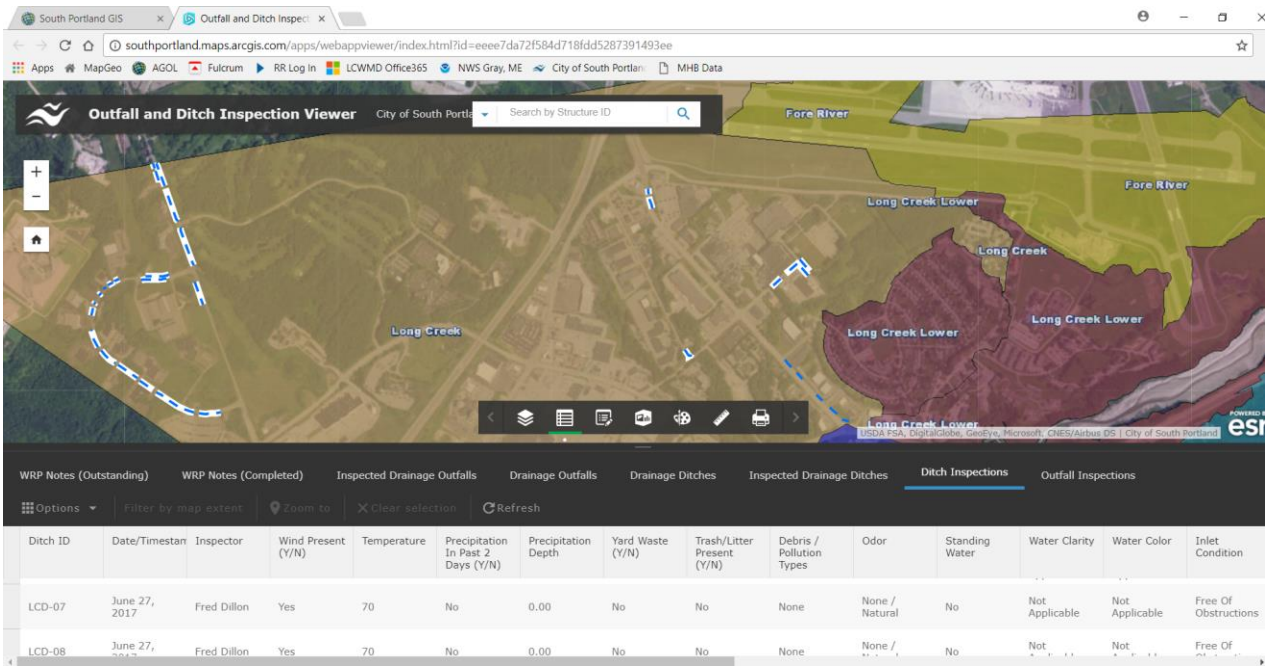


Figure 10: screen shot of AGOL dry weather ditch inspection application used for Long Creek watershed

BMP 3.5 Develop List & Evaluation Protocols for Septic Systems 20 Years Old or Greater with Potential to Discharge into MS4 System in Event of Failure

Responsible Party: Stormwater Program Coordinator *Additional Party: N/A*

INTENT

To identify and assess the potential for discharges from failing septic systems to enter City's MS4 system and adversely affect local water resources.

METHODOLOGY

Develop list of septic systems 20 years or older and an evaluation protocol to determine whether any of these may be discharging to the MS4 system and/or nearby water resources.

MEASURABLE GOALS

- ***Measureable Goal 3.5.1*** – by the end of Permit Year 3, develop a list and evaluation protocols for septic systems that are 20 years old or greater and have the potential to discharge into the MS4 for the Long Creek watershed (formerly the highest priority watershed for the 2008-13 MS4 permit) and Trout Brook (the highest priority watershed for the 2013-18 MS4 permit).
- ***Measureable Goal 3.5.2*** – by the end of Permit Year 4, implement a drive-by evaluation and documentation program for septic systems that are 20 years old or greater and have the potential to discharge into the MS4 for the Long Creek watershed and Trout Brook. This septic system inspection and documentation program will include a mechanism for addressing any discharges to the MS4 from malfunctioning septic systems.

Reporting: the annual report for Permit Year 3 will provide a summary of the progress made on developing the septic system list and evaluation protocols; the reports for Permit Years 4 and 5 will include a summary of septic system inspection results and associated corrective actions if needed.

ACTIONS COMPLETED DURING PERMIT YEAR

We used the City-wide list of parcels on septic systems developed in PY2015-16 to conduct extensive archival research for each of these parcels by reviewing available documents and plan sets on file with the Planning & Development Department. Relevant paper documentation was converted to electronic file formats and uploaded to the Fulcrum, the cloud-based application we created to conduct septic system evaluations. Parcels with septic systems were also imported into the Fulcrum application and all related documentation was "geotagged" to corresponding parcels (Figure 11).

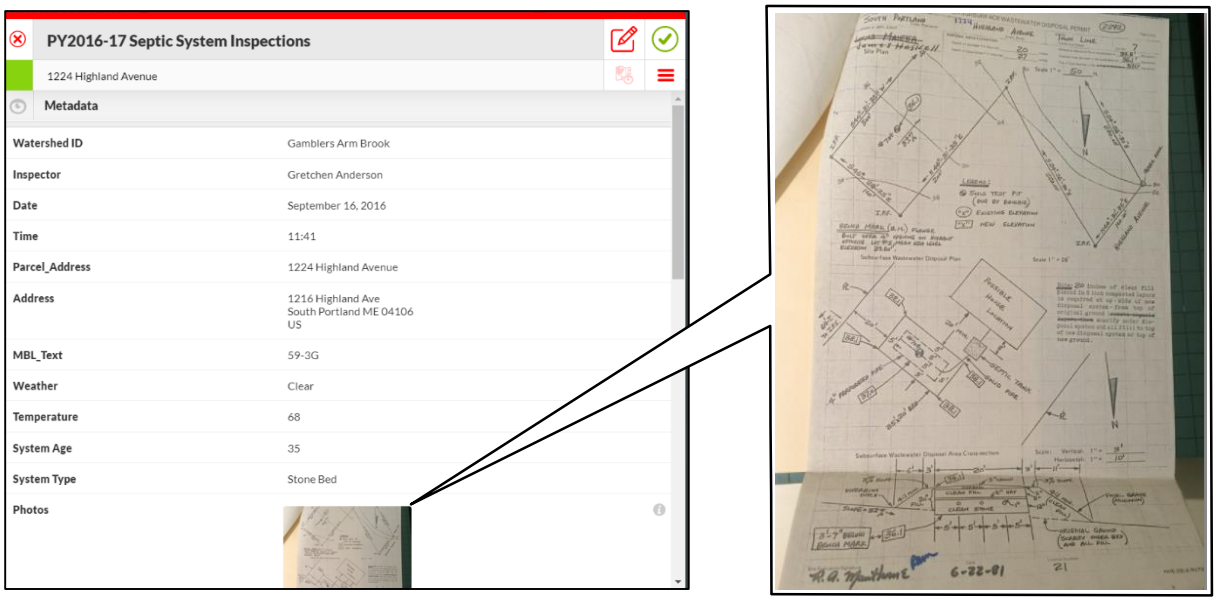


Figure 11: screen shot of Fulcrum-based septic system evaluation application and accompanying documentation.

Drive-by septic system evaluations were conducted for 183 parcels throughout the City (Figure 12). In most cases, the evaluations were of limited value because septic systems located on the rear of properties could not be accessed directly for inspection. However, 19 systems were identified for potential follow up primarily due to the presence of greener grass above the leach fields (the inspections were conducted during an extended period of extreme drought). No corroborating indicators, such as ponding or sewage breakout, were observed. Even so, the owners of these systems will be contacted in PY2017-18 for additional information (e.g., maintenance frequency, operational issues, etc.) to assist with the condition assessment.

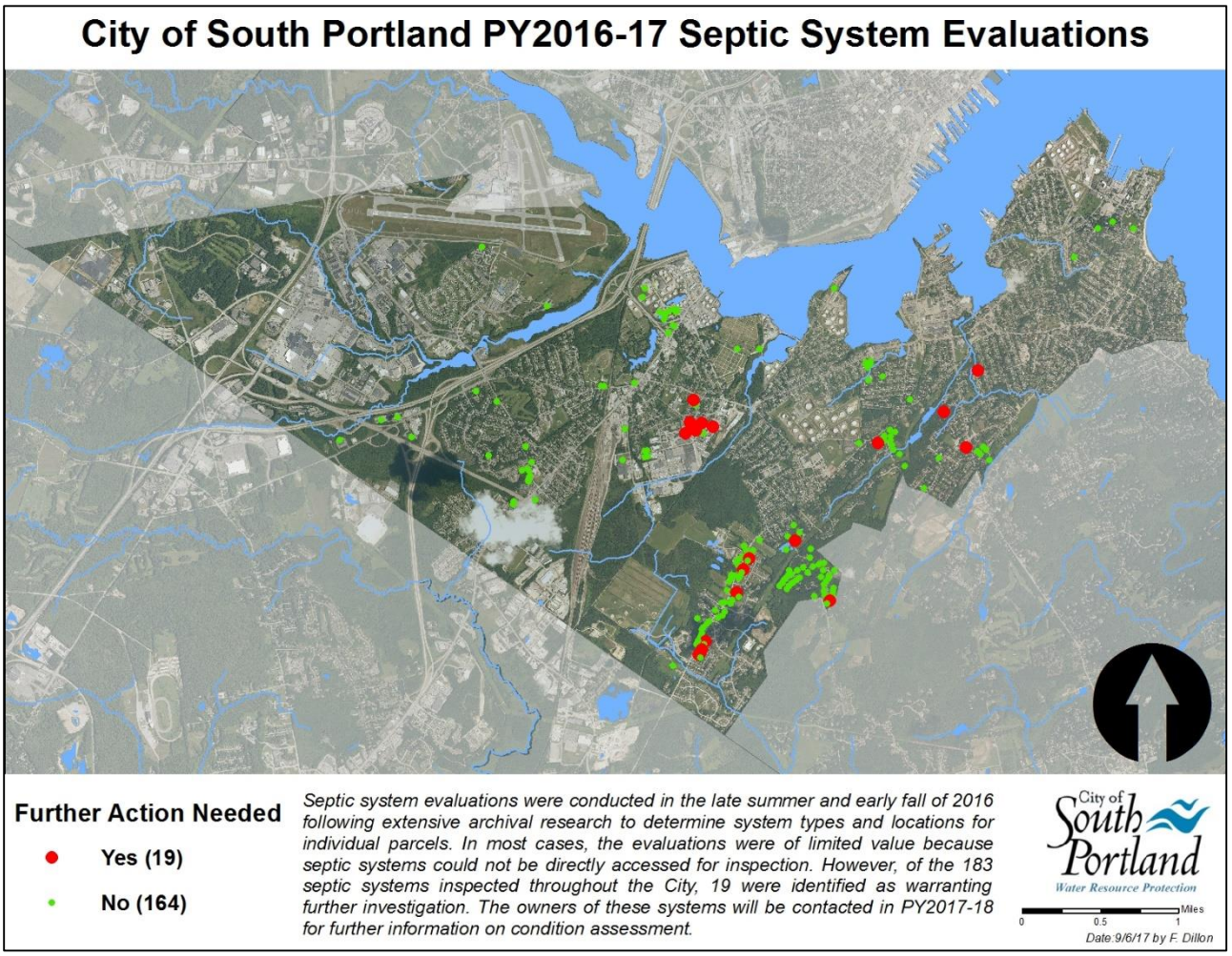


Figure 12: map of septic systems evaluated for PY2016-17

BMP 3.6 Continue Hosting Annual Household Hazardous Waste Collection Day

Responsible Parties: Water Resource Protection & Public Works Departments *Additional Party: N/A*

INTENT

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

METHODOLOGY

Host an annual Household Hazardous Waste collection day.

MEASURABLE GOALS

- ***Measureable Goal 3.6.1*** – as funding allows, 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

As described above in BMP 2.2, the City's Water Resource Protection Department, Public Works Department and Sustainability Office partnered to hold the biggest HHW and Electronic Waste Collection Day on 10/8/16 since we began tracking participation rates in 2009. Much of this increase can be attributed to the addition of E-Waste Collection and to funding assistance provided through a grant acquired by the City's Energy and Recycling Committee. In addition to the $1,000 grant to cover the E-Waste collection costs, the City invested over $15,000 (not including City staff labor costs) to dispose of residential HHW (Figure 13). Please refer to summary of activities for BMP 2.2 and **Appendix 2** for more details.

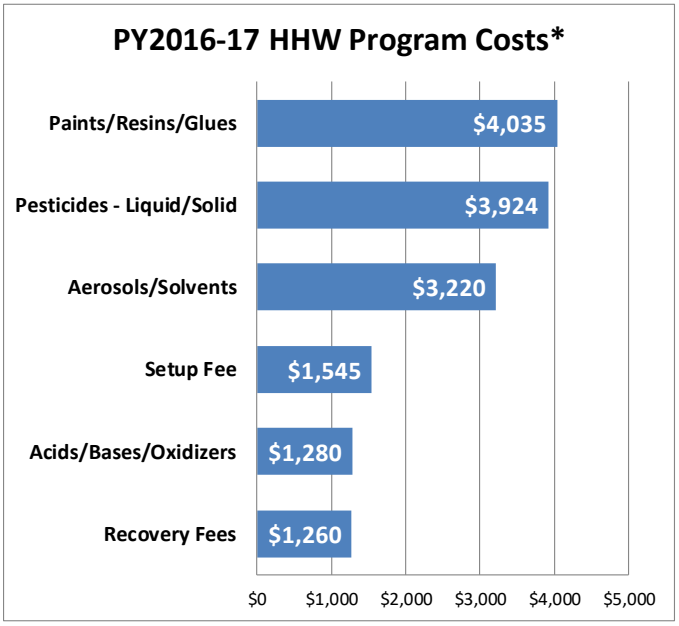


Figure 13: HHW program costs for PY2016-17

BMP 3.7 Continue Supporting the Friends of Casco Bay Mobile Vessel Pumpout Service

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

INTENT

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

METHODOLOGY

Annual financial contribution ($5,000) to pumpout program.

MEASURABLE GOALS

- ***Measureable Goal 3.7.1*** – as funding is available, continue to financially support the mobile vessel pumpout service.

ACTIONS COMPLETED DURING PERMIT YEAR

The City contributed $5,000 to the Friends of Casco Bay's Boat Pumpout Program for PY2016-17.

BMP 3.8 Continue Providing Confidential Public Complaint Hotline for Suspected Illicit Discharges

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

INTENT

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.

MEASURABLE GOALS

- ***Measureable Goal 3.8.1*** – 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

The City continued to maintain a Stormwater Violations Hotline and Online Complaint Report form that allowed concerned citizens to easily and anonymously report any suspected incidents of non-stormwater discharge violations to the publicly owned stormwater system. No complaints were filed through the online reporting system during the permit year. As summarized in Table 3 above, when illicit discharge incidents are reported by any means, follow up inspections are conducted.

BMP 3.9 Continue Storm Drain Stenciling Program

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

INTENT

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

METHODOLOGY

Continue ongoing annual catch basin stenciling program.

MEASURABLE GOALS

- ***Measureable Goal 3.9.1*** – continue to annually stencil catch basins in conjunction with catch basin cleaning.

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued to stencil catch basins as part of its annual Dig Safe utility location program. We receive over 1,500 Dig Safe requests each year and staff often reapplies paint to the "No Dumping Drains to Casco Bay" stencils for many of our catch basins while locating our piped infrastructure for construction projects. The City also continued to partner with the Friends of Casco Bay on their stormwater education and outreach efforts by permitting teams of volunteers to stencil catch basins in the City's right of way.

Minimum Control Measure 4 – Construction Site Stormwater Runoff Control

The City of South Portland completed a variety of activities for the Construction Site Stormwater Runoff Minimum Control Measure. The overall goals of this MCM are to develop, implement, and enforce a program that reduces pollutants in stormwater runoff to the City's regulated small MS4 from construction activities that result in a land disturbance of an acre or more.

BMP 4.1 Continue Notification to Construction Site Developers and Operators of Maine Construction General Permit or Chapter 500 Registration Requirements

Responsible Party: Planning Dept. *Additional Party: Water Resource Protection Dept.*

INTENT

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.

MEASURABLE GOALS

- ***Measurable Goal 4.1.1*** – continue notification procedures from previous permit cycle that occur through the site plan review permitting process. Additionally, notification is provided to building permit applicants that meet the one-acre threshold.
- ***Measureable Goal 4.1.2*** – continue annual evaluations of current notification system and modify if necessary.

Reporting: the annual report will include a description of any updates made to the notification procedures.

ACTIONS COMPLETED DURING PERMIT YEAR

The City requires property owners, developers and contractors for all construction activities from single family residential house lots to large commercial projects disturbing an acre or more of area to comply with Planning Board Regulation #2. This local regulation was developed specifically for erosion and sediment control and refers directly to the Maine Erosion and Sediment Control Practices Field Guide for Contractors (which refers directly to the Maine's Erosion and Sediment Control Law, the Natural Resources Protection Act, the Maine Construction General Permit, the Shoreland Zoning Act, and the Stormwater Management Law). Applicants for construction projects are required to sign a certification statement that the owner/developer and excavation contractor/subcontractor have read and will follow the applicable provisions in the Maine Erosion & Sediment Control BMP Manual (Figure 14). As part of this process, owners/developers and their excavation contractors are also required to attend a pre-construction meeting prior to the start of the project to review the site-specific erosion and sediment control plan.

I certify that I have received and reviewed the following information from the City of South Portland, including:

(1) Erosion and Sedimentation control standards for site plan and subdivision review;

(2) The link to the Maine Erosion and Sediment Control BMP Manual at www.maine.gov/dep/land/erosion/escbmps;

(3) The DEP Fact Sheet on *Vernal Pools: A Significant Wildlife Habitat*; and

(4) Statement on the values of wetlands and the effects of filling, and general description of erosion and sedimentation control options deemed acceptable by the Planning Board.

_____ Date:_____
Signature **(use of blue ink for signature is required)**

_____
Print name of signer

I certify that I have received and read the packet of Erosion and Sedimentation control standards for site plan and subdivision review information from the City of South Portland, reviewed relevant sections of the Maine Erosion and Sediment Control BMP Manual applicable to the proposed project, and have attended a Pre-construction conference with the Department of Planning and Development.

_____ Date: _____
Signature **(use of blue ink for signature is required)**

_____
Print name of signer

Figure 14: Planning Board Regulation #2 certification statements required for owner/developers (top) and excavation contractors (bottom)

The City continued to confirm that developers for projects requiring site plan review under 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 Maine DEP 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. Additionally, the City's Stormwater Performance Standards (Ch. 27-1536) require projects subject to a modified site plan approval process to comply with the provisions of Planning Board Regulation #2.

In addition to conducting internal staff reviews for proposed development/redevelopment projects, the City also continued to use third party inspectors to evaluate proposed site plans. Each site plan was reviewed to ensure that proposed construction phasing included appropriate soil erosion and sedimentation control practices. Site plans that lacked appropriate soil erosion and sediment control practices were brought to the attention of the City and design engineer for further action.

BMP 4.2 Continue to Document Every Construction Activity that Disturbs One or More Acres within the Urbanized Area

Responsible Party: Planning Dept. *Additional Party: Water Resource Protection Dept.*

INTENT

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).

METHODOLOGY

Use shared computer network to implement electronic filing & tracking system for documentation of applicable construction activities.

MEASURABLE GOALS

- ***Measurable Goal 4.2.1*** – continue implementation of tracking system to record every activity that disturbs greater than or equal to one acre of land area. 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.

Reporting: the number of construction activities disturbing greater than or equal to one acre will be included under MCM 4, BMP 4.3, described immediately below.

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued to document periodic inspections of construction activities disturbing one or more acres of area (see discussion in BMP 4.3). Third parties appointed by the City (or the Long Creek Watershed Management District for projects covered under the Long Creek General Permit) conducted Erosion & Sediment Control (ESC) inspections on at least a monthly basis and on a weekly basis whenever significant deficiencies were identified. The City's Engineering Inspector and Stormwater Program Coordinator reviewed all third party ESC reports to determine whether any follow up actions were needed to address deficiencies. Reports were then electronically filed in a shared network folder accessible to all City staff responsible for ensuring compliance with the City's Stormwater Permit. The City also developed a Fulcrum application for use by the Engineering Inspector to document inspections for single family residential house lots.

BMP 4.3 Continue Implementation of Construction Site Inspection Program

Responsible Party: Planning Dept. *Additional Party: Water Resource Protection Dept.*

INTENT

To ensure construction projects an acre or larger are in compliance with the MCGP and Chapter 500 and to reduce the amount of stormwater pollution entering local water resources through the City's MS4 system.

METHODOLOGY

Develop and implement construction site inspection program in accordance with local and state stormwater laws (South Portland Ordinance § 27-1536, Maine Construction General Permit, Chapter 500, and General Permit for Small MS4s, respectively).

MEASURABLE GOALS

- ***Measurable Goal 4.3.1*** – continue procedures for construction site inspections that meet the terms and conditions of the General Permit and modify if necessary.
- ***Measurable Goal 4.3.2*** – continue use of standardized inspection form to ensure documentation of all required inspections.
- ***Measurable Goal 4.3.3*** – continue implementation of process for tracking and notifying the site developer or contractor of non-compliance 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 City requiring the site to come into compliance within a specified time period. If the violation continues, the City's Code Enforcement Officer will contact the Corporation Counsel to authorize legal proceedings needed to enforce all applicable ESC requirements. Continued non-compliance will be reported to the DEP with supporting documentation.
- ***Measurable Goal 4.3.4*** – continue inspecting 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 to ensure that all post-construction BMPs were properly installed and that final stabilization of the site has been completed. All construction inspections will be properly documented.

