Stormwater Phase II
Annual Report for
Permit Year 5 (2017-18)

City of South Portland
Water Resource Protection

Submitted electronically to MEDEP on 9/14/18
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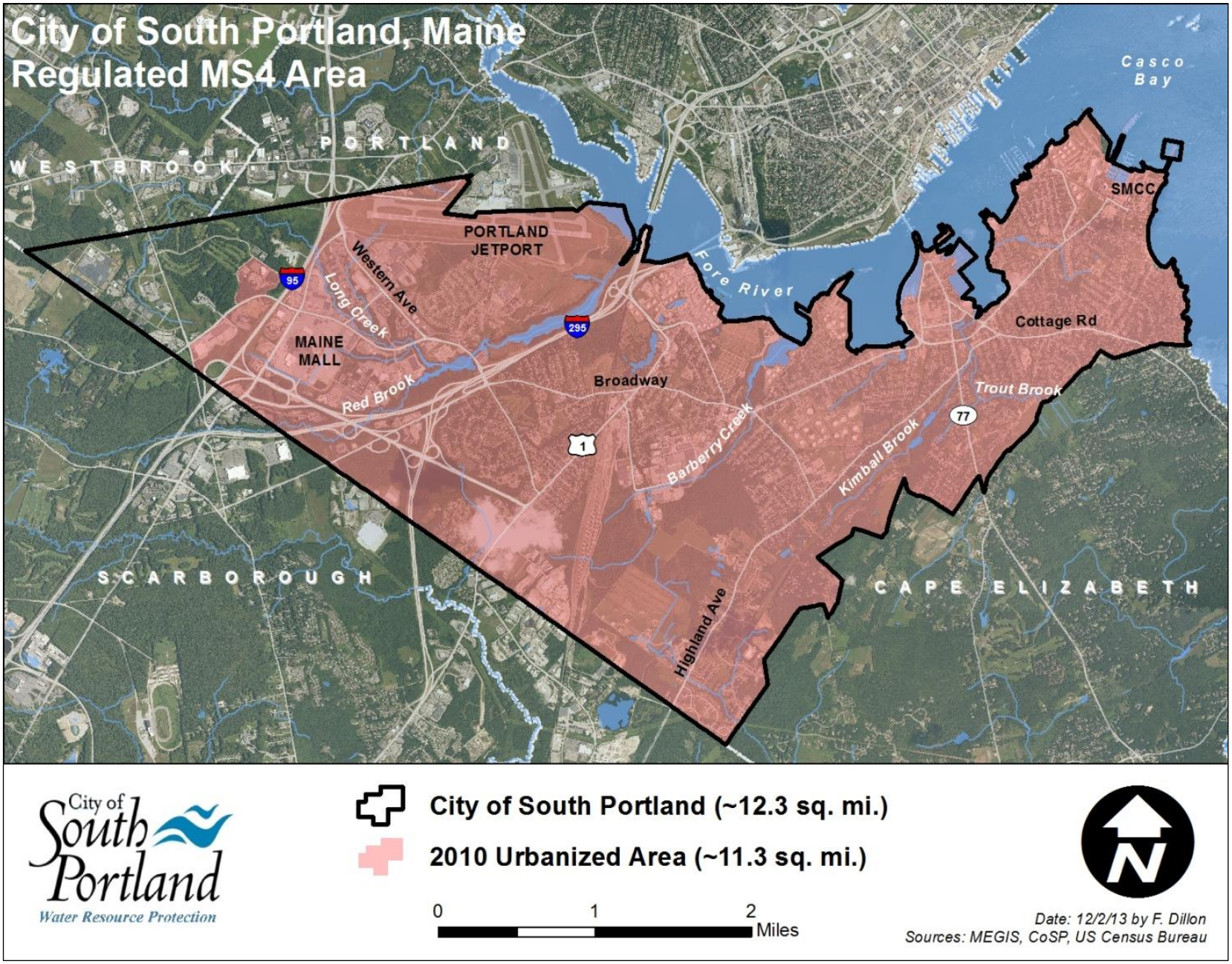