Reporting: inspection results will be documented in a database management system or other recordkeeping system. The annual report will provide a summary of the inspection results.

ACTIONS COMPLETED DURING PERMIT YEAR

The WRP and Planning & Development Departments continued to share and improve construction project oversight duties for PY2016-17. The City contracted with the Cumberland County Soil & Water Conservation District (CCSWCD) to conduct a thorough review and mock audit of our construction oversight procedures, which was concluded in late August 2016. The review consisted of several meetings with senior staff from both the Water Resource Protection and Planning & Development Departments while the audit consisted of visits to three active construction sites in the City. Outcomes of the review included recommendations to update policies and procedures for development review and pre-construction meetings; more clearly define roles & responsibilities; and finalize the draft construction project inspection process flowchart for use in responding to and documenting any corrective actions needed to bring construction sites into compliance with applicable regulations (e.g., Planning Board Regulation #2, the MCGP and Chapter 500).

In response to these recommendations, the City finalized the inspection process flow chart for large projects (Figure 15). The flow chart clearly defines roles & responsibilities for the third party inspector (3PI), relevant City staff, the contractor and the owner. It also establishes processes for submittal and filing of inspection reports and escalating responses by the City to BMP deficiencies. The first significant deficiency identified by the 3PI results in an increased inspection frequency from monthly to weekly; the second deficiency results in a warning letter from the Engineering Inspector to the contractor and owner; and the third deficiency results in a Notice of Violation and Stop Work Order from the Code Enforcement Officer with an option to involve DEP.

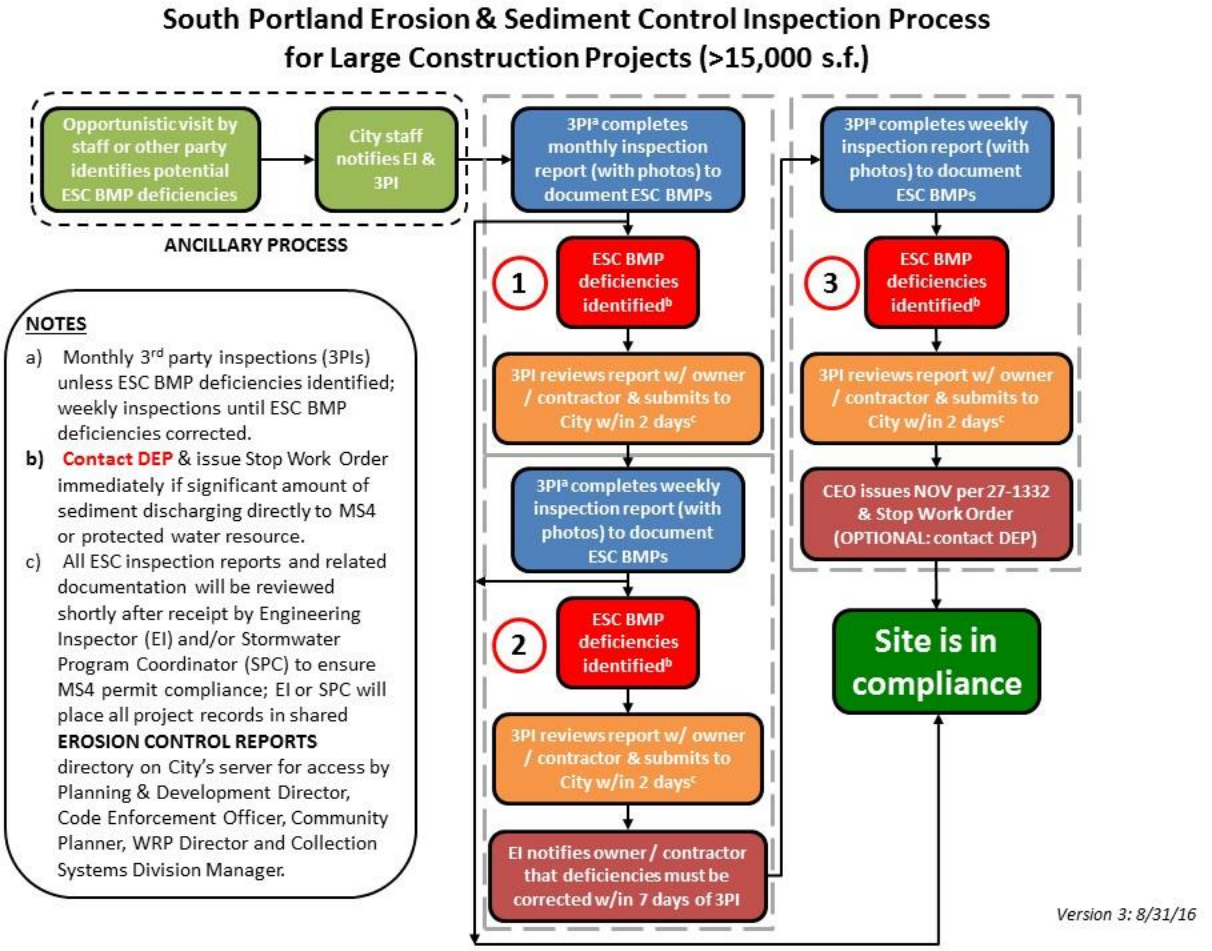
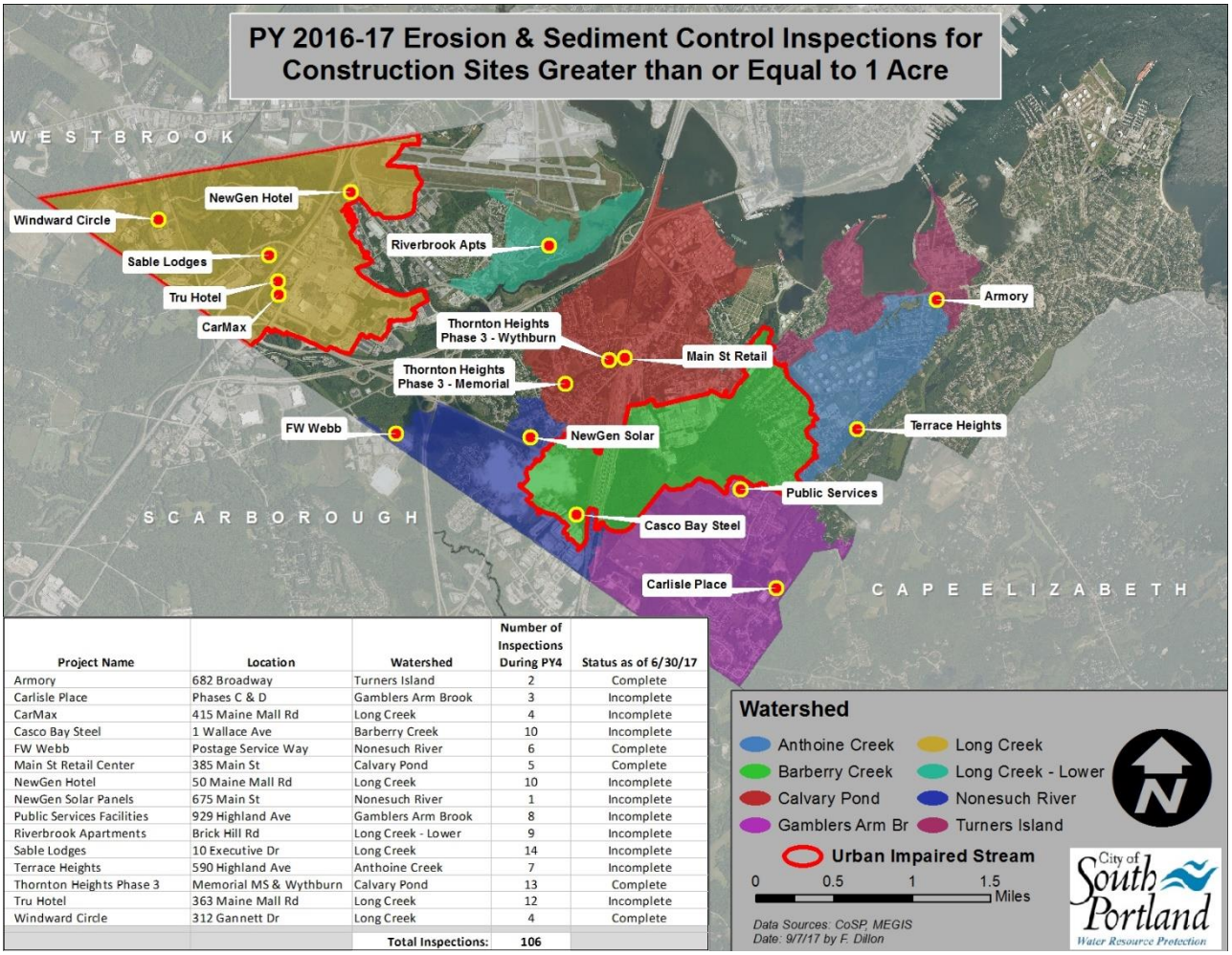


Figure 15: Erosion & Sediment Control inspection process flow chart for larger construction projects

The City's Stormwater Program Coordinator was also closely involved with an ISWG subcommittee that finalized an updated erosion & sedimentation control inspection form intended to comply with the MS4 General Permit, the MCGP and Chapter 500. The form was adapted for use by South Portland 3PIs in July 2017 (**Appendix 6**). To facilitate nearly real-time report transmittal from City-appointed inspectors, we are considering adapting the form for use with a cloud-based data collection application using either Fulcrum or ArcGIS Online in PY2017-18.

During PY2016-17 there were 15 active construction projects that were inspected 106 times primarily by City-appointed inspectors with a few conducted by the City's Engineering Inspector. Almost all of these sites were inspected on at least a monthly basis (Figure 16). Most projects with only a few inspections were either completed shortly after the beginning or started just before the end of PY2016-17. In both cases, most were inspected on multiple occasions during PY2015-16 or PY2017-18.



Project Name	Location	Watershed	Number of Inspections During PY4	Status as of 6/30/17
Armory	682 Broadway	Turners Island	2	Complete
Carlisle Place	Phases C & D	Gamblers Arm Brook	3	Incomplete
CarMax	415 Maine Mall Rd	Long Creek	4	Incomplete
Casco Bay Steel	1 Wallace Ave	Barberry Creek	10	Incomplete
FW Webb	Postage Service Way	Nonesuch River	6	Complete
Main St Retail Center	385 Main St	Calvary Pond	5	Complete
NewGen Hotel	50 Maine Mall Rd	Long Creek	10	Incomplete
NewGen Solar Panels	675 Main St	Nonesuch River	1	Incomplete
Public Services Facilities	929 Highland Ave	Gamblers Arm Brook	8	Incomplete
Riverbrook Apartments	Brick Hill Rd	Long Creek - Lower	9	Incomplete
Sable Lodges	10 Executive Dr	Long Creek	14	Incomplete
Terrace Heights	590 Highland Ave	Anthoine Creek	7	Incomplete
Thornton Heights Phase 3	Memorial MS & Wythburn	Calvary Pond	13	Complete
Tru Hotel	363 Maine Mall Rd	Long Creek	12	Incomplete
Windward Circle	312 Gannett Dr	Long Creek	4	Complete
		Total Inspections:	**106**	

Figure 16: PY2016-17 erosion and sediment control (ESC) inspections for sites greater than 1 acre

BMP 4.4 – Continue Promotion of Certified Contractors in Erosion Control Practices

Responsible Party: Planning Dept. *Additional Party: Water Resource Protection Dept.*

INTENT

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.

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

The City continued to provide information (Maine Erosion and Sedimentation Control Law) to contractors as part of the project proposal and site plan review process.

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

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 Continue Implementation of Program to Address Stormwater Runoff from New Development and Redevelopment Projects

Responsible Party: Planning Dept. *Additional Party: Water Resource Protection Dept.*

INTENT

To ensure that controls are in place to prevent or minimize water quality impacts from newly developed or redeveloped projects.

METHODOLOGY

Continue using City's Stormwater Management Performance Standards (Section 27-1536) 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.

MEASURABLE GOALS

- ***Measureable Goal 5.1.1*** – implement Stormwater Management Performance Standards to ensure the installation of post-construction BMPs from applicable new development and redevelopment projects.

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued to implement the Stormwater Management Performance Standards (local ordinance Sec.

27-1536) to ensure that post-construction BMPs were being installed for applicable new development and redevelopment projects. Implementation of these standards occurs through the Planning Board application review process for all new development or redevelopment projects disturbing 15,000 square feet of land or for nonconforming lots of record. As such, the City's ordinance requirements exceed state standards which generally do not require stormwater management practices for projects disturbing less than 1 acre of land.

BMP 5.2 Continue Implementing Tracking Program for Post-Construction BMPs in Urbanized Area

Responsible Party: Planning Dept. *Additional Party: Water Resource Protection Dept.*

INTENT

To ensure the adequate long-term operation and maintenance of post-construction stormwater BMPs for new development or redevelopment projects that disturb an acre or more (including projects less than 1 acre that are part of a larger common plan of development) and discharge to the City's MS4 system.

METHODOLOGY

Establish and implement a process to notify owners/operators of qualifying properties about annual inspection requirements for post-construction stormwater BMPs; establish and implement a tracking system to ensure that these systems are being inspected annually and properly maintained to ensure effective long-term operation.

MEASURABLE GOALS

- ***Measurable Goal 5.2.1*** – continue implementing tracking program for post-construction stormwater BMPs in the Urbanized Area to ensure completion and receipt of annual inspection certification reports from owner/operator of BMPs.
- ***Measurable Goal 5.2.2*** – conduct yearly evaluations of tracking program and modify if necessary.

Reporting*:* documentation of all BMPs and annual certifications will be entered into a database management system or other recordkeeping system for tracking and annual reporting to DEP. The following information will be included in the annual report:

  - Cumulative number of sites that have post construction BMPs discharging to City's MS4.
  - Summary of the number of sites that have post-construction BMPs discharging into the City's MS4 that were reported to municipality.
  - Number of sites with documented functioning post-construction BMPs.
  - Number of sites that required routine maintenance or remedial action to ensure the post-construction BMP was functioning as intended.

ACTIONS COMPLETED DURING PERMIT YEAR

The City's tracking program for the annual post-construction stormwater BMP inspections in the Urbanized Area continued to document and ensure the submittal of certified 3rd party inspection reports for all

qualifying properties (Figure 17). In addition to inspection requirements for new or redevelopment projects disturbing an acre or more as specified in the MS4 permit, the City's Stormwater Performance Standards (27-1536) also require stormwater BMPs and inspections for projects disturbing 15,000 square feet or more and in some cases even for small non-conforming lots of record (~5,000 s.f.).

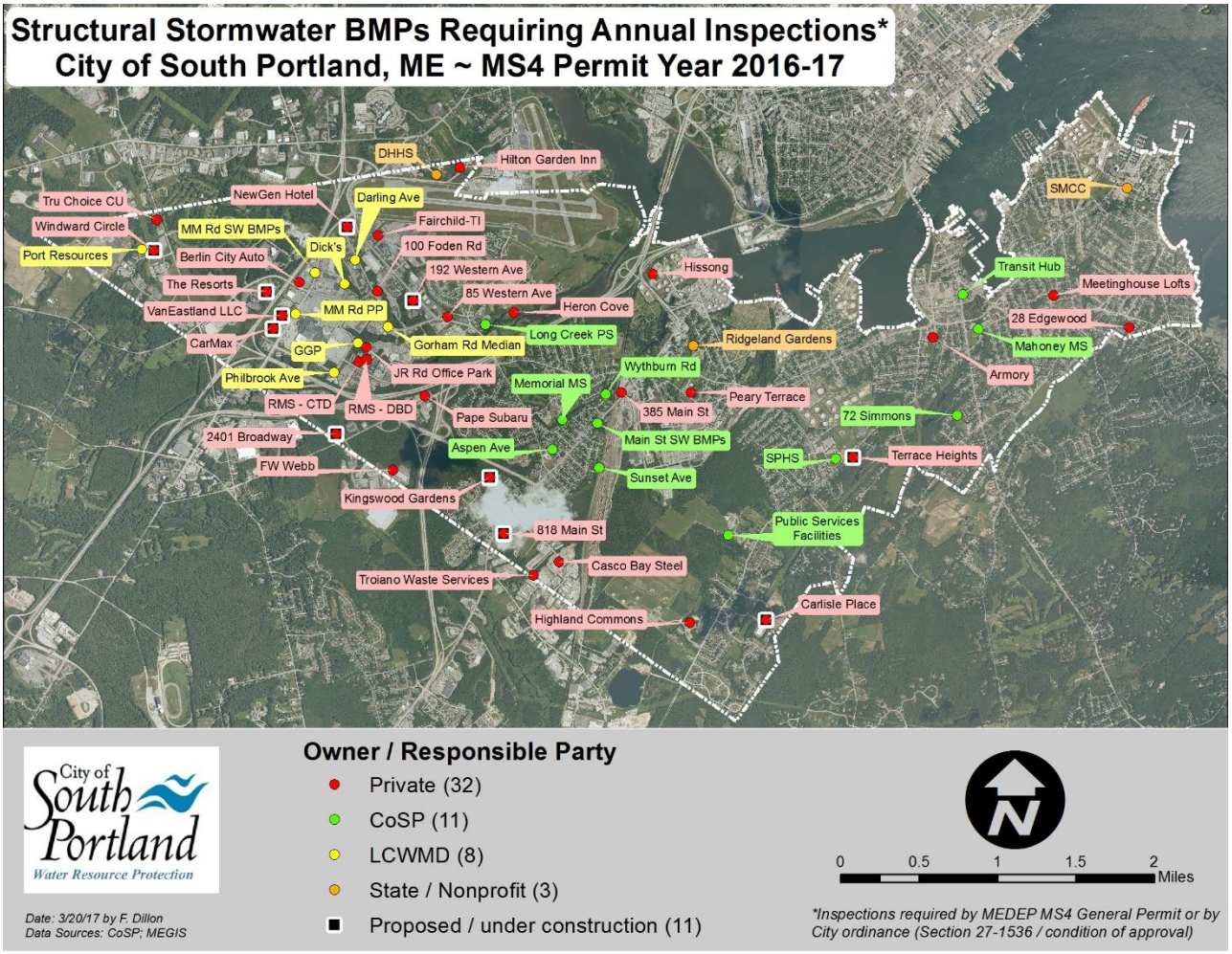


Figure 17: locations of qualifying post-construction structural stormwater BMPs in South Portland for PY2016-17

As of 6/30/17, the properties or projects that currently require (or will require) stormwater BMP inspections were as follows:

- ***32 privately owned properties / projects***
- ***8 properties / projects managed by the Long Creek Watershed Management District*** (2 less than were listed last year because Texas Instruments decided to conduct their own inspections and the Maine Mall parking lot project was suspended indefinitely)
- ***11 City-owned properties / projects***
- ***3 State or nonprofit properties / projects***

The City sent notification letters in February 2017 to all qualifying property owners not participating in the

Long Creek General Permit informing them of the annual post-construction BMP inspection requirements specified in the MS4 permit and City's ordinance. By early September 2017, inspection reports for all but three qualifying properties had been submitted to the City (Table 4). Virtually all of the reports were completed by City-certified 3rd party inspectors and the majority of systems inspected were functioning properly with some minor maintenance needed, such as revegetation or sediment removal. The City also retains inspection reports for stormwater systems covered under the Long Creek General Permit.

Table 4: PY2016-17 properties requiring post-construction 3rd party inspections for stormwater treatment BMPs

INSPECTIONS	3PI Report Received	Follow-up Needed?	Comments
Privately Owned			
Armory - 682 Broadway	n	??	No response to City's notification by 7/15/17; contacted Wes Thames and sent followup email to Priority Real Estate Group on 7/24/17. Sent follow up email on 8/23/17.
100 Foden Road	y	n	Report received from SW Compliance on 5/25/17; some maint completed to ensure system functionality
Berlin City - MM Honda	y	n	IP parcel 68-5D inspected by CCSWCD on 5/23/17; GP parcels 68-5A and 68-5C inspected by Stormwater Compliance on 5/30/17.
Casco Bay Steel	y	y	STI inspected 7/27/17; City concern that project not completed per PB approval and additional work needed.
Highland Commons	y	y	Received 3PI report from Nathan Marles on 7/27/17; several deficiencies identified with follow up needed.
Hilton Garden Inn	y	n	Report received from Acorn report on 6/16/17.
Hissong	n	??	Report submittal extenstion requested on 7/7/17 to allow for construction project completion; report expected by 9/15/17.
Hoyt St Apartments	n	??	No response from owner to City's multiple notifications; contacted design consultant as well. Currently (as of 9/15/17) considering enforcement options.
John Roberts Rd Office Park - 33 Chris Toppi	y	n	Report received from Sterling on 12/1/16
Meetinghouse Lofts	y	n	3PI report received from Ransom on 8/3/17.
Osprey Circle	y	n	Report (w/ photos) received on 8/7/17.
Pape Subaru	y	n	Report received from SGC on 5/18/17.
Peary Terrace	y	n	Report received from WP on 6/6/17.
RMS 28 Chris Toppi Drive	y	n	3PI report received on 8/8/17.
RMS 30 Donald Dean Drive	y	n	3PI report received on 8/8/17.
Troiano Waste Services	y	n	Report received from SGC on 6/28/17.
Tru Choice Credit Union	y	n	Report received from DM Roma on 6/30/17; some maintenance completed for proper functioning.
VanEastland LLC	y	n	Report received on 8/21/17.
Western Ave Crossing	y	n	Report received from STI on 6/30/17.
Publicly Owned		- -	
72 Simmons Rd Rain Garden	y	n	Report received from STI on 6/14/17.
Aspen Ave Biofilter	y	y	Report received from STI on 6/22/17; some maint needed.
Boothy Ave StormTree	y	y	Report received form STI on 6/12/17; some maint needed.
City Hall / Transit Hub	y	y	Report received from STI on 6/8/17; some maint needed.
Community Center Det. Pond	y	n	Report received from STI on 6/15/17.
Hinckley Park Rain Garden	y	y	Report received from STI on 6/14/17; remove veg from rip-rap inlet/outlet areas.
Long Creek PS	y	y	Report received from STI on 6/22/17; some maint needed.
Mahoney Middle School	y	n	Report received from STI on 6/14/17.
Main St Biofilters (10)	y	y	Reports received from STI on 6/22/17; some maint needed.
Memorial MS Gravel Wetland	y	y	Report received from STI on 6/21/17; some maint needed.
Public Services Facilities	y	y	Report received from STI on 6/22/17; some maint needed.
Ridgeland Gardens	y	n	3PI report received on 7/28/17.
SMCC Parking Lot	y	n	Report received from Blais on 7/21/17.
South Portland High School	y	y	Report received from STI on 6/14/17; some maint needed.
State Office Building - DHHS	y	n	Report received from SW Compliance on 5/25/17.
Sunset Ave Gravel Wetlands	y	y	Reports received from STI on 6/22/17; some maint needed.
Wythburn Gravel Wetland	y	y	Report received from STI on 6/22/17.

BMP 5.3 Continue Implementing Procedures for Notifying Site Developers to Consider Incorporating Low Impact Development Techniques

Responsible Party: Planning Dept. *Additional Party: Water Resource Protection Dept.*

INTENT

To promote the use of LID practices for new development and redevelopment projects.

METHODOLOGY

Use Stormwater Management Performance Standards (Sec. 27-1536) to encourage the use of LID practices.

MEASURABLE GOALS

- ***Measurable Goal 5.3.1*** – as specified in the City's Stormwater Management Performance Standards (Sec. 27-1536), projects requiring a Chapter 500 stormwater permit will comply with the practices described in Maine DEP's Stormwater Management Manual, which include low impact development techniques.
- ***Measureable Goal 5.3.2*** – as specified in the City's Stormwater Management Performance Standards (Sec. 27-1536), projects not requiring a Chapter 500 stormwater permit but requiring a Post-Construction or Basic Stormwater Management Plan from the City will use LID practices as determined by the Planning Board to be appropriate for the site.
- ***Measureable Goal 5.3.3*** – as specified in the City's Stormwater Management Performance Standards (Sec. 27-1536), projects not requiring a Chapter 500 stormwater permit but requiring a Drainage Plan from the City are encouraged but not required to use LID practices appropriate for the type of development identified in the Maine DEP's Volume III – BMP Technical Design Manual or City's Stormwater Manual.

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued to rely on Stormwater Management Performance Standards (Sec. 27-1536) to encourage the use of LID practices. All new or redevelopment projects requiring Planning Board review are subject to these standards. The relevant ordinance language is as follows:

> *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…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 (Stormwater) Manual adopted by the Planning Board...Provisions must be made in the Stormwater Management Plan for all stormwater treatment techniques to be maintained in perpetuity.*

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

The City completed a variety of activities for the Pollution Prevention / Good Housekeeping for Municipal Operations Minimum Control Measure 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 Continue to Maintain Inventory of Municipal Properties, Facilities & Activities for Implementation of Operation & Maintenance Plans

Responsible Party: Stormwater Program Coordinator *Additional Party: N/A*

INTENT

To ensure the use of structural and non-structural controls at all applicable municipally owned or operated properties and facilities that will reduce stormwater pollution to the maximum extent practicable.

METHODOLOGY

Continue to maintain GIS-based inventory of all City properties with a list of associated municipal activities that have the potential to generate stormwater pollution and continue implementation of O&M procedures.

MEASURABLE GOALS

- ***Measurable Goal 6.1.1*** – continue maintaining and updating inventory of all municipal operations conducted in, on, or associated with facilities, buildings, golf courses, cemeteries, parks and open space owned or operated by the City that have the potential to cause or contribute to stormwater or surface water pollution.
- ***Measurable Goal 6.1.2*** – continue implementing 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 all areas of the City within the Urbanized Area. These procedures must address the following, as applicable:
    - Proper use, storage, and disposal of petroleum and non-petroleum products, hazardous materials, waste materials, pesticides and fertilizers, including minimizing the use of these products and an alternative product analysis;
    - Spill response and prevention;
    - Vehicle and equipment storage, maintenance, and fueling;
    - Amount and type(s) of deicing materials used each deicing season;
    - Landscaping and lawn care, including, where applicable, an evaluation of reduced mowing

frequencies, establishing and maintaining buffers, and cutting vegetation within 100 feet of a stormwater conveyance or surface water;

- Erosion and sedimentation control;
- Feeding gulls, waterfowl or other wildlife.

ACTIONS COMPLETED DURING PERMIT YEAR

South Portland's cadastral records from November 2015 identified 208 parcels that are owned by the City (Figure 18). Various municipal departments are responsible for maintaining these properties in accordance with the Operations & Maintenance Plans developed by the Interlocal Stormwater Working Group in 2015.

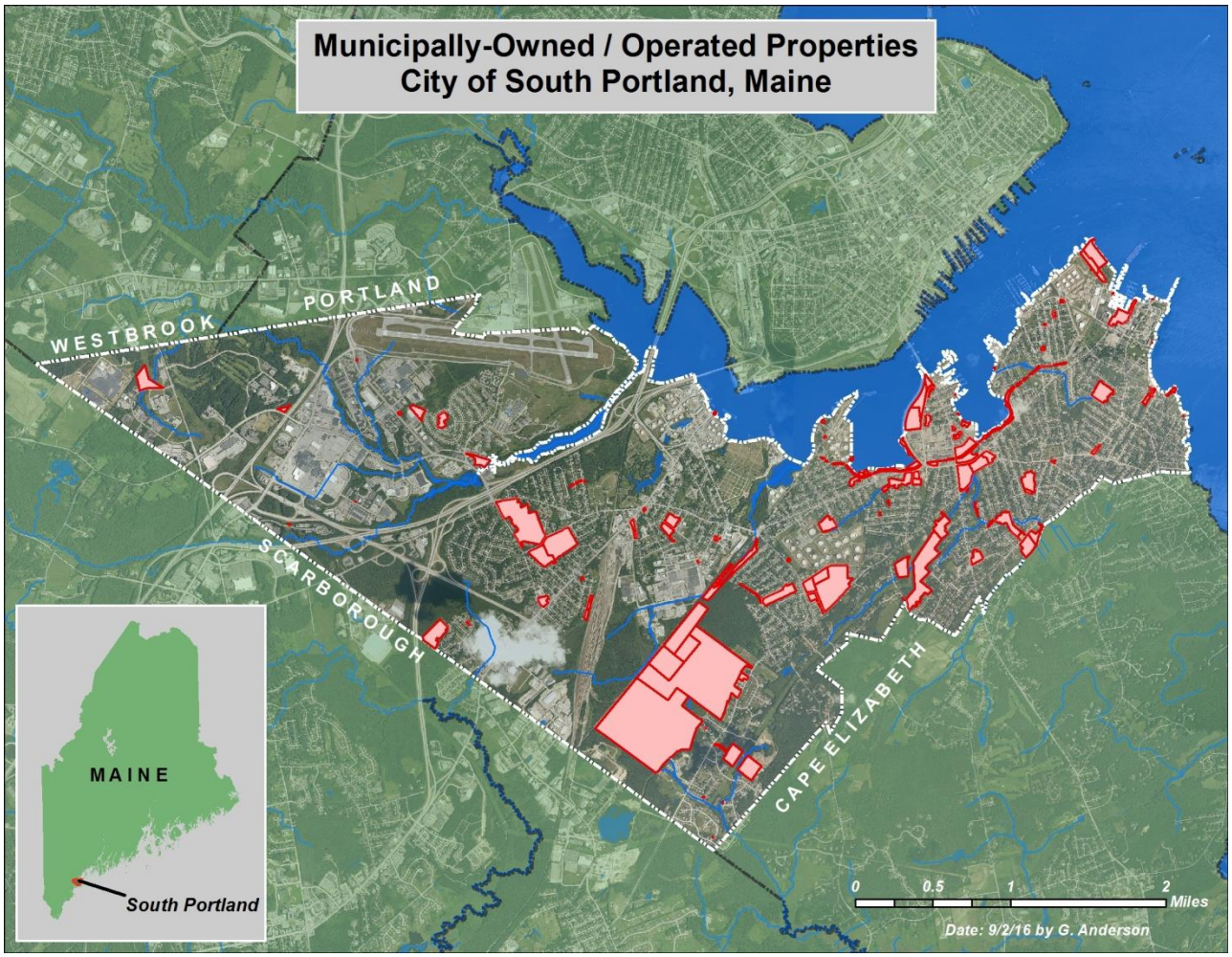


Figure 18: properties owned and operated by the City and subject to O&M plans to minimize / prevent polluted stormwater runoff

BMP 6.2 Continue Implementation of Municipal Employee Training Program

Responsible Party: Stormwater Program Coordinator *Additional Party: N/A*

INTENT

To provide employee training that will prevent or reduce stormwater pollution from municipal operations and facilities.

METHODOLOGY

Continue working independently and in partnership with the Interlocal Stormwater Working Group and Maine DEP to provide municipal employees with relevant training for the prevention or reduction of stormwater pollution from municipal operations.

MEASURABLE GOALS

- ***Measurable Goal 6.2.1*** – continue to identify training needs and materials and revise / update as necessary.
- ***Measurable Goal 6.2.2*** - continue implementing municipal employee training program to reduce stormwater pollution potential from municipal operations. Topics to be covered by the training program may include, but not be limited to:
    - Maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural stormwater controls to reduce pollutants discharged from the separate storm sewers.
    - Controls for reducing or eliminating the discharge of pollutants into the separate storm sewers from streets, roads, highways, municipal parking lots, maintenance and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations, snow disposal areas, and waste transfer stations.
    - Procedures for disposing of waste removed from the separate storm sewers and areas listed above in accordance with all regulatory requirements (such as dredge spoil, accumulated sediments, floatables, and other debris).

ACTIONS COMPLETED DURING PERMIT YEAR

The City participated in or provided three Stormwater Pollution Prevention Plan (SWPPP) and/or Good Housekeeping / Pollution Prevention (GH/PP) training events in PY2016-17. On 12/6/16, the City partnered with Maine DEP to provide site-specific Stormwater Pollution Prevention Plan (SWPPP) training to 3 staff members from the City's Transfer Station facilities. The formal training presentation was followed by an inspection of the Transfer Station facilities with DEP staff using the City's updated quarterly SWPPP inspection form (Figure 19). The inspection portion of the training was especially useful to help City staff better understand the importance of proper good housekeeping and pollution prevention practices in minimizing the adverse impacts of polluted stormwater runoff.

Figure 19: DEP's Alison Moody & Laura Crossley conduct inspection of Transfer Station facilities with City staff on 12/6/16.

On 5/25/17, the City partnered with Maine DEP and ISWG to provide good housekeeping and pollution prevention training to staff from MS4 communities throughout the greater Portland area including 18 South Portland employees (Figure 20). The City of South Portland has hosted this annual event at our Community Center for the past several years. On 6/13/17, the Stormwater Program Coordinator provided site-specific good housekeeping and pollution prevention training to 15 employees from the Water Resource Protection Department's Treatment Systems Division. The presentation was very well received by Treatment Systems Division staff and was followed a lively discussion about the numerous overlaps between the wastewater and stormwater professions. In addition to the City's continuing commitment to partner with MEDEP and ISWG for ongoing annual SWPPP and GH/PP training, we will also continue providing this training directly to various municipal departments to ensure that relevant staff understand how they are the first line of defense in minimizing the adverse effects of polluted stormwater runoff.

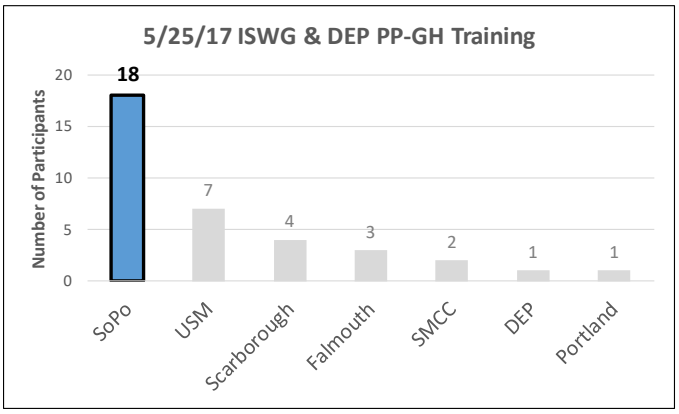


Figure 20: 5/25/17 MEDEP & Interlocal Stormwater Working Group Pollution Prevention & Good Housekeeping training event

BMP 6.3 Continue Implementation of Street Sweeping Program

Responsible Party: Public Works Dept. *Additional Party: Water Resource Protection Dept.*

INTENT

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.

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

The City continued its ongoing sweeping program for all municipally owned or operated streets and parking areas along with a more intensive sweeping regimen for the Long Creek watershed in support of restoration efforts there.

BMP 6.4 Continue Cleaning of Stormwater Structures Including Catch Basins

Responsible Party: Water Resource Protection Dept. *Additional Party: N/A*

INTENT

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.

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. Stormwater structures and catch basins will be cleaned more frequently if inspections indicate excessive sediment accumulation (i.e., when the sump is greater than or equal to 50 percent filled).

ACTIONS COMPLETED DURING PERMIT YEAR

For PY2016-17, the City once again cleaned virtually 100% of all publicly-owned catch basins with sumps. We continued using ArcGIS Online (AGOL) with iPads to track data collection and as of 9/11/17, approximately 266 tons of grit material was removed from 2,629 catch basins and disposed of at Commercial Paving & Recycling in Scarborough. The total operational cost to complete this work was just over $30,000 and the average catch basin cleaning cost was approximately $11.45 (Table 5).

Table 5: summary of 2017 catch basin cleaning costs

2017 CITY OF SOUTH PORTLAND CATCH BASIN CLEANING SUMMARY (as of 9/11/17)							RELATIVE EFFICIENCIES			
Watershed	CBs Cleaned	Labor Hours	Fuel Use (Gallons)	Grit Tons	Grit Tons / CB	Approx. Ops. Cost	Labor Hrs/CB	Gallons Fuel/CB	Ops Cost $/Ton	$/CB Cleaned
Anthoine Creek	176	39.00	59.00	22.48	0.13	$2,304	0.22	0.34	$102.47	$13.09
Barberry Creek	204	36.75	48.50	25.09	0.12	$2,349	0.18	0.24	$93.63	$11.52
Breakwater	286	49.00	52.50	17.91	0.06	$2,349	0.17	0.18	$131.13	$8.21
Calvary Pond	421	89.75	71.00	43.91	0.10	$4,800	0.21	0.17	$109.32	$11.40
Clarks Pond	143	30.00	33.00	11.74	0.08	$1,477	0.21	0.23	$125.84	$10.33
Danforth Cove	15	3.50	7.50	1.21	0.08	$171	0.23	0.50	$141.48	$11.41
Gamblers Arm Bk	199	31.00	45.00	22.96	0.12	$2,077	0.16	0.23	$90.47	$10.44
Kimball Brook	47	5.00	8.00	4.98	0.11	$399	0.11	0.17	$80.11	$8.49
Long Creek	258	68.50	198.00	32.42	0.13	$3,872	0.27	0.77	$119.42	$15.01
Long Creek Lower	102	23.00	38.00	10.71	0.11	$1,240	0.23	0.37	$115.74	$12.15
Mill Creek	193	56.50	70.00	25.39	0.13	$2,957	0.29	0.36	$116.48	$15.32
Nonesuch River	93	23.00	26.00	8.93	0.10	$1,131	0.25	0.28	$126.60	$12.16
Red Brook	26	8.00	17.00	2.75	0.11	$390	0.31	0.65	$141.91	$15.01
Trout Brook	131	37.75	28.00	11.07	0.08	$1,653	0.29	0.21	$149.33	$12.62
Turners Island	241	35.00	79.90	8.99	0.04	$1,568	0.15	0.33	$174.46	$6.51
Willard Beach	94	19.50	28.00	15.42	0.16	$1,354	0.21	0.30	$87.80	$14.40
Totals:	**2629**	**555.25**	**809.40**	**265.96**	**0.10**	**$30,091**	**0.21**	**0.31**	**$113.14**	**$11.45**

* Assumes $28.07 hourly labor rate; $1.82 / gal fuel cost; and $49 / ton grit disposal cost. DOES NOT include maintenance or equipment replacement costs.

BMP 6.5 Continue Maintenance and Upgrade of Stormwater Conveyances, Structures and Outfalls

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

INTENT

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.

MEASURABLE GOALS

- ***Measurable Goal 6.5.1*** – continue repairing or upgrading MS4 system conveyances, structures, and outfalls through general maintenance, repairs and new construction, and as part of the combined sewer system separation program.
- ***Measurable Goal 6.5.2*** – continue to evaluate and implement a prioritized schedule, as necessary, for repairing or upgrading the conveyances, structures and outfalls of the its MS4.

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued its ongoing inspection and maintenance program for stormwater conveyances and completed 99 construction projects for PY2016-17. Project examples include stormwater treatment system maintenance, catch basin repair or replacement, storm drain or combined sewer line repair / replacement, culvert replacement, regrading to improve drainage, and ditch armoring with rip rap for erosion control, among others. Excluding equipment replacement and maintenance costs, the City expended just over $73,000 – or approximately 62% of the annual construction program budget ($117,411) – on a variety of stormwater system repair and replacement projects for the 2016-17 permit year (Figure 21).

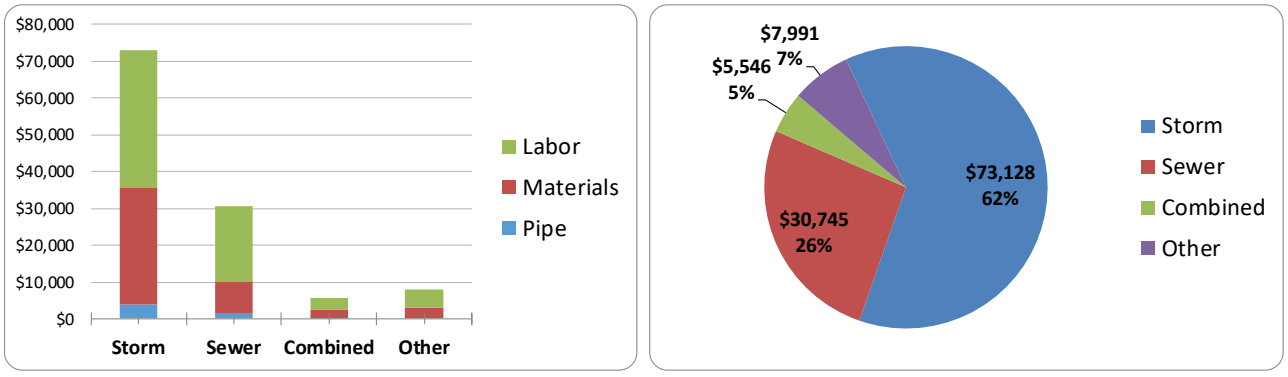


Figure 21: summary of construction project expenses for South Portland's stormwater and sewer systems

BMP 6.6 Continue Implementation of Stormwater Pollution Prevention Plans (SWPPPs)

Responsible Party: Stormwater Program Coordinator *Additional Party: Public Works & School Depts.*

INTENT

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

METHODOLOGY

Work with department heads and other relevant staff to ensure that SWPPPs are current being implemented as specified.

MEASURABLE GOALS

- ***Measurable Goal 6.6.1*** – continue implementing SWPPPs for public works facilities, transfer station and school bus maintenance facilities. Collaborate with DEP and ISWG on developing and implementing a training program for municipal facility staff informing them about the requirements of the SWPPP and how to implement it effectively. The managers for each facility will retain an up-to-date printed copy of the SWPPP on each site so affected employees can refer to it as needed.

ACTIONS COMPLETED DURING PERMIT YEAR

SWPPPs have been developed for the public works facilities, school bus maintenance garage and transfer station, the latter of which was significantly updated to reflect new facilities that were completed in early 2016. The City is currently constructing a new public works facility on outer Highland Avenue that is expected to be ready for occupancy by the late fall of 2017. The DPW SWPPP will be updated to reflect these changes upon completion of the new facility. (The current DPW facility on O'Neil Street will be vacated and redeveloped for residential housing). Staff from numerous City departments attended SWPPP and municipal good housekeeping / pollution prevention training provided by the City's Stormwater Program Coordinator, MEDEP and ISWG as described for BMP 6.2 above.

APPENDICES

Appendix 1: ISWG Permit Year 4 Summary of MCMs 1 & 2

ISWG Permit Year 4 (2016-2017) Summary of Minimum Control Measures 1 & 2

APPENDIX A-1: Permit Year 4 (PY4) Summary of Minimum Control Measures 1 & 2

The following is a summary of work facilitated by the Cumberland County Soil & Water Conservation District (CCSWCD) on behalf of the Interlocal Stormwater Working Group (ISWG), and in some instances for all statewide municipalities.