Cover: South Portland High School teacher Tania Ferrante and Stormwater Intern Addie Halligan installing rain garden

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ACKNOWLEDGEMENTS

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- **Tom Burns** ~ *City's GIS Consultant*

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- **The many teachers & students involved in the City's Stormwater Program Education & Outreach efforts**

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 fifth Permit Year (2017-18) 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: DEP's Mary Beth Richardson (left) & MEWEA's Stacy Thompson (right) participate in the South Portland High School's Career Fair (May 2018)

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 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: presentations & activities provided by City Stormwater Program staff during PY2017-18

Date	School / Oganization	# Participants (approx)	Contact	Subject	Comments
7/13/17	MEWEA Young Professionals	30	Allison Fisher	City's WW & SW programs	
10/16/17	Cape Elizabeth High School	25	Kathy Bock & Doug Worthley	Senior AP Env. Sci.	Classroom presentations (2)
10/17/17	CEHS	25	" "	" "	Field assessments (2)
10/23/17	CEHS	25	" "	" "	Maine Stormwater Conference presentation
11/20/17	USM	20	Rebeccah Schaffner	Planning Workshop	Provided overview of City's pesticide ordinance to help students develop E&O strategies
11/25/17	Maine Landscape & Nursery Association	50	Jesse O'Brien	Fall Workshop	Provided overview of City's pesticide ordinance to help landscapers understand how provision will affect them
4/2/18	South Portland High School	10	Tanian Ferrante	Environmental Studies	Provided overview of rain garden construction in preparation for rain garden installation in May
5/7/18	Mahoney Middle School	45	Julie Pitt	6th grade science	Presentations to 3 separate classes on City's SW program
5/8/18	" "	25	" "	" "	Presentations to 2 separate classes on City's SW program
5/15/18	" "	35	" "	" "	Search for stormwater pollution sources as part of PWD trout release at Trout Brook
5/17/18	" "	35	" "	" "	" "
5/21/18	SPHS	10	Tania Ferrante	Environmental Studies	Start rain garden installation
5/23/18	" "	10	" "	" "	Complete rain garden installation
	Total Students (approx.):	***345***			

Among the 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. Since 2013, and with the help of retired high school science teacher (and PhD biochemist) Tom Mikulka, CEHS students have been helping to characterize the macroinvertebrate community of Trout Brook, one of the City's five urban impaired streams.

Figure 2: Victoria Boundy (left) with the Casco Bay Estuary Partnership and Carina Brown (right) with the Portland Water District prepare for the annual Trout Brook trout release (May 2018)

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.

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.

- **9/22/17: Maine Water Environment Association Fall Conference** – *"Alternative Nutrient Management Strategies" (presentation on how MS4 program elements help reduce nutrient concerns)*
- **10/16/17: Maine Stormwater Conference** – "*Engaging Students in Water Quality & Habitat Assessments to Help Identify Stormwater Impacts" (presentation with USM's Karen Wilson on involving students with water quality monitoring activities)*
- **11/15/17: Pleasantdale Stormwater Separation Project Community Meeting** – *"How Municipal Piped Infrastructure Relates to Water Resources Protection" (presentation on MS4 program overview and relationships between stormwater and sewer pipes)*
- **12/6/17: Maine Rural Water Association Technical Conference & Trade Show** – *"Stormwater in the Regulated Landscape" (presentation on stormwater pollution and the main elements of MS4 program)*
- **12/6/17: Maine Rural Water Association Technical Conference & Trade Show** – *"Pollution Source Tracking Approaches in the Willard Beach Watershed – South Portland, ME" (presentation on stormwater system monitoring methods used in the Willard Beach watershed)*
- **3/29/18: Maine Water Conference** – *"A Case for Integrating the Management of Wastewater & Stormwater Programs" (presentation with Zach Henderson, Woodard & Curran Water Resources Technical Manager)*

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 5: provide in-depth assessment of both the implementation and impact of **Permit Awareness Plan**

ACTIONS COMPLETED DURING PERMIT YEAR

The City continued to collaborate with ISWG to implement the **Permit Awareness Plan** (**Appendix 1)**. The Stormwater Program Coordinator also continued to staff the City's Pest Management Advisory Committee (PMAC) in support of the Pesticides Use Ordinance. In addition to coordinating monthly meetings, preparing agendas and taking meeting notes, PMAC meeting topics of involved discussions about stormwater management concepts.