MCM1: Public Education and Outreach on Stormwater Impacts

Stormwater Public Awareness Plan

<table>
<tr><th>Task</th><th>Status</th><th>Details[1]</th></tr>
<tr><td>Summarize plan implementation to date</td><td>complete</td><td>Plan goal: As a result of our efforts, at the end of this permit cycle, 50% of homeowners, aged 35-55, in the 30 regulated small MS4 municipalities 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 water bodies used for drinking, fishing, and swimming.</td></tr>
<tr><td>Conduct awareness media campaign utilizing television and online advertising</td><td>complete</td><td>CCSWCD coordinated a statewide television and online media campaign through Time Warner Cable. The original ducky and devil ducky ads ran two weeks per month from August through October 2016 in PY4. The ads were shown on cable television stations most likely to reach the target audience (i.e., homeowners, aged 35-55, in Maine's 30 MS4 communities), including: AMC, Animal Planet, CNN, Discovery, ESPN, Food Network, Freeform, FX, Fox News, HGTV, NESN, National Geographic, Nickelodeon, Outdoor Network, The Weather Channel.

The following television campaign data were provided by Time Warner Cable:
<table>
<tr><th>Television Airplay</th><th>Est. Reach[2]</th><th>Est. Frequency[3]</th></tr>
<tr><td>644</td><td>19.3%</td><td>2.8</td></tr>
</table>
Time Warner Cable placed online ads with a clean water message that directed users to the Think Blue Maine website. Ads were placed on websites most likely to reach the target audience (e.g. local and national news websites, outdoor-themed sites). The online ad campaign ran continuously from August through October 2016.

The following online campaign data were provided by Time Warner Cable:
<table>
<tr><td>Impressions[4]</td><td>316,255</td></tr>
<tr><td>Click throughs</td><td>683</td></tr>
<tr><td>Click through rate[5]</td><td>0.21% (industry average is 0.04-0.08%)</td></tr>
</table>
Based on analytical software installed on the Think Blue Maine website, hits during the online media campaign were more than nine times higher than hits during the same three-month time period in 2015 when the online ad campaign was inactive. Between August and October 2016, there were 3,528 visits to the Think Blue Maine website. Between March and June 2015, there were 381 visits.</td></tr>
</table>

[1] CCSWCD maintains documentation for all MCM 1&2 activities detailed in this summary report.
[2] Reach is the percentage of the audience that saw the television ads.
[3] Frequency is the number of times the audience saw the television ads.
[4] Impressions are the number of times users saw the online ads.
[5] Click thru rate is the number of users that click on a specific link out of the total users that view a page, email, or advertisement.

Promote and participate in local public event	complete	*Promotion* With the help of ISWG representatives, CCSWCD promoted ISWG's public event, the Urban Runoff 5K and Green Neighbor Family Fest, via social media, paid online ads, and direct email communication to participants. In addition, 340 posters were distributed throughout the 14 ISWG communities by ISWG representatives; radio ads aired on 98.9 WCLZ during the month of April. In addition, News 8 WMTW developed a 20 second ad that ran on their station throughout the month of April. They also conducted six on-air interviews the morning of the event and covered the race and festival on April 22, 2017. *Participation* Representatives from the ISWG municipalities volunteered or participated at the events, on April 22, 2017. Many representatives provided logistical support for the race and festival (e.g. flagging, parking, set up, etc.). In addition, the City of Portland and other organizations provided educational activities focused on keeping water clean. Please see the MCM2 summary for more details about the events.

Original PY4 Awareness Plan Requirement: *Carry out comprehensive evaluation of awareness campaign utilizing data provided by cable carriers and statewide public survey.*
 	
Revised PY4 Awareness Plan Requirement: *Finalize statewide public survey and survey methods; pilot the survey with municipal representatives.*
	complete	On behalf of ISWG, CCSWCD worked with representatives from the MS4 regional groups to revise the existing DEP-approved Statewide Awareness Plan throughout PY4. The original DEP-approved Plan called for the statewide public survey to be conducted in PY4; however, DEP felt that the Plan timeline conflicted with the Permit language and required that it be changed. Through official correspondence, phone conversations, and a video conference between DEP and representatives from the MS4 regional groups on 12/5/16, a compromise was reached.
		
		The revised DEP-approved Plan was modified as follows and approved by DEP in a letter dated 2/21/17:
		• Permit Year 4 requirements:
		  ○ Finalize survey tool: incorporate DEP's comments into the survey and circulate it to DEP and regional groups for review and comment circa February 2017
		  ○ Finalize survey methods: input final survey into an online tool (i.e., Survey Monkey) circa March 2017
		  ○ Pilot survey: request that statewide partners, municipal staff, and others test the online survey and provide feedback on question language, survey duration, etc. by May 31, 2017; modify survey as needed based on pilot survey feedback on or by June 30, 2017
		• Permit Year 5 requirements:
		  ○ Implement statewide survey: use targeted online advertising to drive traffic to the statewide survey; also purchase survey responses from Survey Monkey to inform evaluation
		  ○ Analyze survey results: provide a draft analysis/report to regional groups by June 30, 2018
		  ○ Provide assessment of all awareness activities: finalize analysis based on input from the facilitators of the statewide clusters for inclusion in the PY5 annual report (due September 15, 2018)
		
		Per the new DEP-Approved Awareness Plan requirements, CCSWCD incorporated comments and feedback from DEP and the MS4 clusters to finalize the statewide public survey for evaluating impact of our awareness activities. CCSWCD also compiled the methods and determined the target sample size for the survey. This information was provided to DEP and the MS4 clusters for their review on 5/12/17. If an additional copy is required, please contact jfitch@cumberlandswcd.org.

		Following the input of the survey into Survey Monkey, the online evaluation survey was piloted by CCSWCD staff and municipal reps from the MS4 clusters. Those who took the survey provided feedback on the survey content and the functionality of the online format. Minor revisions to the survey were made based on feedback. The survey will be implemented with the public in early PY5.

Targeted Best Management Practices Adoption Plan

Task	Status	Details
Summarize plan implementation to date	complete	Plan goal: As a result of our efforts, at the end of this permit cycle, 15% of college-educated homeowners, aged 35-55, residing in the urbanized area and/or the priority watershed within the ISWG communities and who currently apply fertilizers and pesticides to their lawns will reduce their use of lawn chemicals.

Point of Sale

Retain 21 Point of Sale locations in the ISWG communities	complete	The ISWG YardScaping Point of Sale Program continued to be maintained at more than the 21 locations required. Twenty-two stores participated in PY4. The distribution of the stores in PY4 is as follows:
		Biddeford: 1
		Cape Elizabeth: 0
		Cumberland: 1
		Falmouth: 2
		Freeport: 1
		Gorham: 2
		Old Orchard Beach: 0
		Portland: 3
		Saco: 1
		Scarborough: 1
		South Portland: 3
		Westbrook: 2
		Windham: 3
		Yarmouth: 2
Maintain Point of Sale program in Home Depot stores within ISWG communities	complete	The ISWG YardScaping Point of Sale program continued to be maintained in the four Home Depot stores located in ISWG municipalities (Biddeford, Portland, South Portland, and Windham). Program components include a staff training, distribution of educational materials to the general public, and an educational event for customers at each store.

Adult Education

Offer a minimum of seven adult education events per year on YardScaping practices	complete	Once again, the number of YardScaping educational events offered in the ISWG municipalities far exceeded the minimum required in the Plan. In PY4, 15 YardScaping events were provided as follows:
		Portland: 7/9/16, Peak's Island Garden Club workshop, 22 participants
		Biddeford: 9/8/16, Home Depot community education event, 7 interactions
		Windham: 9/9/2016, Home Depot community education event, 1 interaction
		Portland: 9/10/2016, GreenFest, 47 interactions

		Gorham: 9/10/2016, O'Donal's Nursery community workshop, 7 participants
		Portland: 9/15/2016, Home Depot community education event, 10 interactions
		South Portland: 9/16/2016, Home Depot community education event, 3 interactions
		South Portland: 9/20/2016, adult education class, 2 participants
		Scarborough: 9/22/2016, adult education class, 7 participants
		South Portland: 4/4/2017, adult education class, 8 participants
		Yarmouth: 4/6/2017, Yarmouth Water District community workshop, 16 participants
		South Portland: 5/17/17, Osewantha Garden Club Annual Meeting, 9 participants
		Yarmouth: 5/20/2017, Yarmouth Public Works Open House, 30 participants
		Portland: 6/3/17, Home Depot community education event/staff training, 19 interactions
		South Portland: 6/3/17, Home Depot community education event/staff training, 19 interactions
Promote adult education classes	complete	Information on YardScaping classes was published in local adult education catalogs, in local newspapers and online calendars, using social media, and through host locations.
Track behavior change	complete	CCSWCD staff documented class evaluations and contacted past adult education class participants to determine which YardScaping practices were implemented. Please see summary of behavior change reported by participants of PY3 classes, as well as those practices participants of PY4 classes intend to implement below.

Adult Education Behavior Change Tracking

During the fall of 2016, phone calls were made to participants of YardScaping adult education classes held in the fall of 2015 and spring of 2016 in order to determine class participants' level of implementation of the YardScaping practices. Follow up phone calls are made six months to one year after the class to allow participants a growing season to implement the recommended practices. Our follow-up provided an anticipated rate of compliance for the YardScaping practices that class participants intended to implement.

Follow up from Permit Year 3 Adult Education Classes			
Lawn Care Practice	**Plan to implement**	**Implemented Practice**	**% behavior change**
Set Mower to a height of 3"	10	10	100.00%
Leave grass clippings[6]	11	?	?
Sharpen mower blades[6]	11	?	?
Aerate	22	13	60.0%
Topdress	20	10	50.0%
Overseed	22	11	50.0%
Use low maintenance seed	23	4	18.2%
Weed Control	23	6	27.3%
Get a soil test	25	5	18.2%
Use nitrogen-only fertilizer	22	4	18.2%
Use compost tea	24	9	36.4%

[6] Unable to determine based on follow up

As part of follow up behavior change tracking, CCSWCD asked past participants about barriers to implementing YardScaping practices, if they did not adopt the practices as indicated on their post-class evaluation. The following were common responses:

- *Practices were too expensive*
- *Lack of time to implement practices*
- *Companies would not aerate due to the drought*
- *Lawn care company would not leave clippings on the lawn, as requested*

A total of 61 people participated in the YardScaping adult education classes in PY4. Below are the results of the Permit Year 4 post-class evaluations completed by the YardScaping class participants.

Permit Year 4 Post-Class Evaluations			
Lawn Care Practice	**Plan to implement**	**Currently do not implement**	**% planning to implement**
Set Mower to a height of 3"	21	21	100.0%
Leave grass clippings	6	10	60.0%
Sharpen mower blades	26	33	78.8%
Aerate	35	52	67.3%
Topdress	41	52	78.9%
Overseed	44	48	91.7%
Use low maintenance seed	35	41	85.4%
Get a soil test	37	50	74.0%
Use nitrogen-only fertilizer	38	51	74.5%
Use compost tea	34	52	65.4%

CCSWCD staff will contact the class participants from the Permit Year 4 classes in Permit Year 5 to determine which behaviors have been adopted.

Targeted Information Distribution

<table>
<tr><td>Distribute lawn care information in one targeted neighborhood per ISWG community</td><td>complete</td><td>ISWG used online Facebook ads directed at the target audience for behavior change (college educated homeowners, aged 35-55) in each of the ISWG municipalities. The ads promoted the YardScaping program and directed to CCSWCD's YardScaping page.
The following data were provided by Facebook:
<table>
<tr><th>Impressions</th><th>Frequency</th><th>Click Through Rate</th></tr>
<tr><td>12,189</td><td>2.12</td><td>0.05%
(industry average is 0.04-0.08%)</td></tr>
</table></td></tr>
</table>

Websites & Free Media

Maintain and monitor CCSWCD YardScaping website	complete	The YardScaping page on CCSWCD's website is up-to-date with partner stores and updated fact sheets. YardScaping event information is posted on both CCSWCD's website and Facebook page.
Newspaper coverage related to YardScaping activities and healthy lawn care	complete	*South Portland Sentry:* City pushed for no-penalty pesticide ban (August 12, 2016)
		The Forecaster: South Portland Council gives OK to pesticide ban (August 16, 2016)
		South Portland Sentry: South Portland passes first look at pesticide ban (August

		19, 2016)
		Portland Press Herald: South Portland passes pesticide ban that puts education over enforcement (September 7, 2016)
		The Forecaster: Falmouth to explore pesticide restrictions (November 8, 2016)
		The Forecaster: South Portland plans to educate residents on pesticide ban (September 15, 2016)
		The Forecaster: South Portland bans pesticides, but skips penalties (September 8, 2016)
		Portland Press Herald: Summer may be over, but your lawncare isn't (September 7, 2016)
		Portland Press Herald: South Portland passes pesticide ban that puts education over enforcement (September 18, 2016)
		The Forecaster: Portland task force weighs ban, restrictions on pesticides (December 13, 2016)
		The Forecaster: Portland task force to keep working on pesticide use (January 3, 2017)
		The Forecaster: Portland panel sends pesticide rules to City Council (March 7, 2017)
		The Forecaster: Falmouth explores limits on pesticides (March 28, 2017)
		Portland Press Herald: Letter to the editor: Back organic lawn care ordinance, not pesticides (April 6, 2017)
		Portland Press Herald: Letter to the editor: Get involved in protecting environment from pesticides (May 9, 2017)
		Portland Press Herald: Letter to the Editor: Smart environmentalism means letting grass grow (May 29, 2017)
		Green & Healthy Maine Homes: The lawn that loves you back (spring/summer 2017) (CCSWCD staff were interviewed for this article)
		The Forecaster: Portland city councilors to take up regulation of pesticides (June 13, 2017)
		Portland Press Herald: Pesticide restriction plan to get Portland City Council hearing Wednesday (June 19, 2017)
		Portland Press Herald: Letter to the editor: Take a stance at Portland workshop for land care using organics (June 20, 2017)
		Portland Press Herald: Speakers at hearing urge Portland councilors to ban pesticides but differ on best approach (June 21, 2017)
		The Forecaster: Portland pesticide opponents put pressure on city councilors (June 27, 2017)

Municipal Permit Awareness Plan

Task	Status	Details
Summarize plan implementation to date	complete	Plan goal: As a result of our efforts, at the end of this permit cycle, municipal councilors, managers, and directors of Planning, Public Works, and Parks & Recreation (or equivalent) departments in the ISWG communities will understand that they are subject to a Maine Pollutant Discharge Elimination System (MPDES) permit and will understand the requirements under that permit. They will also gain an understanding of stormwater pollution, how their municipal operations may contribute to stormwater pollution, and steps that can be taken to reduce stormwater pollution.

Materials Development

Develop permit awareness materials	complete & ongoing	**Fact Sheets:** Fact sheets developed in PY2 were updated for ISWG municipalities as needed in PY4. These fact sheets were provided to incoming council members in ISWG municipalities. **PowerPoint:** The PowerPoint presentation developed in PY2 was updated/tailored for the municipalities identified to receive targeted municipal outreach in PY4.

Targeted Outreach

Provide targeted outreach to four to five ISWG communities each Permit Year.	complete	CCSWCD provided targeted outreach to municipal staff and elected officials in Falmouth, Freeport, Portland, Yarmouth, and Cumberland in PY4. The designated MS4 stormwater coordinator from each municipality worked with CCSWCD staff to determine what support would be most beneficial to their stormwater programs in their community. CCSWCD was able to tailor efforts to the specific needs of each municipality by offering many varied methods of support. CCSWCD offered numerous trainings, facilitation of interdepartmental meetings, support and training for fieldwork components of the stormwater program, support and training for municipal and construction site inspections, and more.		
		Falmouth	07/18/16	Meeting with DPW staff
			07/18/16	Interdepartmental meeting
			07/18/16	Site visit to DPW garage
			07/19/16	Audit support
		Freeport	08/09/16	Meeting with Town Engineer
			08/15/16	Interdepartmental meeting
			08/16/16	Audit support
		Cumberland	06/13/17	CCTV slides developed and in rotation
			05/22/17	Council presentation
		Yarmouth	01/09/17	Meeting with Town Engineer
			02/01/17	Interdepartmental meeting
			03/03/17	IDDE Program support; SOP development
		Portland	11/14/16	Meeting with DPW staff
			11/21/16	Meeting with DPW staff
			12/16/16	Meeting with DPW staff
			01/04/17	Development of Audit Prep Task List
		Municipalities may have conducted additional outreach outside of the efforts tracked through the ISWG Municipal Permit Awareness Plan.		

General Outreach

Provide presentation to municipal councils or planning boards about municipal stormwater program	complete	Under ISWG's Municipal Permit Awareness Plan, each municipality is required to provide a presentation to their municipal council or planning board about their MS4 program during each permit year. Municipalities may elect to receive CCSWCD support for the presentation to Council (noted below).
		Biddeford: 02/21/17
		Cape Elizabeth: 03/22/17
		Cumberland: 05/22/17
		Falmouth: 04/04/17
		Freeport: 02/07/17

		Gorham: 08/2/16
		Old Orchard Beach: 04/06/17
		Portland: 07/26/16 and 09/17/16
		Saco: 06/12/17
		Scarborough: 06/28/17
		South Portland: 01/18/17 and 08/18/17
		Westbrook: no information provided
		Windham: 04/18/17
		Yarmouth: Council certifies that they are aware of the municipal stormwater program (5/4/17).

Cooperative Outreach

<table>
<tr><td rowspan="14">Provide outreach through a minimum of one partner organization</td><td rowspan="14">complete</td><td rowspan="12">Green SnowPro Workshop – 09/22/16

ISWG/CCSWCD partnered with the Long Creek Watershed Management District and experts from New Hampshire's Green SnowPro program to provide training and certification to area winter maintenance workers. Attendees learned winter maintenance techniques that help keep our water resources clean, including:
• Environmental & infrastructure concerns
• Pre-season prep
• Site inspection & expectations
• Calibration
• Pre-treatment: before the storm
• During the storm activities
• Recordkeeping & salt accounting system</td><td>Municipality</td><td>Number of Attendees</td></tr>
<tr><td>Biddeford</td><td>1</td></tr>
<tr><td>Cape Elizabeth</td><td>0</td></tr>
<tr><td>Cumberland</td><td>0</td></tr>
<tr><td>Falmouth</td><td>2</td></tr>
<tr><td>Freeport</td><td>1</td></tr>
<tr><td>Gorham</td><td>0</td></tr>
<tr><td>Old Orchard Beach</td><td>6</td></tr>
<tr><td>Portland</td><td>9</td></tr>
<tr><td>Saco</td><td>0</td></tr>
<tr><td>Scarborough</td><td>0</td></tr>
<tr><td>South Portland</td><td>0</td></tr>
<tr><td>Westbrook</td><td>0</td></tr>
<tr><td>Windham</td><td>0</td></tr>
<tr><td>Yarmouth</td><td>3</td></tr>
<tr><td rowspan="4">Regional Clean Water Collaborative

Cumberland County Government, the Greater</td><td>Municipality</td><td colspan="4">Number of Attendees</td></tr>
<tr><td></td><td>8/18[7]</td><td>10/13[7]</td><td>12/9</td><td>5/2</td></tr>
<tr><td>Biddeford</td><td></td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Cape Elizabeth</td><td></td><td></td><td></td><td>1</td></tr>
</table>

[7] 8/18 and 10/13 meeting were smaller, "design team" meetings

		Portland Council of Governments, CCSWCD and municipal partners have formed the Regional Clean Water Collaborative, aimed to be a comprehensive resource for municipalities for clean water topics.	Cumberland				1
			Falmouth	1	1	1	1
			Freeport			1	1
			Gorham			1	1
			Old Orchard Beach				2
			Portland	1	1	2	2
			Saco			2	2
			Scarborough		1	2	2
			South Portland			1	1
			Westbrook			1	1
			Windham	1	1	2	2
			Yarmouth		1	2	2
		Highway Congress – 6/1/17 An interactive educational booth about spill response procedures was staffed at APWA's annual Highway Congress, held on June 1, 2017. Time out for Training, a program coordinated by Maine Local Roads, ensured that 76 people visited the booth. *Note: attendance in PY4 was lower than in past years due to an error related to the location of the booth.*	**Municipality**	**Reps. from ISWG who visited booth**			
			Biddeford	0			
			Cape Elizabeth	0			
			Cumberland	0			
			Falmouth	1			
			Freeport	0			
			Gorham	1			
			Old Orchard Beach	0			
			Portland	4			
			Saco	0			
			Scarborough	2			
			South Portland	1			
			Westbrook	0			
			Windham	1			
			Yarmouth	0			

Provide regional Good Housekeeping / Pollution Prevention Training	complete	CCSWCD and DEP's Alison Moody provided annual pollution prevention and good housekeeping training to municipal employees. *Note: Some municipalities do not attend this training because they choose to provide their own in-house training.*	**Municipality**	**Municipal Staff in Attendance on 05/25/17**
			Biddeford	0
			Cape Elizabeth	0
			Cumberland	0
			Falmouth	3
			Freeport	1
			Gorham	0
			Old Orchard Beach	0
			Portland	1
			Saco	0
			Scarborough	4
			South Portland	17
			Westbrook	0
			Windham	0

ISWG Permit Year 4 (2016-2017) Summary of Minimum Control Measures 1 & 2

			Yarmouth	0
		Evaluation of Good Housekeeping / Pollution Prevention Training: A written quiz assessing attendees' understanding of stormwater issues was given before and after the training. Fewer wrong answers given after the training indicates the level of effectiveness of the messages. # wrong before training: 9 # wrong after training: 4		

Evaluation

Conduct annual survey of ISWG municipalities to gauge awareness	complete	The survey was administered to ISWG representatives in PY4. See summary of survey responses in Appendix A-2.

Additional Activities Not Identified in the Plan

Additional materials developed / trainings delivered	complete	**Code Enforcement Training (12/15/16):** Provided comprehensive training discussing typical erosion controls and common maintenance issues for active construction sites, conducting and documenting erosion and sedimentation control inspections, follow-up actions, and enforcement actions for MS4 compliance; 32 attendees. **IDDE Training for Managers (01/19/17):** Provided comprehensive training on running an effective IDDE Program; 25 attendees **IDDE Training for Field Crews (03/21/17):** Provided comprehensive training on recognizing, stopping, and reporting illicit discharges; 40 attendees **Tier 2 Construction Inspection Form:** Developed erosion and sedimentation control inspection form for active construction sites, intended for frequent use **Tier 3 Construction Inspection Form:** Developed comprehensive construction inspection form intended to document compliance with MS4 permit, which requires ensuring construction activity is meeting CH500 and MCGP requirements **Post-Construction Inspection Form:** Developed comprehensive BMP inspection form intended to satisfy the annual post-construction inspection requirements for MS4 and CH500

MS4 Enhanced Outreach Plan

Task	Status	Details
Summarize plan implementation to date	complete	Plan goal: Provide the Environment and Natural Resources Committee and the legislature with information about use and environmental impacts of coal tar sealants in the state, and the viability of potential alternative products, so they can make an informed decision about legislating the use of coal tar sealants.
Meet with Rep. Daughtry to plan for the 2016-17 legislative session	complete	ISWG and SMSWG representatives met with the LD 1235 Bill sponsor, Rep. Daughtry on 11/29/2017 to review prior efforts for the bill, update each other on research and knowledge of new studies and state's actions, and determine next actions. The revised message to the legislators was determined to focus in two parts: 1. Presenting data collected in the Augusta area by the US Geologic Survey (USGS) regarding concentrations of PAHs from parking lots that had and had not

		been sealed using coal tar-based sealants. 2. Addressing issues described in previous testimony against the legislation.
Revise outreach message to address issues raised in the opposition's testimony	complete	Testimony from the 2015 LD1208 hearing was reviewed. The talking points developed in 2015 and updated in 2016 were revised to address recent data and issues, including Maine-specific data collected by USGS. ISWG and SMSWG representatives worked with USGS to download the study data, provide tables and figures summarizing the data obtained, and preparing testimony (neither for nor against) addressing some of the misinformation provided in prior years' testimony.
Conduct outreach to Environment and Natural Resources Committee	complete	Representatives from ISWG/CCSWCD and SMSWG invited legislators to attend MEWEA's Legislative breakfast on 3/9/17. Staff attended the breakfast and provided the coal tar fact sheet to interested parties and answered questions posed by legislators. Representatives from ISWG/CCSWCD and SMSWG attended the ENR committee hearing on the bill on 4/27/17. Testimony (neither for nor against) the bill was provided. Copies of testimony are included in the documentation maintained by CCSWCD for ISWG. Representatives from ISWG/CCSWCD attended "District Day in the Hall of Flags" on 5/17/17. This event allows Maine's Conservation Districts to speak with legislators about their work. CCSWCD provided information about the harmful effects coal tar-based pavement sealers have on water resources. Additional outreach to one ENR committee member, Senator Volk from Scarborough, consisted of providing the testimony via email. This member voted against the bill, which was defeated by three votes. Despite the defeat of the bill, the effort gained support over the 2015 effort, which was defeated by 30 votes.

Additional Outreach Activities not identified in the Permit or Outreach Plans

Maine Stormwater Conference
The Maine Stormwater Conference Planning Committee, which includes representatives from ISWG, reconvened to begin planning the 2017 conference. Committee activities include releasing the call for abstracts, selecting presentations, securing the conference venue, soliciting sponsorships, and building the preliminary agenda. The 2017 Maine Stormwater Conference will be held on October 23 and 24 in Portland.

Winter Maintenance Outreach and Support
ISWG/CCSWCD continues to participate in the statewide Maine Salt Group to finalize a manual of winter maintenance best management practices (BMP) to reduce salt use in Maine. On behalf of ISWG, CCSWCD is engaging key stakeholders, including DEP, MaineDOT, private contractors, municipal public works staff, and private insurance companies.

Maine Water Environment Association (MEWEA)
ISWG/CCSWCD continues to serve on MEWEA's Stormwater Committee, attend meetings, and assist with the Committee's technical and outreach efforts. ISWG outreach materials are being used as a basis to educate MEWEA's membership about stormwater.

ISWG Youth Education

Although not a permit requirement, ISWG provides funding to deliver clean water education to K-12 students in each municipality. CCSWCD staff provide the education on behalf of ISWG. Portland Water District provides information on their clean water lessons to supplement ISWG's efforts. A summary of students reached, contact hours, and topics covered is provided below.

Overall:
Total students: 3,298
- CCSWCD total: 1,867
- PWD total: 1,431

Total contact hours: 8,937.5
- CCSWCD total: 4,570.5
- PWD total: 4,367

Primary educator contact information
CCSWCD: Kat Munson, Education and Outreach Coordinator, Cumberland County Soil & Water Conservation District, kmunson@cumberlandswcd.org, 207-892-4700 x 102.

Portland Water District (PWD): Sarah Plummer, Environmental Education Coordinator, Portland Water District, splummer@pwd.org, 207-774-5961 x3324.

Biddeford
Total students: 176 (CCSWCD)
Total contact hours: 187 (CCSWCD)
Lesson topics: Watersheds, watershed models, water movement and branching patterns; transport of nonpoint source pollutants
Schools: Biddeford Middle School

Cape Elizabeth
Total students: 75 (CCSWCD: 32, PWD: 43)
Total contact hours: 182 (CCSWCD: 32, PWD: 150)
Lesson topics: Marine debris, nonpoint source pollution and prevention and ocean currents; watershed protection; drinking water and wastewater treatment facility tours
Schools: Cape Elizabeth High School

Cumberland
Total students: 294 (CCSWCD: 112, PWD: 182)
Total contact hours: 720 (CCSWCD: 112, PWD: 608)
Lesson topics: Honey Bee life cycle and adaptations, pollination, pollinator importance, pesticides impact; water movement and watersheds; nonpoint source pollution; bioassessment; WaterWays Program, Brook Trout Theme/Trout Kids Program: nonpoint source pollution and impacts, water quality, brook trout habitat requirements and life cycle, stewardship, water chemistry, biological, and streamside assessments;
Schools: Mabel I. Wilson Elementary School, Greely Middle School, Friends School of Portland

Falmouth
Total students: 171 (CCSWCD)
Total contact hours: 142 (CCSWCD)
Lesson topics: Ocean currents, ocean influence on climate, ocean acidification
Schools: Falmouth Middle School

Freeport
Total students: 80 (CCSWCD)

Total contact hours: 160 (CCSWCD)
Lesson topics: Amount of water in the world, conservation, and the water cycle; nonpoint source pollution, stormwater, storm drains, and cumulative impact; impervious/pervious surfaces, runoff, and best management practices
Schools: Mast Landing School

Gorham
Total students: 546 (CCSWCD: 104, PWD: 442)
Total contact hours: 1,016 (CCSWCD: 208, PWD: 808)
Lesson topics: Nonpoint source pollution, types of mixtures, water quality; Local foods, agriculture, nutrition, environmental & economic impacts of food production; local history and water chemistry field trip; drinking water and wastewater treatment facility tours; wellness display about drinking water; WaterWays Program, Systems Theme: global water distribution, water cycle, water movement, watersheds, nonpoint source pollution and impacts, best management practices, stewardship; Trout Kids Program: nonpoint source pollution, water quality, brook trout habitat requirements and life cycle, stewardship, water chemistry, biological, and streamside assessments
Schools: Gorham Middle School, Gorham High School, Great Falls Elementary School

Old Orchard Beach
Total students: 57 (CCSWCD)
Total contact hours: 157 (CCSWCD)
Lesson topics: Amount of water in the world, conservation, and the water cycle; watersheds, watershed models, water movement and branching patterns; transport of nonpoint source pollutants; nonpoint source pollution, stormwater, storm drains and cumulative impact; impervious/pervious surfaces, runoff and best management practices; wastewater treatment facility tour; Southern Maine Children's Water Festival: Day-long field trip at USM with theme "Clean Water: It's all about ME!"
Schools: Loranger Middle School, Old Orchard Beach High School

Portland
Total students: 435 (CCSWCD: 190, PWD: 245)
Total contact hours: 1,616 (CCSWCD: 842, PWD: 774)
Lesson topics: Watersheds, watershed models, water movement and branching patterns; transport of nonpoint source pollutants; types of erosion, best management practices for erosion control; nonpoint source pollution, stormwater, storm drains, and cumulative impact; reducing impact on waterways by changing lawn care practices (Youth YardScaping)[8]; watershed/Sebago Lake protection and climate change; macroinvertebrates; drinking water and wastewater facility tours; WaterWays Program, Systems Theme: global water distribution, water cycle, water movement, watersheds, nonpoint source pollution and impacts, best management practices, stewardship
Schools: Lincoln Middle School, Deering High School, Longfellow Elementary School, Hall Elementary School, Ocean View Elementary School, Lyman Moore Middle School, Baxter Academy, Children's Nursery School, Maine College of Art, University of Southern Maine

Saco
Total students: 225 (CCSWCD)
Total contact hours: 589.5 (CCSWCD)
Lesson topics: Soil testing, soil health, erosion; macroinvertebrate sampling, identification & bioassessment; Southern Maine Children's Water Festival: Day-long field trip at USM with theme "Clean Water: It's all about ME!"
Schools: Thornton Academy, C.K. Burns School

Scarborough
Total students: 275 (CCSWCD)
Total contact hours: 275 (CCSWCD)
Lesson topics: Types of erosion; best management practices for erosion control; water quality[9]

[8] Additional funding for Youth YardScaping provided by the City of Portland
[9] Additional funding for erasing erosion lessons provided by Scarborough School Department

Schools: Scarborough Middle School

South Portland
Total students: 277 (CCSWCD: 50, PWD: 227)
Total contact hours: 1,078 (CCSWCD: 150, PWD: 928)
Lesson topics: Amount of water in the world, conservation, and the water cycle; "Follow Flow"; watersheds, watershed models, water movement and branching patterns; transport of nonpoint source pollutants; living and nonliving pond exploration; Water Ways Program, Human Impact Theme: water movement, watersheds, nonpoint source pollution and impacts, best management practices, impervious/pervious surfaces, brook trout habitat requirements, stewardship; TroutKids Program: nonpoint source pollution, water quality, brook trout habitat requirements and life cycle, stewardship, water chemistry, biological, and streamside assessments; Southern Maine Children's Water Festival: Day-long field trip at USM with theme "Clean Water: It's all about ME!"
Schools: Dora E. Small Elementary School, Mahoney Middle School

Westbrook
Total students: 146 (CCSWCD)
Total contact hours: 730 (CCSWCD)
Lesson topics: Watershed ecology: Students evaluated the health of the Presumpscot River during a field trip to two sites on the River, one rural and one urban; water quality parameters and testing; bioassessment using macro-invertebrate sampling; river characteristic observations; compared data from the two sites to develop their ideas about human impact on the river ecosystem.[10] PWD educators provided extra staffing support for this field trip.
Schools: Westbrook High School

Windham
Total students: 378 (CCSWCD: 86, PWD: 292)
Total contact hours: 1,903 (CCSWCD: 804, PWD: 1099)
Lesson topics: Watersheds, watershed models, water movement and branching patterns; transport of nonpoint source pollutants; stormwater, storm drains, and cumulative impact; impervious/pervious surfaces, runoff, and best management practices; Runoff; impervious/pervious surfaces; nonpoint source pollution; best management practices; vegetated buffers; shorefront landscape design; water quality parameters and testing, bioassessment using macro-invertebrate sampling, river characteristic observations; Service Learning[11]: Nonpoint source pollution research, pollution prevention and solutions for Windham Middle School Campus, community education, water quality parameters and testing, service learning project; where water comes from/goes and human impacts on quality/quantity; nonpoint source pollution and impacts; converting "Discovering Water" book to an iBook; focus on technology and WaterWays curriculum/water-related topics in the book; unit on water quality, including in-class water quality testing, research, panel discussion, and public presentation; WaterWays Program, Systems Theme: global water distribution, water cycle, water movement, watersheds, nonpoint source pollution and impacts, best management practices, stewardship; TroutKids Program: nonpoint source pollution, water quality, brook trout habitat requirements and life cycle, stewardship, water chemistry, biological, and streamside assessments
Schools: Manchester Elementary School, Windham Middle School, Windham High School, Windham Girl Scout Troop

Yarmouth
Total students: 163 (CCSWCD)
Total contact hours: 182 (CCSWCD)
Lesson topics: Macroinvertebrate sampling and identification & bioassessment; water quality and nonpoint source pollution and prevention; groundwater model; groundwater resources and pollution prevention[12]
Schools: Yarmouth Elementary School, Frank H. Harrison Middle School

[10] Additional funding for student field trip provided by the Westbrook Environmental Improvement Corporation
[11] Additional funding for service learning was provided by the Portland Water District
[12] Additional funding for groundwater lessons provided by the Yarmouth Water District

MCM2: Public Involvement and Participation

Urban Runoff & Green Neighbor Family Fest

2017 marked the sixth year ISWG supported, coordinated, promoted, and participated in the Urban Runoff and Green Neighbor Family Fest, a day-long community event that promotes clean water and raises awareness of water pollution. In addition to raising awareness, funds raised from the Urban Runoff support ISWG's in-school youth education program. The race and festival, held on April 22, 2017, served as the Public Involvement and Participation event for all ISWG communities. Participation by each ISWG municipality is summarized in the table below.

Despite the (appropriately) rainy weather, the event was a great success in 2017. Over 720 runners and walkers registered for the race, and more than 100 of those registered on race-day. Many local businesses supported the race through sponsorships, in-kind donations, and employee participation as race participants and volunteers. Local media outlets advertised the events, including the donation of radio advertisement during the month of April by 98.9 WCLZ. Channel 8 WMTW developed and ran a 20-second ad promoting the events throughout the month of April, and they attended the race and festival to provide news coverage of the events, including 6 live interviews on the morning of April 22, 2017. Social media, paid online advertising, posters, and direct mail and email were also used to promote the race and included a clean water message. Additional clean water messages were included on the event website, social media, eblasts, and other marketing tools that were sent to all registered participants, sponsors, and partners.

The *Green Neighbor Family Fest* was held after the race at Deering High School. The event ran for two and a half hours and was attended by approximately 850 people. Scheduled events included the awards ceremony and live music. A total of 28 exhibits were set up by local nonprofit, governmental organizations, and businesses to provide hands-on, educational activities for children and families. These activities included an aquaculture display, paper making, experimenting with stormwater runoff, and more. Children also took part in face painting, a moon bounce, and water-related giveaways.

Plans are underway to host the seventh annual *Urban Runoff* 5K and *Green Neighbor Family Fest* on Saturday, April 21, 2018.

Summary of ISWG Municipal Involvement in the 2017 Urban Runoff & Green Neighbor Family Fest

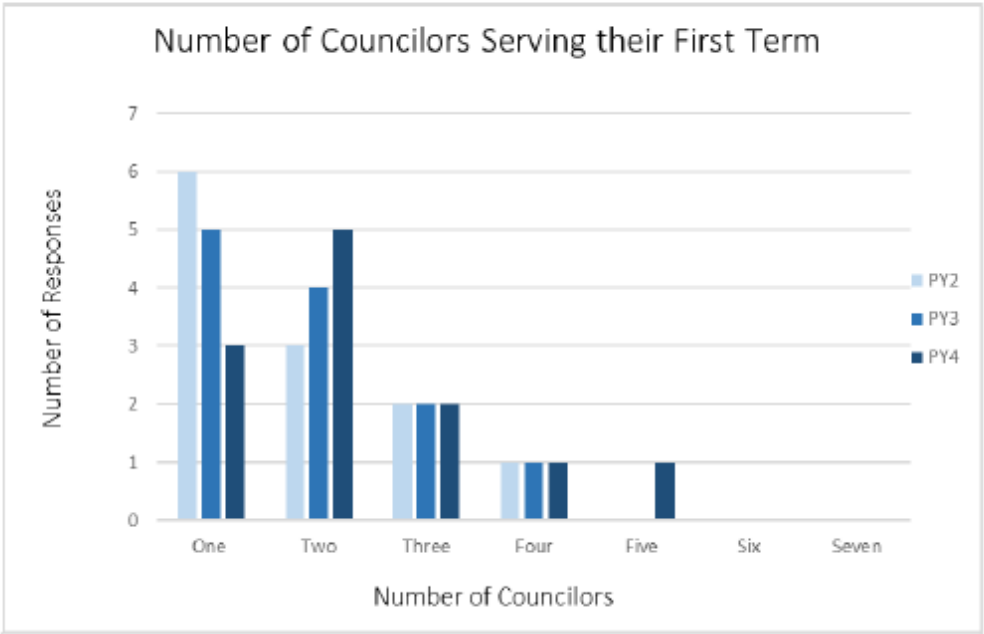
	Race Participants	Municipal Volunteers	Municipal Team (number of members)	Posters Provided for Distribution	Additional Contribution
Biddeford	4	1		25	
Cape Elizabeth	6	1		16	
Cumberland	27			19	
Falmouth	12		5	21	
Freeport	2			25	
Gorham	22		9 [13]	19	
Old Orchard Beach	2			21	
Portland	198	2	3	50	Permit fees waived; display at festival
Saco	17	1	1	28	
Scarborough	43	4	3	24	
South Portland	48	1	1	28	$500 Splash

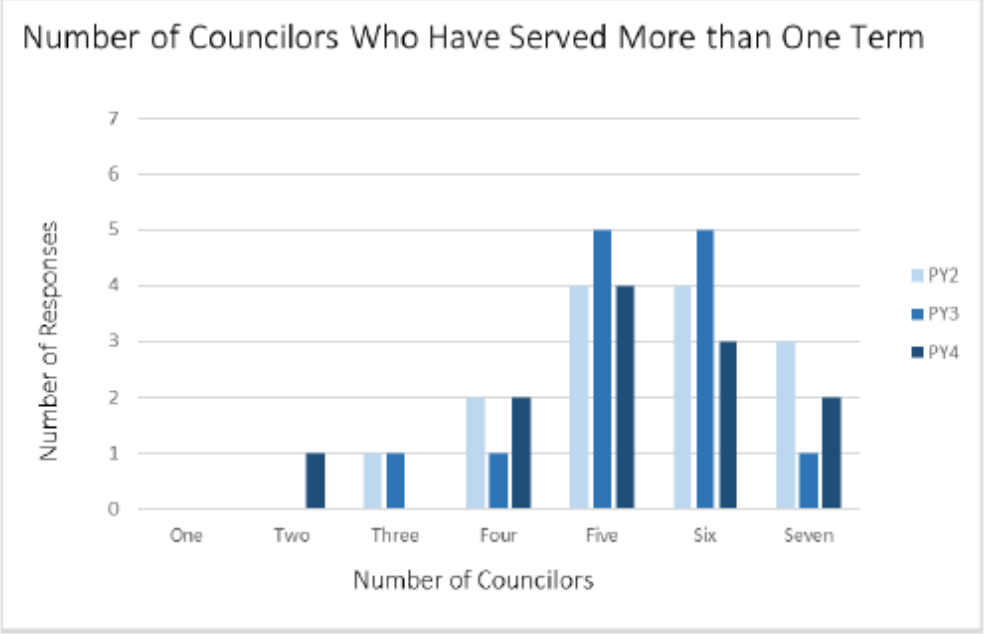
[13] The towns of Gorham and Windham created a joint team that totaled 9 participants.