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 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**. The City also continued to implement the Pesticides Use Ordinance, which began applying to private properties (i.e., residents and businesses) on May 1, 2018. As part of this effort, the Stormwater Program Coordinator was closely involved in helping develop the Grow Healthy South Portland website, which is intended to serve as an important resource for helping to maintain compliance with the ordinance while also promoting sustainable land care practices. The website provides a wealth of information for a variety of potential audiences on minimizing the adverse impacts associated with synthetic pesticide use. The Stormwater Program Coordinator also helped obtain a $15,000 Community Development Block Grant for a demonstration project in an underutilized City park (Figure 3). The goals of the project are twofold:

- Serve as a public demonstration project on the suppression of invasive plants (primarily Japanese Knotweed) without the use of synthetic pesticides
- Increase public use of the park by improving access and enhancing the natural amenities

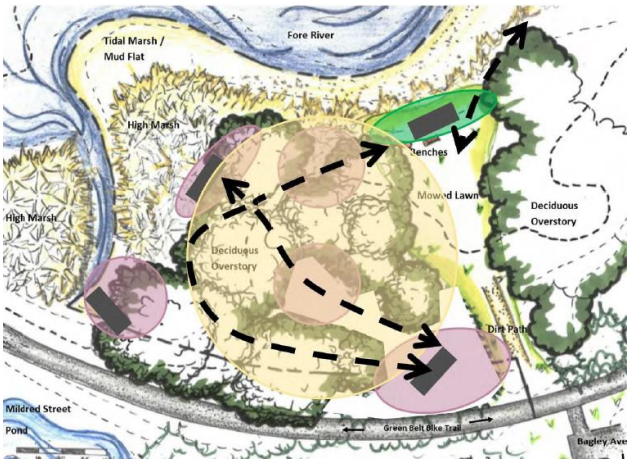


Figure 3: preliminary concept plan for Yerxa Park improvement project (Design credit: Stormwater Intern Addie Halligan)

As mentioned above, 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.

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 one formal meeting during the 2017-18 Permit Year, which covered the following major topics:

8/29/17

- Review and discuss draft MS4 General Permit provisions
- Review committee tasks / accomplishments
  - Provide staffing for MEWEA display at upcoming Maine Stormwater Conference
  - Update on Hydrant Flushing BMP Manual
  - Discuss Stormwater Committee Award ideas

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 reappointed as the LCWMD's Board Chair in June 2018 and will likely serve in that capacity until the end of the second Long Creek General Permit term in 2020.

Finally, the City also hosts annual public events that provide opportunities for local residents to participate in South Portland's Stormwater Management Program. The long-standing Household Hazardous Waste (HHW) Collection event has been very popular and successful at preventing potential pollutants from entering local water resources (Figure 4). The overwhelming success of the fall 2018 HHW event prompted the City to provide three separate collection events each year: 1 HHW event in the spring; 1 electronic waste event in the late spring ; and 1 HHW event in the fall.

Figure 4: Water Resource Protection Administrative Assistant Colleen Mitchell greets a HHW event participant (April 2018).

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.

November 18, 2017 – 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 HHW/E-Waste event resulted in the largest turnout since the City began tracking participation rates in 2009 (Figure 5). Over 500 residents waited in a long 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. A considerable number of respondents were familiar with the City's Pesticides Use Ordinance, stormwater management efforts, and Think Blue Maine (**Appendix 2**). The high attendance level resulted in considerable frustration for many participants due to long wait times. Consequently, (and as discussed above) the City decided to hold three separate events each year: 1 HHW event in the spring; 1 electronic waste event in the late spring; and 1 HHW event in the fall (Figure 5).