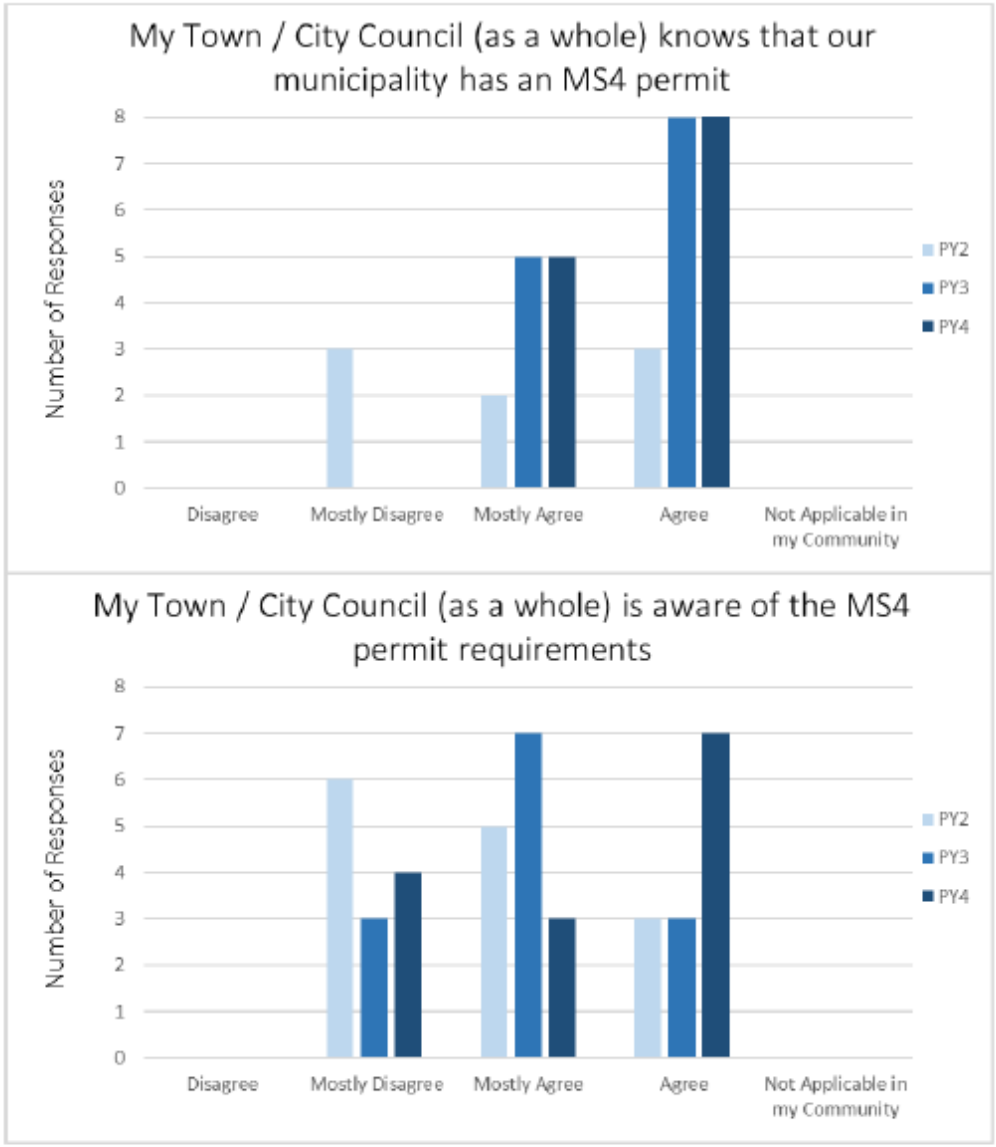
					Sponsorship
Westbrook	62	2	35	22	Largest municipal team
Windham	13		9 [13]	23	
Yarmouth	9	1		19	

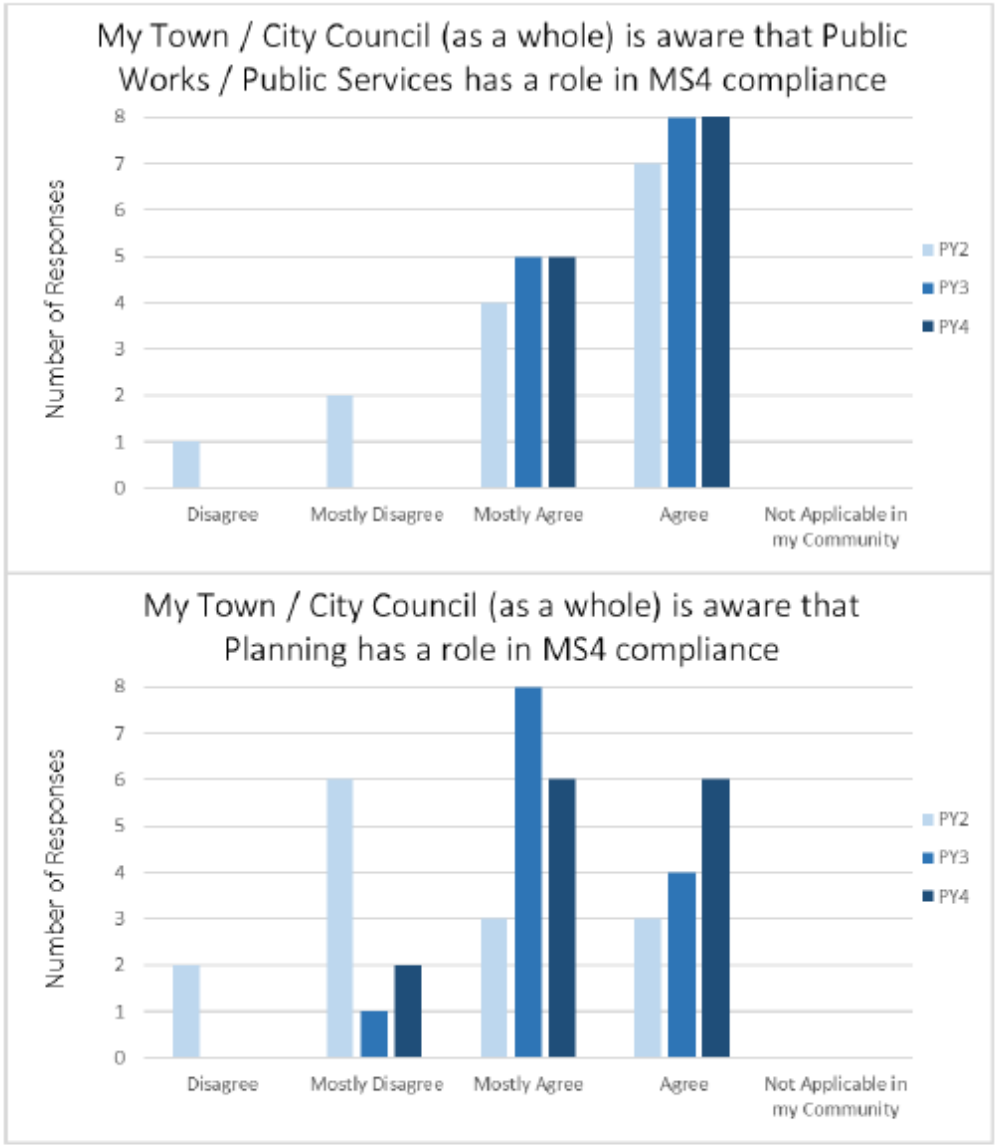
APPENDIX A-2: Permit Year 4 (PY4) Summary Municipal Survey Responses

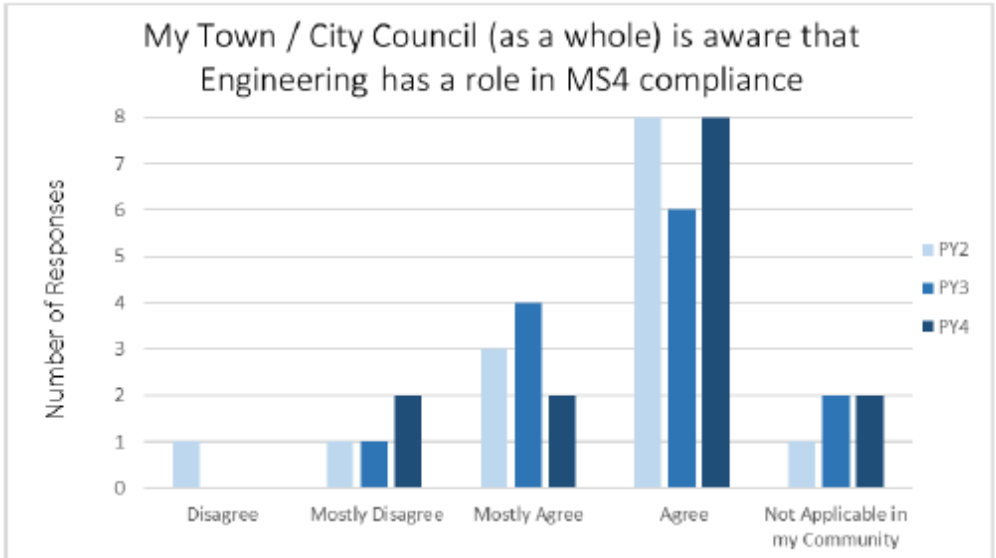
The following graphs summarize the responses to the annual municipal survey that was conducted in the first quarter of PY3. This survey is used to gauge municipal councilors' awareness of their municipal stormwater program.

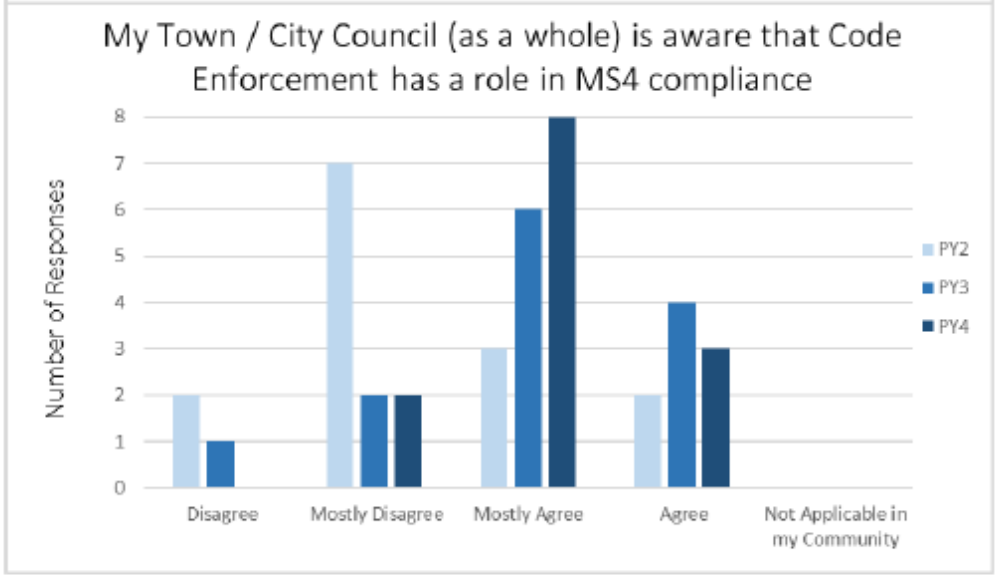


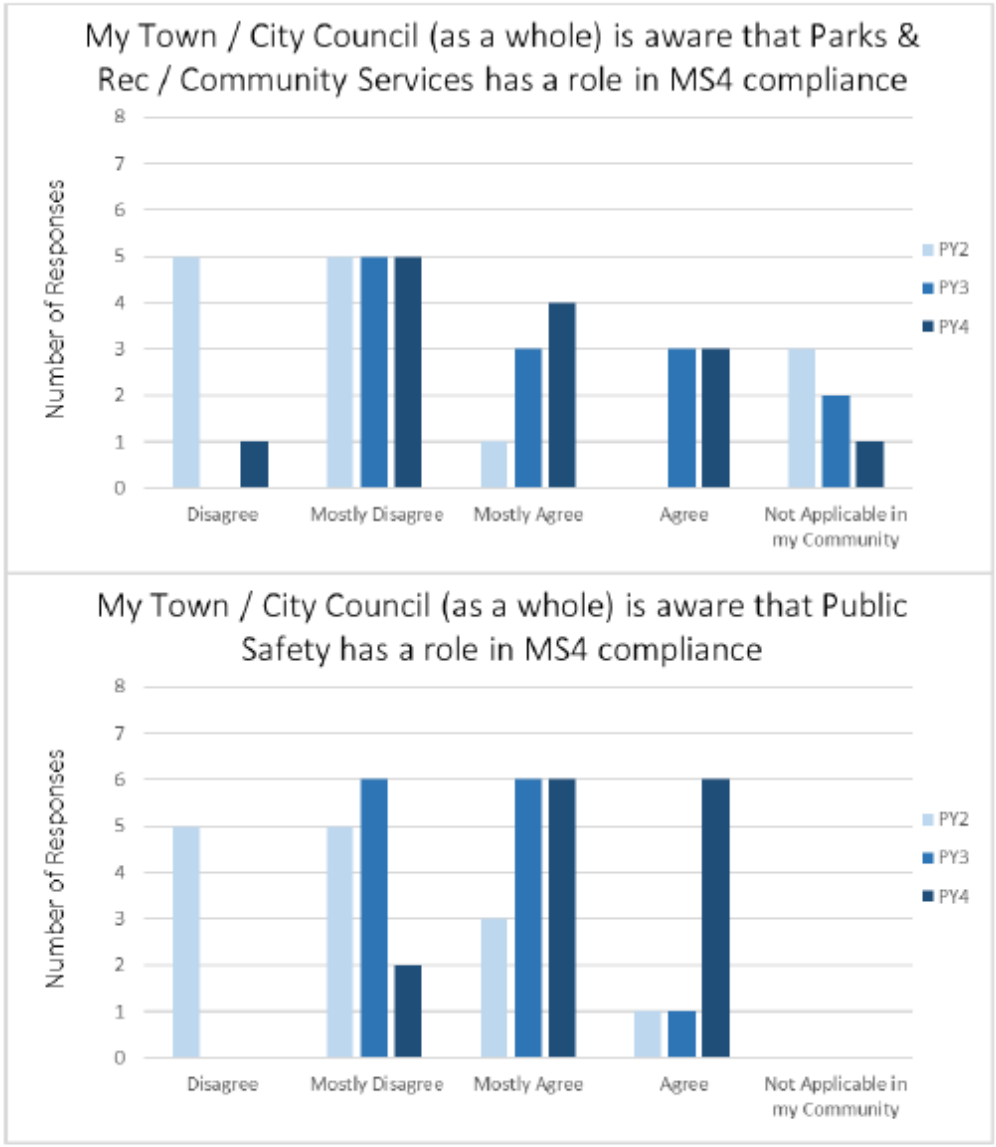


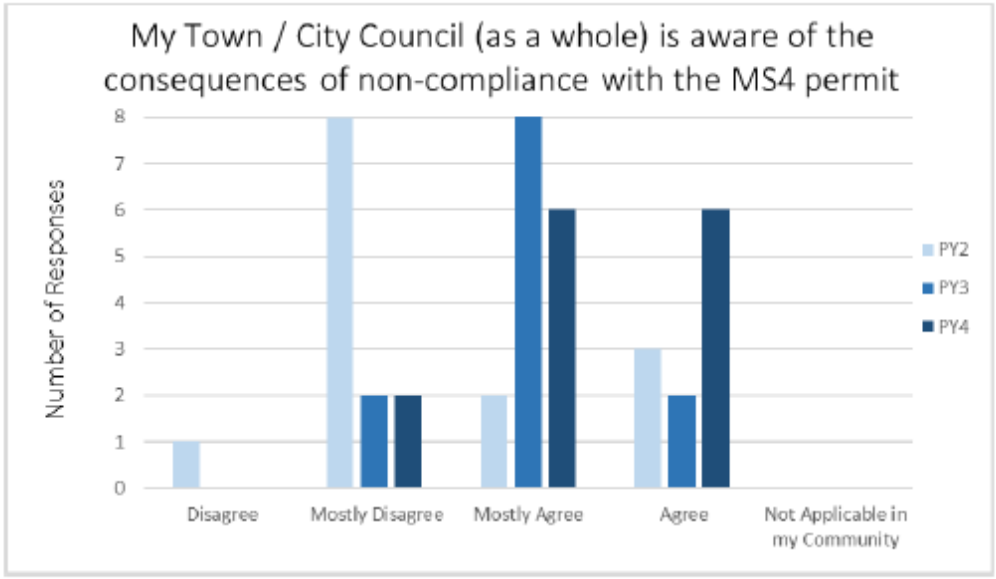

My Town / City Council (as a whole) knows that our municipality has an MS4 permit
Number of Responses
0
1
2
3
4
5
6
7
8
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
My Town / City Council (as a whole) is aware of the MS4 permit requirements
Number of Responses
0
1
2
3
4
5
6
7
8
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4


My Town / City Council (as a whole) is aware that Public Works / Public Services has a role in MS4 compliance
Number of Responses
0
1
2
3
4
5
6
7
8
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
My Town / City Council (as a whole) is aware that Planning has a role in MS4 compliance
Number of Responses
0
1
2
3
4
5
6
7
8
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4


My Town / City Council (as a whole) is aware that Engineering has a role in MS4 compliance
Number of Responses
0
1
2
3
4
5
6
7
8
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4


My Town / City Council (as a whole) is aware that Code Enforcement has a role in MS4 compliance
Number of Responses
0
1
2
3
4
5
6
7
8
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4


My Town / City Council (as a whole) is aware that Parks & Rec / Community Services has a role in MS4 compliance
Number of Responses
0
1
2
3
4
5
6
7
8
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
My Town / City Council (as a whole) is aware that Public Safety has a role in MS4 compliance
Number of Responses
0
1
2
3
4
5
6
7
8
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4

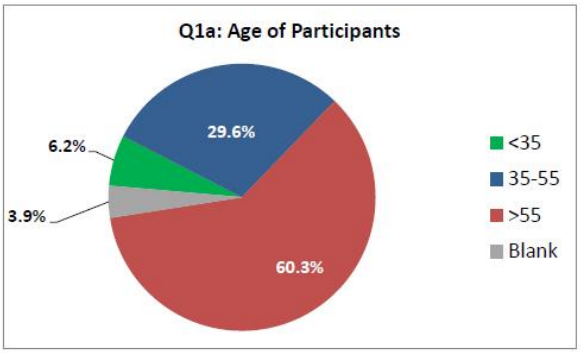

My Town / City Council (as a whole) is aware of the consequences of non-compliance with the MS4 permit
Number of Responses
0
1
2
3
4
5
6
7
8
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4

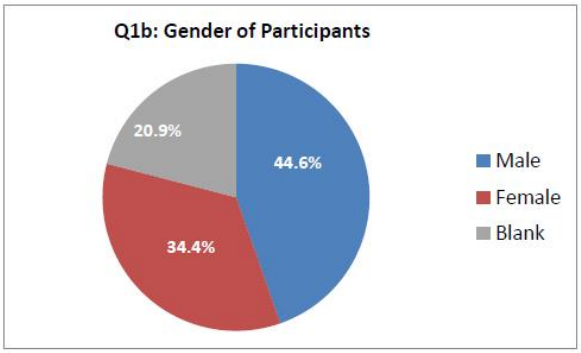
Appendix 2: Household Hazardous Waste Day Questionnaire Results

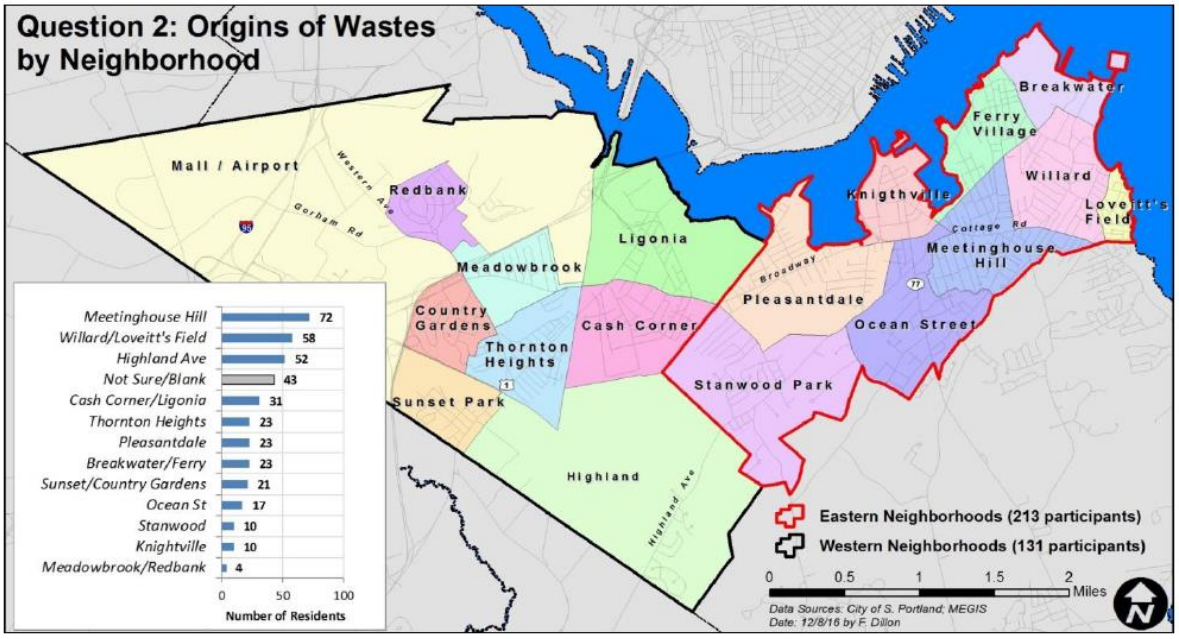
Household Hazardous Waste and E-Waste Collection Day ~ 10/8/16

QUESTIONS ***(~400 questionnaires were distributed and 387 were returned)***

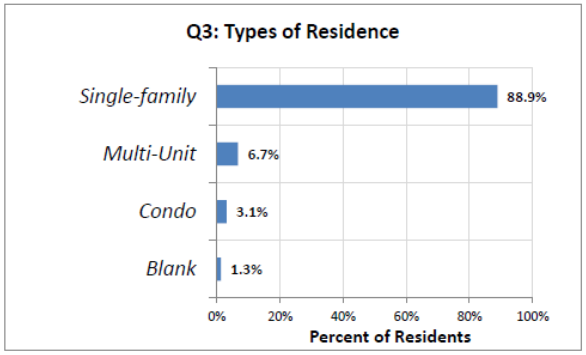
1a. What is your age? *Most respondents (~60%) were over 55 years old, ~30% were 35-55 and ~6% were less than 35 years old.*
1b. Are you male or female? *~45% of respondents were men, 34% were women and 21% opted not to respond.*
2. Origins of wastes by neighborhood? *The majority of respondents (55%) came from the the City's eastern neighborhoods.*
3. Please indicate the type of residence in which you live. *The vast majority (~89%) of respondents reside in single family homes.*
4. Please indicate the types of HHW wastes dropped off. *Paints/solvents were most common followed by auto fluids, cleaning products and weed/bug killer (pesticides).*
5. Please indicate the types of E-wastes dropped off. *TVs & stereos were the most common items followed by computer accessories and computers / laptops.*
6. How long have you had wastes? *Most respondents (104) had wastes for 1-5 years.*
7. How did you learn about today's event? *Newspapers were by far the most common source of info for respondents.*
8. Have you been to previous HHW events? *~50% of respondents had attended previous HHW events.*
9. Reason(s) for participating in HHW event? *Protecting health & environment were the most common reasons for participating.*
10. Will you participate in future HHW events? *Vast majority of respondents (~99%) will return for future HHW / E-waste events.*
11. Are you aware of the following WQ protection efforts? *The City's SW Program was the most common effort with which respondents were aware; numerous respondents were also familiar with Yardscaping/Bayscaping and Think Blue Maine.*
12. Does the HHW program need to be improved? *Approximately 37% of respondents suggested program improvements; the most common suggestion was to increase event frequency to reduce wait times (~13% were happy with the program as-is).*

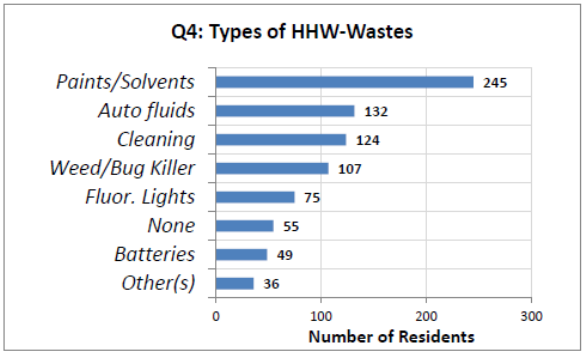


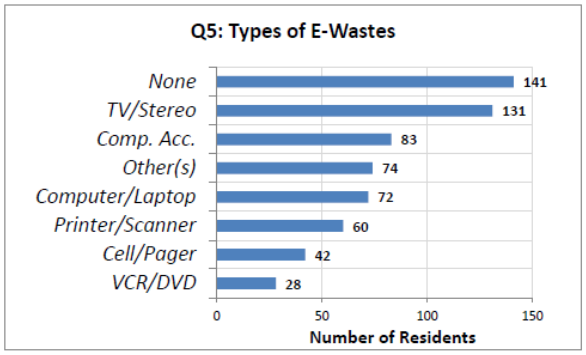


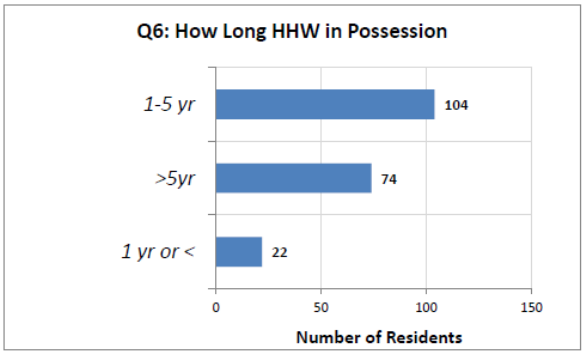


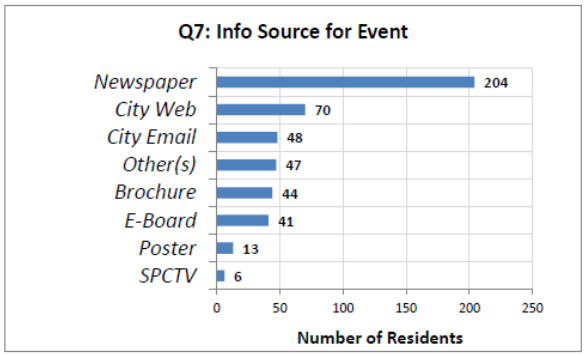
Household Hazardous Waste and E-Waste Collection Day ~ 10/8/16

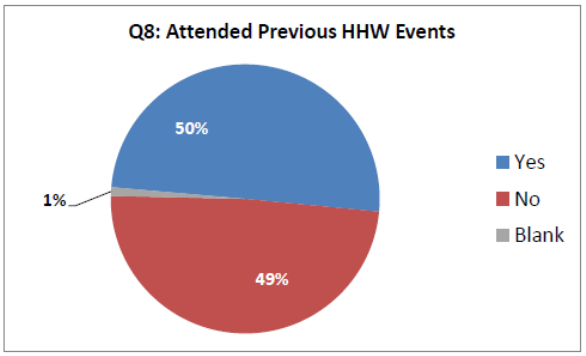


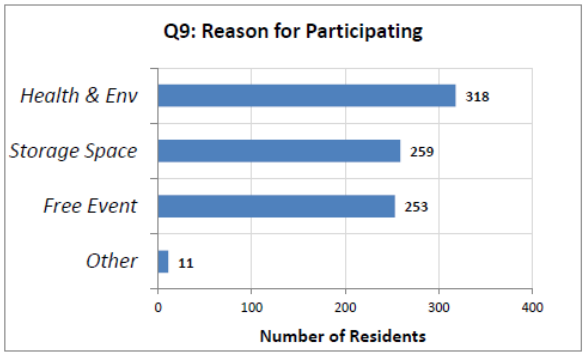


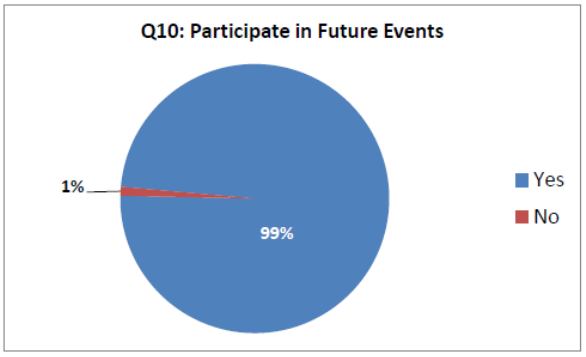




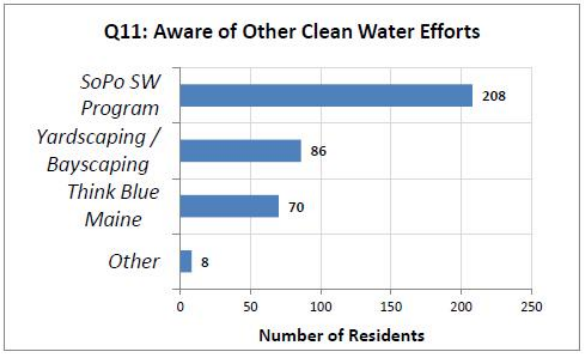


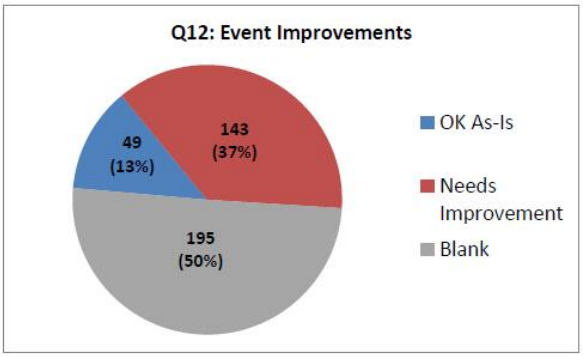






Household Hazardous Waste and E-Waste Collection Day ~ 10/8/16





Household Hazardous Waste and E-Waste Collection Day ~ 10/8/16






Appendix 3: Portland Water District Memo on BMPs for MS4 Requirements

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

To: Frederick Dillion – Stormwater Program Coordinator,
South Portland Water Resource Protection Department

From: James Wallace

Date: June 15, 2017

Re: Summary of Portland Water District BMPs for Addressing MS4 Requirements

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Introduction

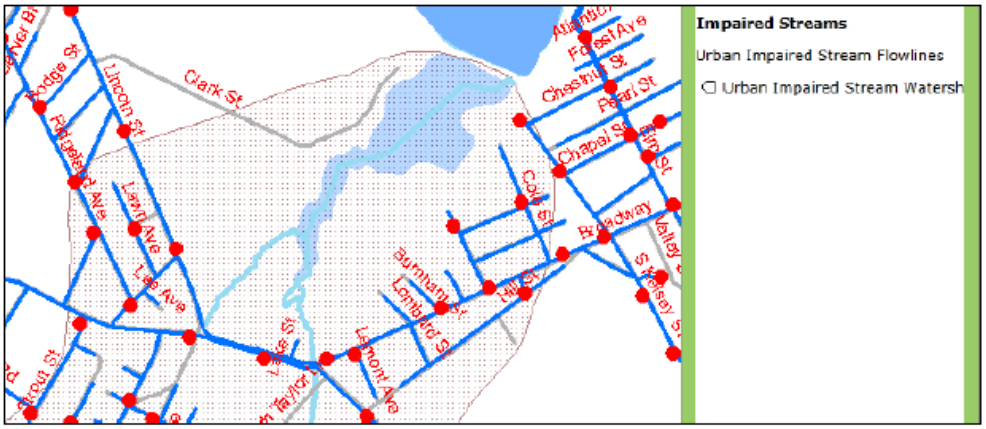
It is our understanding that a requirement of your MS4 permit is to provide a summary of Best Management Practices (BMPs) to address chlorinated water discharges from hydrant flushing. This memo will summarize the BMPs currently used by the District as part of our Unidirectional Flushing Program (UDF).

Dechlorination

The District's primary BMP for hydrant discharges is dechlorination. Currently the District has four types of dechlorination devices. The District is using ascorbic acid, in both granular and tablet forms, as the de-chlorinating agent for all of the devices. The District is achieving very good success at achieving non-detectable chlorine residuals with these units. Based on our field evaluations in 2016, total residual chlorine concentrations were consistently below the detection limit of our field chlorine analyzer.

Identifying Points of Concern

In early 2017, PWD staff implemented GIS mapping that incorporates hydrant locations with watershed boundaries and stream locations. This mapping provides our staff an understanding of how these watersheds surround our water system.



Land Application

In instances where the discharge is a significant distance from any stream or water body, District crews can choose to discharge water directly to the ground, under the assumption that the residual will degrade before mixing with a water body.

Staff Training

In December of 2014, Cumberland County Soil and Water Conservation District staff trained our field crews on the requirements of the MS4 program. Additional staff training has included Basic Contractor Erosion and Sediment Control certification by the Maine DEP Nonpoint Source Pollution program. Maine Water Utilities Association and Maine Rural Water Association received a grant in 2017 to create statewide BMP's for discharge of drinking water. Maine Rural Water will provide training on these BMP's during the summer of 2017.

Statewide BMP's

In 2017, Maine Rural Water Association and Maine Water Utilities Association received a grant to write statewide BMP's for de-chlorination, and then provide training to water operators across the state. The District was involved in the review of DEP's hydrant flushing profile and will likely be involved in the BMP creation and training.

Dilution

In one instance during 2015, our engineering staff determined that a river flow was sufficient to dilute the total chlorine residual below the acute toxicity level of 0.019 mg/L. The discharge flow rate into the river included a significant safety factor. To date, the District has not used this option a second time. The final DEP MS4 drinking water system discharge issue profile of 11/18/16 does include a formula for calculating dilution into a stream. Should the District consider using this option again, qualified staff would determine the streamflow and discharge rates to ensure final dilution includes a significant safety factor.

PY2016-17 Dry Weather Outfall Inspections - City of South Portland, ME

Feature ID	Watershed	Inspection Date	Inspector	Precip. Past 3 Days (Y/N)	Temp (deg F)	Wind (Y/N)	Pipe Submerged (Y/N)	Pipe Material	Pipe Shape	Pipe Size1 (Inches)	Open Drain	Foam (Y/N)	Green Scum (Y/N)	Oil / Film (Y/N)	Vegetatative Mat (Y/N)	Sewage (Y/N)	Odor	Water Clarity	Pipe Flow	Seepage Flow	Flow Color	Sediment Condition	Structure Condition	Trash (Y/N)	Yard Waste (Y/N)	Follow-Up Needed
BC_2	Barberry Creek	6/14/2017, 10:57 AM	Jarrod Erskine	No	70	No	Partially	Steel	Circular	18"	Earthen	No	No	No	No	No	None	Clear	Steady	None	No Flow	Open	Good	No	No	
BC_3	Barberry Creek	6/14/2017, 10:48 AM	Jarrod Erskine	No	70	No	No	Steel	Circular	36"	Rip Rap	No	Yes	No	Yes	No	None	Clear	None	None	No Flow	Open	Good	No	No	
BC_6	Barberry Creek	6/13/2017, 2:08 PM	Jarrod Erskine	No	85	No	No	RCP	Circular		Rip Rap	No	No	No	No	No	None	Clear	Trickle	None	No Flow	Open	Good	No	No	
BC_8	Barberry Creek	6/13/2017, 2:01 PM	Jarrod Erskine	No	85	No	No	RCP	Circular	24"	Rip Rap	No	No	No	Yes	No	None	Clear	Trickle	None	Clear	Open	Good	No	No	
BC_9	Barberry Creek	6/14/2017, 1:55 PM	Jarrod Erskine	No	70	Yes	No	PVC	Circular	24"	Earthen	Yes	No	No	No	No	None	Cloudy	Trickle	None	Clear	Open	Good	No	No	
BC_10	Barberry Creek	6/14/2017, 12:59 PM	Jarrod Erskine	No	70	Yes	No	PVC	Circular	15"	Rip Rap	No	No	No	No	No	None	Clear	Trickle	None	Clear	Open		No	No	
BC_10	Barberry Creek	6/14/2017, 12:59 PM	Jarrod Erskine	No	70	Yes	No	PVC	Circular	15"	Rip Rap	No	No	No	No	No	None	Clear	Trickle	None	Clear	Open		No	No	
BC_11	Barberry Creek	6/13/2017, 2:25 PM	Jarrod Erskine	No	85	No	No	Other	Circular	24"	Rip Rap	No	No	No	No	No	Musty	Clear	None	None	No Flow	Open	Fair	No	No	
BC_12	Barberry Creek	6/13/2017, 2:41 PM	Jarrod Erskine	No	85	No	No	Other	Circular	18"	Other	No	No	No	No	No	None	Clear	Trickle	None	Clear	Open		No	No	
BC_13	Barberry Creek	6/13/2017, 2:28 PM	Jarrod Erskine	No	85	No	Partially	RCP	Circular		Earthen	No	No	No	No	No	Musty	Cloudy	Steady	None	Orange	Open	Good	No	No	
BC_14	Barberry Creek	6/14/2017, 12:37 PM	Jarrod Erskine	No	70	Yes	No	HDPE	Circular	15"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
BC_15	Barberry Creek	6/13/2017, 1:52 PM	Jarrod Erskine	No	85	No	No	RCP	Circular	24"	Rip Rap	No	No	No	No	No	Musty	Clear	None	None	No Flow	Open	Good	No	No	
LC_10	Long Creek	2/6/2017, 10:05 AM	Mike Adriance	No	26	Yes	No	RCP	Circular	60"	Earthen	Yes	No	No	No	No	None	Clear	Steady	None	Clear	Open	Fair	Yes	No	
LC_11	Long Creek	2/6/2017, 1:52 PM	Mike Adriance	No	26	Yes	No	RCP	Circular	48"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Fair	Yes	No	Yes
LC_12	Long Creek	2/6/2017, 8:06 AM	Mike Adriance	No	25	Yes	No	PVC	Circular	15"	Rip Rap	No	No	No	No	No	None	Clear	Trickle	None	Clear	Open	Good	Yes	No	
LC_13	Long Creek	2/6/2017, 9:26 AM	Mike Adriance	No	26	Yes	No	RCP	Circular	12"	Rip Rap	No	No	No	No	No	None	Clear	Trickle	None	Clear	Open	Good	No	No	
LC_15	Long Creek	2/6/2017, 8:18 AM	Mike Adriance	No	25	Yes	No	Other	Circular	12"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Good	Yes	No	
LC_16	Long Creek	2/6/2017, 8:26 AM	Mike Adriance	No	26	Yes	No	PVC	Circular	12"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_18	Long Creek	2/6/2017, 1:19 PM	Mike Adriance	No	26	Yes	No	Steel	Circular	12"	Rip Rap	No	No	No	No	No	None	Clear	Trickle	None	Clear	Open	Good	No	No	
LC_19	Long Creek	2/6/2017, 8:12 AM	Mike Adriance	No	25	Yes	No	RCP	Circular	12"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	Yes	No	
LC_100	Long Creek	2/6/2017, 1:02 PM	Mike Adriance	No	26	Yes	No	RCP	Circular	24"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_101	Long Creek	2/6/2017, 9:21 AM	Mike Adriance	No	26	Yes	Partially	PVC	Circular	6"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_102	Long Creek	2/6/2017, 12:57 PM	Mike Adriance	No	26	Yes	No	PVC	Circular	8"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_103	Long Creek	2/6/2017, 1:07 PM	Mike Adriance	No	26	Yes	No	PVC	Circular		Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	Yes	No	
LC_104	Long Creek	2/6/2017, 9:40 AM	Mike Adriance	No	26	Yes	No	PVC	Circular	15"	Rip Rap	No	No	No	Yes	No	None	Clear	None	None	Clear	Open	Good	No	No	
LC_105	Long Creek	2/6/2017, 1:04 PM	Mike Adriance	No	26	Yes	No	PVC	Circular	8"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_106	Long Creek	3/7/2017, 9:06 AM	Randy Rafuse	No	32	No	No	Other	Circular			No	No	No	No	No			None	None	No Flow	Open		Yes	No	
LC_107	Long Creek	3/7/2017, 9:00 AM	Randy Rafuse	No	32	No	No	RCP	Circular			No	No	No	No	No	None		None	None	No Flow	Open		No	No	
LC_108	Long Creek	3/7/2017, 9:04 AM	Randy Rafuse	No	32	No	Fully	PVC	Circular			Yes	No	No	No	No			None	None	No Flow	Open		Yes	No	Yes
LC_109	Long Creek	3/13/2017, 8:59 AM	Randy Rafuse	No	11	No	No	Other	Circular			No	No	No	No	No	None		None	None	No Flow	Open		No	No	
LC_110	Long Creek	3/7/2017, 9:11 AM	Randy Rafuse	No	32	No	No		Circular	3"		No	No	No	No	No			None	None	No Flow	Open		Yes	No	
LC_111	Long Creek	3/7/2017, 9:10 AM	Randy Rafuse	No	32	No	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_112	Long Creek	2/6/2017, 10:39 AM	Mike Adriance	No	26	Yes	Partially	PVC	Circular	6"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Good	Yes	No	
LC_113	Long Creek	2/6/2017, 10:10 AM	Mike Adriance	No	26	Yes	No	PVC	Circular	12"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	Yes	No	

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LC_115	Long Creek	3/13/2017, 10:57 AM	Randy Rafuse	No	15	No	Fully		Circular			No	No	No	Yes	No			None	None	No Flow	Open		No	No	
LC_115	Long Creek	3/13/2017, 1:55 PM	Randy Keenan	No	10	No	Fully		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_116	Long Creek	2/6/2017, 1:05 PM	Mike Adriance	No	26	Yes	No	PVC	Circular		Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Fair	Yes	No	
LC_117	Long Creek	2/6/2017, 1:26 PM	Mike Adriance	No	26	Yes	No	PVC	Circular	12"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_118	Long Creek	2/6/2017, 1:23 PM	Mike Adriance	No	26	Yes	No	Steel	Circular	12"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Fair	No	No	
LC_119	Long Creek	2/6/2017, 1:21 PM	Mike Adriance	No	26	Yes	No	Steel	Circular	15"	Rip Rap	No	No	No	No	No	None	Clear	Trickle	None	Clear	Open	Good	No	No	
LC_20	Long Creek	3/6/2017, 2:22 PM	Randy Rafuse	No	25	Yes	No		Circular			No	No	No	No	No	None	Clear	None	None	Clear	Open	Good	No	No	
LC_21	Long Creek	3/6/2017, 2:20 PM	Randy Rafuse	No	25	No	No		Circular			No	No	No	No	No	None	Clear	None	None	No Flow	Open		No	No	
LC_22	Long Creek	2/6/2017, 1:13 PM	Mike Adriance	No	26	Yes	No	RCP	Circular	36"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open		Yes	No	
LC_23	Long Creek	2/6/2017, 12:48 PM	Mike Adriance	No	26	Yes	No	RCP	Circular	24"	Earthen	No	No	No	No	No	None	Clear	Trickle	None	Clear	Open	Fair	Yes	No	
LC_24	Long Creek	2/3/2017, 10:27 AM	Mike Adriance	No	30	Yes	No	Steel	Circular	15"	Rip Rap	No	Yes	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_25	Long Creek	2/3/2017, 10:52 AM	Mike Adriance	No	30	Yes	No	Steel	Circular	18"	Earthen	No	Yes	No	No	No	None		None	None	No Flow	Open	Fair	No	No	
LC_26	Long Creek	2/6/2017, 10:23 AM	Mike Adriance	No	26	Yes	No	PVC	Circular	24"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_27	Long Creek	2/6/2017, 10:21 AM	Mike Adriance	No	26	Yes	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	Yes
LC_27	Long Creek	3/7/2017, 9:30 AM	Randy Rafuse	No	32	No			Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	Yes
LC_28	Long Creek	2/3/2017, 11:02 AM	Mike Adriance	No	30	Yes	No	Steel	Circular	15"	Earthen	No	No	No	No	No	None	Clear	Trickle	None	No Flow	Open	Fair	No	No	
LC_29	Long Creek	2/6/2017, 7:42 AM	Mike Adriance	No	28	Yes	No	PVC	Circular	8"	Earthen	No	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	Yes	No	
LC_3	Long Creek	2/28/2017, 10:21 AM	Randy Keenan	No	30	No	No	PVC	Circular	3"		No	No	No	No	No			Trickle	None	No Flow	Open		No	No	No
LC_30	Long Creek	2/6/2017, 7:47 AM	Mike Adriance			No	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	Yes
LC_30	Long Creek	3/6/2017, 1:23 PM	Randy Rafuse	No		Yes	No		Circular			Yes	No	No	No	No	None		None	None	No Flow	Open		Yes	Yes	Yes
LC_31	Long Creek	3/13/2017, 12:46 PM	Randy Keenan	No	10	No	Fully		Circular			No	No	No	No	No			None	None	No Flow	Open		No	Yes	
LC_33	Long Creek	3/7/2017, 1:20 PM	Mike Lorello	No	39	No	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_34	Long Creek	2/6/2017, 1:39 PM	Mike Adriance	No	26	Yes	No	RCP	Circular	36"	Earthen	No	No	No	Yes	No	None		None	None	No Flow	Open	Fair	No	No	
LC_35	Long Creek	3/7/2017, 1:28 PM	Mike Lorello	No		No	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_36	Long Creek	2/6/2017, 9:00 AM	Mike Adriance	No	26	Yes	No	Steel	Circular	10"	Concrete	No	No	No	No	No	None	Clear	Steady	None	Clear	Open	Good	No	No	
LC_37	Long Creek	2/3/2017, 9:41 AM	Randy Rafuse	No	25	No	No	RCP	Circular			No	No	No	No	No	None		None	None	No Flow	Open		No	No	
LC_38	Long Creek	2/3/2017, 10:11 AM	Randy Rafuse	No	25	Yes	No	Steel	Circular			No	No	No	No	No	None	Clear	None	None	No Flow	Open		No	No	
LC_39	Long Creek	2/6/2017, 9:48 AM	Mike Adriance	No	26	Yes	No	Other	Circular	15"	Rip Rap	No	No	No	No	No	None	Clear	Steady	None	Clear	Open	Good	No	No	
LC_4	Long Creek	2/6/2017, 8:32 AM	Mike Adriance	No	26	Yes	No	Other	Circular	12"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Fair	Yes	No	
LC_40	Long Creek	2/6/2017, 9:43 AM				No	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	Yes
LC_41	Long Creek	2/3/2017, 2:36 PM	Randy Rafuse	No	32	Yes	No	RCP	Circular			No	No	No	No	No			None	None	Brown	Open		No	No	
LC_42	Long Creek	2/3/2017, 2:26 PM	Randy Rafuse	No	32	Yes	Partially		Circular			No	No	No	Yes	No		Opaque	None	None	No Flow	Open		Yes	No	
LC_43	Long Creek	2/3/2017, 10:34 AM	Randy Rafuse	No	25	Yes	No		Circular		Rip Rap	No	No	No	No	No	None	Clear	None	None	No Flow	Open		No	No	
LC_44	Long Creek	2/3/2017, 9:26 AM	Randy Rafuse	No	25	Yes	No	Other	Circular		Rip Rap	No	No	No	No	No	None	Clear	None	None	No Flow	Open		No	No	
LC_46	Long Creek	2/3/2017, 9:54 AM	Randy Rafuse	No	25	Yes	No		Circular			No	No	No	No	No	None	Clear	None	None	No Flow	Open		No	No	