Figure 5: post card to inform residents of additional HHW and E-waste events following long wait times at fall 2017 event

April 14, 2018 – Household Hazardous Waste Collection Event

This event was the first held in the spring since at least 2009 and had a comparatively low turnout (~150 residents participated). The City also decided to try using an electronic questionnaire to reduce the administrative burdens associated with processing the paper forms. Consequently, the proportion of completed questionnaires was considerably lower than in previous years (51 questionnaires were completed for about a 30% response rate). Participants generally rated their experience much more favorably than in recent years with 42% indicating the event was "great" and 16% indicating the event was "good". Only 10% of the participants believed the event could still be improved (**Appendix 2**).

April 21, 2018 – 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 and the Stormwater Program Coordinator volunteered at the event for the entire day. This event has proven to be highly successful at increasing public awareness about the adverse impacts of polluted stormwater runoff.

May 15 & 17, 2018 – Portland Water District Trout Release Events

The City continued to partner with the Portland Water District on the annual trout release events in the Trout Brook Nature Preserve (Figure 6). Other organizations participating in this event included the Maine Department of Environmental Protection and Casco Bay Estuary Partnership. Approximately 70 students from Mahoney Middle School conducted water quality analyses, identified aquatic macroinvertebrates and completed stream assessments to identify potential sources of stormwater pollution.

Figure 6: Mahoney Middle School students survey Trout Brook during the PWD's trout release event

May 21 & 23, 2018 – South Portland High School Rain Garden Installation

In conjunction with the South Portland Conservation Commission's (SPCC) Community Service Grants for Healthy Watersheds, the City was closely involved in planning, designing and installing a small rain garden at the South Portland High School (SPHS). The SPCC awarded $2,500 to SPHS teacher Tania Ferrante for the project, which will also include an interpretive sign that will be developed with the assistance of local landscape architect Catherine Callahan of Callahan + LeBleu.

June 1, 2018 – Long Creek Stream Cleanup Day

For the third consecutive year, the City partnered with the Long Creek Watershed Management District and Hydro International to remove 296 pounds of trash from the banks of Long Creek's South Branch. As part of this effort, Hydro International has been cataloging the types and amounts of trash collected to assist in the development of more effective treatment systems to remove trash from polluted stormwater runoff.

June 2, 2018 – Electronic Waste Collection Event

This was the third E-waste collection event held by the City and the first held as a stand-alone event. It proved to be highly successful with 253 participants and over a full box truck load of waste items removed. Event organizers provided participants with brochures on the pesticide ordinance and organic land care practices, both of which should decrease the amount of toxic pollutants entering local water bodies.

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 new stormwater infrastructure in the Pleasantdale neighborhood (primarily catch basins and storm drains) as part of the City's ongoing stormwater separation and CSO mitigation efforts. The City is also currently implementing a sophisticated and powerful Asset Management System for our piped infrastructure (sewer and storm drains), wastewater treatment facility and publicly-owned roads. This system is fully integrated with our existing GIS data, which is improved and updated on a nearly continuous basis throughout each Permit Year.

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 the Long Creek Watershed Management District (Table 2). During routine inspections of properties participating in the Long Creek General Permit, LCWMD staff encountered numerous problems related to poor food waste management practices at several restaurants in the Maine Mall area. The City contacted the operators or owners of problem establishments and offered technical assistance followed by Notices of Violation for recalcitrant restaurant operators. Reports, correspondence on follow up actions and/or photos are available for all of these incidents. The City's Water Resource Protection Department also developed a draft "Restaurant Checklist for Potential Stormwater Pollution Sources" for use by Codes Department staff during annual public health and/or food safety inspections (**Appendix 3**).

The City continued working with the Maine Healthy Beaches (MHB) Program on bacteria source tracking investigations in the Willard Beach watershed. Paired optical brightener and bacteria (enterococcus) samples were collected at several strategic locations during the 2017 and 2018 summer swim beach seasons to isolate potentially problematic subcatchment areas throughout the watershed (Figure 7). An inadvertent cross-connection between a residential greywater source (washing machine used to clean cloth diapers) and the sewer was identified and removed as a result of these investigations (**Appendix 4**).