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LC_48	Long Creek	2/3/2017, 9:58 AM	Randy Rafuse	No	25	Yes	No		Circular		Rip Rap	No	No	No	No	No	None	Clear	None	None	No Flow	Open		No	No	
LC_49	Long Creek	2/3/2017, 9:50 AM	Randy Rafuse	No	0	No	No		Circular		Rip Rap	No	No	No	No	No			Trickle	None	Clear	Open		No	No	
LC_5	Long Creek	2/3/2017, 10:15 AM	Mike Adriance	No	30	Yes	No	PVC	Circular	18"	Earthen	No	No	No	No	No	None	Clear	Trickle	None	No Flow	Open	Fair	No	No	
LC_51	Long Creek	2/6/2017, 9:15 AM	Mike Adriance	No	26	Yes	Partially	Steel	Circular	15"	Earthen	No	No	No	No	No	None	Clear	Steady	None	Clear	Open	Poor	No	No	
LC_54	Long Creek	2/3/2017, 10:21 AM	Mike Adriance	No	30	Yes	No	Steel	Circular	15"	Rip Rap	No	Yes	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	
LC_54	Long Creek	2/3/2017, 10:31 AM	Mike Adriance	No	30	Yes	No	Steel	Circular	15"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_55	Long Creek	2/3/2017, 10:34 AM	Mike Adriance	No	30	Yes	No	PVC	Circular	12"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_56	Long Creek	3/7/2017, 1:29 PM	Mike Lorello	No	32	No	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_57	Long Creek	3/7/2017, 2:00 PM	Randy Rafuse	No	32	No	No		Circular			No	No	No	No	No	Musty	Cloudy	None	None	No Flow	Open		No	No	
LC_58	Long Creek	3/7/2017, 1:51 PM	Mike Lorello	No	40	Yes	No	Steel	Circular	15"	Rip Rap	No	No	No	No	No		Clear	None	None	No Flow	Open	Fair	No	No	
LC_59	Long Creek	3/7/2017, 1:25 PM	Mike Lorello	No	32	No	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_6	Long Creek	2/3/2017, 9:41 AM	Mike Adriance	No	30	No	No	PVC	Circular	24"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_6	Long Creek	2/3/2017, 10:05 AM	Mike Adriance	No	30	No	No	PVC	Circular	24"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_61	Long Creek	3/7/2017, 1:37 PM	Mike Lorello	No		No	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_62	Long Creek	3/7/2017, 1:36 PM	Mike Lorello	No	32	No	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_63	Long Creek	2/6/2017, 9:52 AM	Mike Adriance	No	26	Yes	Partially	PVC	Circular	15"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Fair	No	No	
LC_63	Long Creek	2/6/2017, 9:53 AM	Mike Adriance	No	26	Yes	Partially	PVC	Circular	15"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Fair	No	No	
LC_64	Long Creek	3/6/2017, 1:58 PM	Randy Rafuse	No	25	Yes	No	PVC	Circular	3"		No	No	No	No	No	None	Clear	None	None	No Flow	Open		No	No	
LC_65	Long Creek	2/3/2017, 9:53 AM	Mike Adriance	No	30	No	No	CMP	Circular		Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_65	Long Creek	2/3/2017, 10:08 AM	Mike Adriance	No	30	No	No	RCP	Circular			No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_66	Long Creek	3/7/2017, 1:14 PM	Mike Lorello	No	32	No	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_68	Long Creek	2/6/2017, 10:29 AM	Mike Adriance	No	26	Yes	No	PVC	Circular	12"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	Yes	No	
LC_69	Long Creek	2/6/2017, 10:36 AM	Mike Adriance	No	26	Yes	No	PVC	Circular	12"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	Yes	No	
LC_7	Long Creek	2/3/2017, 9:57 AM	Mike Adriance	No	30	No	No		Circular		Rip Rap	No	No	No	No	No	None		Trickle	None	No Flow	Open	Good	No	No	
LC_7	Long Creek	2/3/2017, 10:10 AM	Mike Adriance	No	30	No	No		Circular		Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_70	Long Creek	3/7/2017, 1:11 PM	Mike Lorello	No	35	No	No	RCP	Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_71	Long Creek	3/13/2017, 1:21 PM	Randy Keenan	No	10	No	No	RCP	Circular	30"		No	No	No	No	No			Steady	None	No Flow	Open	Good	No	No	
LC_72	Long Creek	2/3/2017, 10:47 AM	Randy Rafuse	No	25	Yes	No		Circular			No	No	No	No	No	None	Cloudy	None	None	No Flow	Open		No	No	
LC_73	Long Creek	2/3/2017, 10:42 AM	Randy Rafuse	No	25	Yes	No		Circular			Yes	No	No	Yes	No	None	Cloudy	None	None	No Flow	Open		No	No	
LC_74	Long Creek	2/3/2017, 10:55 AM	Randy Rafuse	No	25	Yes	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_8	Long Creek	2/3/2017, 10:00 AM	Mike Adriance	No	30	No	No	PVC	Circular	12"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_8	Long Creek	2/3/2017, 10:12 AM	Mike Adriance	No	30	No	No	PVC	Circular	12"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
LC_83	Long Creek	2/3/2017, 10:56 AM	Mike Adriance	No	30	Yes	No	Steel	Circular	15"	Earthen	No	Yes	No	Yes	No	None	Clear	Trickle	None	No Flow	Open	Fair	No	No	
LC_84	Long Creek	2/3/2017, 10:45 AM	Mike Adriance	No	30	Yes	No	Steel	Circular	18"	Earthen	No	No	No	No	No	None	Clear	Trickle	None	No Flow	Open	Fair	No	No	
LC_85	Long Creek	2/3/2017, 10:40 AM	Mike Adriance	No	30	Yes	No	Steel	Circular	18"	Rip Rap	No	No	No	No	No	None	Clear	Trickle	None	No Flow	Open	Good	No	No	

PY2016-17 Dry Weather Outfall Inspections - City of South Portland, ME

Feature ID	Watershed	Inspection Date	Inspector	Precip. Past 3 Days (Y/N)	Temp (deg F)	Wind (Y/N)	Pipe Submerged (Y/N)	Pipe Material	Pipe Shape	Pipe Size1 (Inches)	Open Drain	Foam (Y/N)	Green Scum (Y/N)	Oil / Film (Y/N)	Vegetatative Mat (Y/N)	Sewage (Y/N)	Odor	Water Clarity	Pipe Flow	Seepage Flow	Flow Color	Sediment Condition	Structure Condition	Trash (Y/N)	Yard Waste (Y/N)	Follow-Up Needed
LC_86	Long Creek	2/6/2017, 7:49 AM	Mike Adriance	No	28	Yes	No	Steel	Circular	12"	Earthen	No	No	No	No	No	None		None	None	Clear	Open	Fair	Yes	No	
LC_86	Long Creek	2/6/2017, 7:52 AM	Mike Adriance	No	25	Yes	No		Circular			No	No	No	No	No			None	None	No Flow	Open		No	Yes	Yes
LC_86	Long Creek	3/6/2017, 1:31 PM	Randy Rafuse	No	25	Yes	Partially	Steel	Circular	12"		Yes	No	No	Yes	No		Cloudy	Trickle	None	No Flow	Open	Fair	No	No	Yes
LC_87	Long Creek	2/6/2017, 8:00 AM	Mike Adriance	No	25	Yes	No	PVC	Circular	15"	Rip Rap	No	No	No	No	No	None	Clear	None	None	Clear	Open	Good	Yes	No	
LC_88	Long Creek	2/6/2017, 9:07 AM	Mike Adriance	No	26	Yes	Partially	RCP	Circular	12"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Fair	No	No	
LC_89	Long Creek	2/3/2017, 10:32 AM	Randy Rafuse	No	25	No	No		Circular			No	No	No	No	No	None	Clear	None	None	No Flow	Open		No	No	
LC_9	Long Creek	2/6/2017, 10:02 AM	Mike Adriance	No	26	Yes	No	RCP	Circular	48"	Rip Rap	Yes	No	No	No	No	None	Clear	Steady	None	Clear	Open	Fair	Yes	No	
LC_90	Long Creek	3/7/2017, 10:56 AM	Randy Rafuse	No		No	Partially		Circular			No	No	No	No	No			None	None	No Flow	Open		No	No	
LC_91	Long Creek	3/13/2017, 8:28 AM	Randy Rafuse	No	15	No			Circular			No	No	No	No	No	None		None	None	No Flow	Open		No	No	
LC_92	Long Creek	2/6/2017, 8:15 AM	Mike Adriance	No	25	Yes	No	RCP	Circular	24"	Rip Rap	No	No	No	No	No	None	Clear	Steady	None	Clear	Open	Good	Yes	No	
LC_98	Long Creek	3/6/2017, 1:50 PM	Randy Rafuse	No	25	Yes	No		Circular			No	No	No	No	No	None	Clear	Trickle	None	Clear	Open		No	No	
LC_99	Long Creek	2/6/2017, 10:31 AM	Mike Adriance	No	26	Yes	No	PVC	Circular	4"	Rip Rap	No	No	No	No	No	None		None	None	No Flow	Open	Good	Yes	No	
LC_14	Long Creek Lower	2/28/2017, 8:45 AM	Randy Rafuse	No	30	No	No		Circular			Yes	No	No	No	No		Clear	Trickle	None	No Flow	Open		No	No	
LC_45	Long Creek Lower	2/3/2017, 9:23 AM	Randy Rafuse	No	25	Yes	No	RCP	Circular		Rip Rap	No	No	No	No	No	None	Clear	None	None	No Flow	Open		No	No	
TB_1	Trout Brook	6/13/2017, 1:32 PM	Jarrod Erskine	No	85	No	Partially	RCP	Circular		Rip Rap	No	No	No	No	No	None	Clear	Steady	None	Clear	Open	Good	No	No	
TB_2	Trout Brook	6/13/2017, 10:06 AM	Jarrod Erskine	No	80	No	No	PVC	Circular	8"	Earthen	No	No	No	No	No	None	Clear	Steady	None	Clear	Open	Good	No	No	
TB_3	Trout Brook	6/13/2017, 8:37 AM	Jarrod Erskine	No	80	No	No	Steel	Circular		Earthen	No	No	No	No	No			None	None	No Flow	Open	Needs Attention	No	No	Yes
TB_4	Trout Brook	6/13/2017, 1:16 PM	Jarrod Erskine	No	80	No	Partially	RCP	Circular		Other	No	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	
TB_5	Trout Brook	6/13/2017, 12:27 PM	Jarrod Erskine	No	80	No	No		Circular			No	No	No	No	No	None	Cloudy	None	None	No Flow	Open		No	No	
TB_6	Trout Brook	6/13/2017, 12:34 PM	Jarrod Erskine	No	80	No	Fully	RCP	Circular		Rip Rap	No	No	No	No	No	None	Clear	None	None	No Flow	Open	Fair	No	No	
TB_7	Trout Brook	6/13/2017, 10:21 AM	Jarrod Erskine	No	80	No	No	Other	Circular	10"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
TB_8	Trout Brook	6/13/2017, 10:39 AM	Jarrod Erskine	No	80	No	No	Steel	Circular	10"	Other	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	
TB_9	Trout Brook	6/13/2017, 10:28 AM	Jarrod Erskine	No	80	No	No	PVC	Circular	12"	Earthen	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	

Appendix 5: Dry Weather Ditch Inspection Summary

Long Creek Watershed Ditch Inspections - City of South Portland, ME
MS4 Permit Year 2016-17

Ditch ID	Date	Inspector	Wind Present (Y/N)	Temp (deg F)	Precip Past 2 Days (Y/N)	Precip Amount (inches)	Yard Waste (Y/N)	Trash/Litter Present (Y/N)	Debris / Pollution Types	Odor	Standing Water	Water Clarity	Water Color	Inlet Condition	Outlet Conditions	Sediment Buildup	Structural Condition	Vegetation Coverage	Vegetation Height	Vegetation Type	Erosion / Scouring	Follow Up Required	Follow Up Reason	Comments
LCD-01	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable		<3"		No	No		
LCD-02	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	grass >90%	<3"	Normal Grass	No	No		
LCD-03	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Natural	Excessively Tall	Natural	No	Yes	Vegetation removal	
LCD-04	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Natural	Excessively Tall	Natural	No	No		
LCD-05	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Natural	Excessively Tall	Natural	No	Yes	Vegetation removal	
LCD-06	6/27/17	Fred Dillon	Yes	70	No	0	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Natural	Excessively Tall	Natural	No	Yes	Vegetation removal	
LCD-07	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	no obstruction	no obstruction	<2"	Stable	grass >90%	<3"	Normal Grass	No	No		
LCD-08	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	no obstruction	no obstruction	<2"	Stable	grass >90%	<3"	Normal Grass	No	No	N/A	
LCD-09	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	Yes	Cloudy Water	Brown	Stable	Stable	>2"	Stable	grass >90%	3-6 Inches	Normal Grass	No	No	N/A	
LCD-10	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	Yes	Cloudy Water	Brown	no obstruction	no obstruction	<2"	Stable	10% or Greater Bare Soil	<3"	Normal Grass	No	No	N/A	Pipe inlet to ditch w/ green growth
LCD-12	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	Yes	Cloudy Water	Brown	Stable	Stable	<2"	Stable	grass >90%	<3"	Normal Grass	No	No		
LCD-13	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable				No	No		
LCD-14	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Obstructed	>2"	Stable	grass >90%	<3"	Normal Grass	No	Yes	Partially obstructed culvert inlet	
LCD-15	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	Yes	Cloudy Water	Brown	Stable	Stable	>2"	Stable	Natural	Excessively Tall	Natural	No	Yes	Extensive cat tail growth	
LCD-16	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	Yes	Cloudy Water	Brown	Stable	Stable	<2"	Stable	Natural	Excessively Tall	Woody	No	No		
LCD-17	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Natural	Excessively Tall	Woody	No	No		
LCD-18	6/27/17	Fred Dillon	No	70	No	0	No	No	None		No	NA	NA	Stable	Stable	<2"	Stable	grass >90%	3-6 Inches	Normal Grass	No	No		
LCD-19	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	Yes	Cloudy Water	Brown	Stable	Stable	Natural	Stable	Natural	Excessively Tall	Woody	No	Yes	Vegetation removal	
LCD-20	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Stable	>2"	Stable	grass >90%	<3"	Normal Grass	No	No		
LCD-21	6/27/17	Fred Dillon	Yes	70	No	0	No	Yes	None	None / Natural	Yes	Cloudy Water	Brown	Stable	Stable	<2"	Woody Vegetation Present	Natural	Excessively Tall	Natural	No	Yes	Vegetation removal	
LCD-22	6/27/17	Fred Dillon	Yes	70	No	0	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Woody Vegetation Present		Excessively Tall	Woody	No	Yes	Vegetation removal	
LCD-23	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	grass >90%	<3"	Normal Grass	Yes	Yes	Maybe revegetate	
LCD-24	6/27/17	Fred Dillon	Yes	69	No	0	No	No	None	None / Natural	Yes	Cloudy Water	Brown	Stable	Stable	<2"	Stable	10% or Greater Bare Soil	<3"	Normal Grass	No	Yes	Vegetation	
LCD-25	6/27/17	Fred Dillon	Yes	70	No	0	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Woody Vegetation Present	Natural	Excessively Tall	Natural	No	Yes	Vegetation removal	
LCD-26	6/27/17	Fred Dillon	Yes	70	No	0	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass	<3"	Normal Grass	No	No		

Number ditches needing follow up: 11

Appendix 6: South Portland Erosion & Sediment Control Inspection Form

City of South Portland

TIER II: EROSION AND SEDIMENT CONTROL INSPECTION REPORT

PROJECT SITE INFORMATION			
Inspection Date & Time:		Project Name:	
Project Address / Location:		Parcel Id. Number:	
Property Owner:		Owner Contact:	
Inspector:		Inspector Contact:	
Inspection Duration:		Photos Taken:	☐ Y ☐ N
Project in Shoreland Zone[1]:	☐ Y ☐ N	DEP-certified Contractor[1]:	☐ Y ☐ N ☐ N/A
Contractor:		Contractor Contact:	
Current Weather&Temp:		Date & Amount Last Precip:	

INSPECTION DETAILS						
Erosion & Sediment Control Practices[2]	**Inspection Results**					**Comments / Corrective Actions (include locations & photo numbers)**
ESC Plan Available	☐	Y	☐	N		
Changes to ESC Plan Needed	☐	Y	☐	N		
Winter Stabilization Needed (11/1 - 4/15)	☐	Y	☐	N		
Contractor ESC Reports Available	☐	Y	☐	N		
Previous Corrective Actions Needed	☐	Y	☐	N		
Catch basin inlet controls in place and in good condition (not filled with sediment)	☐	Y	☐	N	☐ N/A	
Perimeter controls in place and in good condition (no sediment leaving site)	☐	Y	☐	N	☐ N/A	
Stockpiles managed properly (no material migration)	☐	Y	☐	N	☐ N/A	
Construction entrances(s) clean and free of tracking onto roadways	☐	Y	☐	N	☐ N/A	
Dewatering activities following ESC Plan	☐	Y	☐	N	☐ N/A	
Proper waste management (no trash & debris on site)	☐	Y	☐	N	☐ N/A	
Proper dust control measures	☐	Y	☐	N	☐ N/A	
Proper slope stabilization (no rill or gully formation)	☐	Y	☐	N	☐ N/A	
Infiltration areas protected from compaction	☐	Y	☐	N	☐ N/A	
Sediment accumulation in on-site stormwater treatment systems	☐	Y	☐	N	☐ N/A	
Sediment, trash, debris or polluted stormwater observed leaving site[3]	☐	Y	☐	N		
CORRECTIVE ACTIONS NEEDED	☐	Y	☐	N		
INSPECTION REPORT FINDINGS REVIEWED WITH CONTRACTOR	☐	Y	☐	N		
EXPECTED COMPLETION DATE FOR CORRECTIVE ACTIONS						

*1. Contractor **MUST BE** certified by DEP in Erosion & Sediment Control if working within 250' of a river, coastal or freshwater wetland; or 75' of stream.*
2. Refer to Maine Erosion & Sediment Control Practices Field Guide for Contractors (2014 revision).
3. Non-Stormwater Discharge Ordinance prohibits sediment discharge to MS4 system; MCGP & NRPA prohibit sediment discharge to protected water resources.

ADDITIONAL COMMENTS (including any deviations from ESC plan or recommendations for corrective actions needed):

Ver. 1: 7/20/17 *CoSP Tier II ESC Inspection Form 7-20-17.xlsx*

TIER II: EROSION AND SEDIMENT CONTROL INSPECTION REPORT

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