Figure 7: Stormwater Intern Addie Halligan and Maine Healthy Beaches Americorps member Noah Sargent collecting bacteria and optical brightener samples from the Willard Beach stormwater system (June 2018).

Table 2: spills or IDDE incidents reported for PY2017-18

Report Date	Incident Location	Description	Findings / Follow-up
7/14/17	198 Maine Mall Rd (Super Great Wall Buffet)	Grease & rubbish spills in dumpster storage area	Sent incident report following site visit to CEO, DEP and new property managers (Northeast Capital Group). Partnered with LCWMD to discuss improved GH/PP practices with restaurant manager.

Report Date	Incident Location	Description	Findings / Follow-up
7/18/17	Turnpike Exit #44	Diesel fuel spill	MTA worked with DEP to remove soil contaminated with ~10-20 gal of fuel.
7/26/17	430 Gorham Rd (Kobe Sushi & Steakhouse)	Grease in SW system due to poor GH/PP practices in dumpster storage area	Follow up on LCWMD report; site investigation confirms grease in SW system; contacted CEO, DEP, property manager (Macy's) & manager. Followed up with NOV on 9/26/17. Partnered with LCWMD to discuss improved GH/PP practices with restaurant manager and translate dumpster and FOG fact sheets into Mandarin Chinese.
7/26/17	415 Philbrook (Macaroni Grill)	Grease in SW system due to poor GH/PP practices in dumpster storage area	Follow up on LCWMD report; sent site investigation report CEO, DEP, corporate HQ & manager. Followed up with NOV on 9/26/17. Partnered with LCWMD to discuss improved GH/PP practices with restaurant manager.
7/26/17	420 Maine Mall Rd (On the Border)	Grease in SW system due to poor GH/PP practices in dumpster storage area	Follow up on LCWMD report; sent site investigation report CEO, DEP, corporate HQ & manager. Followed up with NOV on 9/26/17. Partnered with LCWMD to discuss improved GH/PP practices with restaurant manager.
8/23/17	12 Angell Ave	Soap suds in MS4 system	Conducted entero/OB monitoring, CCTV'ing, dye testing & basement inspection to confirm source. Worked with property owner to modify plumbing to remove inadvertent gray-water cross-connection.
9/17/17	154 Mussey St	Discarded cigarette buts	Conducted site visit & took photos of area which didn't seem to have excessive accumulation of butts at time of visit.
9/21/17	2 Loveitt St	Construction debris washout dumping	Conducted site visit & contacted property owner who instructed contractor to stop dumping actvitiy immediately.
10/6/17	430 Gorham Rd (Kobe Sushi & Steakhouse)	Sewage surcharge into SW system	Follow up on LCWMD report; conducted site visit & spoke with manager about removing grease obstruction immediately and improving grease storage vault maint. and staff GH/PP practices. Also notified DEP and property manager (Macy's).
11/2/17	430 Gorham Rd (Kobe Sushi & Steakhouse)	Grease discharge into catch basin	Follow up on LCWMD report; confirmed poor PP/GH of food waste storage area results in grease discharge; contacted restaurant manager, property manager, DEP, LCWMD & Codes Office.
11/4/17	150 Postal Service Way	Sewage surcharge onto street and into drainage swale	WRP staff responded to dispatch notification and discovered sewer main partially obstructed with stone and gravel; cleaned line and removed debris to restore proper sewer functioning.
11/9/17	42 Craggmere Ave	Basement heating oil spill	Fire Dept & DEP contained spill.
11/15/17	Red Brook Trail	Bucket / food waste dumping	Conducted site visit following report from trail user and removed ~16 five-gal buckets of food products.
12/20/17	430 Gorham Rd (Kobe Sushi & Steakhouse)	Grease discharge into catch basin	Follow up on LCWMD report; confirmed poor PP/GH of food waste storage area results in grease discharge; contacted restaurant manager, property manager, DEP, LCWMD & Codes Office.

Report Date	Incident Location	Description	Findings / Follow-up
1/19/18	Broadway (by Anthoine st)	Diesel fuel leak	20-30 gallons of diesel fuel leak due to top hatch not being secured (Fire Dept AR-1 report)
1/23/18	430 Gorham Rd (Kobe Sushi & Steakhouse)	Trash discharge into catch basin	Poor PP/GH of food waste storage area results in trash discharge; contacted restaurant manager, property manager, DEP, LCWMD & Codes Office. City staff met with restaurant manager on 2/22/18 to discuss improvements to PP/GH practices.
2/23/18	259 High St (USCG Base)	Construction activity may have punctured private seewer line	Shaws Bros. to investiage a sagged, clogged sanitary line in dock that took flow from the dock vessel pump-out system to another small volume building. All sources to the line have been stopped and USCG has devised a fix.
3/6/18	200 Running Hill Rd (Applebee's)	Poor PP/GH practices for food waste storage area	FOG & trash entering private CB; LCWMD notified SoPo SW Coord who notified Codes Office
3/6/18	200 Gorham Rd (B. Good)	Poor PP/GH practices for food waste storage area	FOG entering private CB; LCWMD notified SoPo SW Coord who notified Codes Office
3/15/18	684 Broadway	Central Fire station sewage discharge	Staff observed 1-2" of groundwater on basement floor due to obstruction in sewer line; fire dept staff pumped unknown quantity of sewage onto ground and into Anthoine Creek - CSP staff flushed multiple floor drains and fittings so sewer system was functioning properly
3/21/18	333 Clarks Pond Parkway	Sewer overflow	Obstruction in sewer line resulted in raw seage surcharge of unknown amount from manhole into adjacenet catch basin - which discharges to Long Creek. City staff responded to complaint and contacted property manager to confirm problem addressed.
3/26/18	116 Darmouth St	Oil Spill	Motor or waste oil spread across ~1,000 s.f. of paved areas. Public safety & DEP spill response notified. Fire Dept applied absorbent material and Clean Harbors removed most of the absorbent material.
4/5/18	929 Highland Ave (Transfer Station)	Sewage surcharge from MH onto ground and SW ditch / wet pond	DPW contacted contractor to repair pump station electrical problem.
4/10/18	Cummings Rd near Target rear entrance	Landscape contractor pushing winter sand and debris into public ROW	DPW sent sweeper out to remove debris shortly after initial discovery by City staff.
4/18/18	14 Old Bog Rd	Leaking private force main onto front lawn	Staff contacted homeowner who had plumber repair problem
6/5/18	200 Gorham Rd (B. Good Restaurant)	Poor PP/GH practices for food waste storage area	Follow up from LCWMD report; confirmed FOG entering private CB & trash strewn in woods behind dumpsters
6/5/18	380 Gorham Rd (Kobe)	Poor PP/GH practices for food waste storage area	Follow up from LCWMD report; confirmed FOG entering private CB
6/7/18	Rumery St	Hydraulic oil spill	Tractor trailer hydraulic oil leak. DEP on site and advised application of absorbant to spill area and disposal of contaminated soil. Fire Dept performed proper spill response procedures.

Report Date	Incident Location	Description	Findings / Follow-up
6/8 - 6/10/18	198 Maine Mall Rd (Super Great Wall Buffet)	Pump station malfunction - discharged raw sewage into adjacent catch basin	Chronic sewage discharges from pump station failures - NOV to property owner - meet w/ owner and manager to create a regular maintenance strategy to avoid further enforcement action/penalties
6/26/18	430 Gorham Rd (Kobe Sushi & Steakhouse)	Trash discharge into catch basin	LCWMD reports poor PP/GH of food waste storage area results in trash discharge; refered to Codes Office for further action.

The City's Stormwater Program Coordinator once again initiated communications on behalf of all Interlocal Stormwater Working Group (ISWG) communities with the Portland Water District (PWD) in the latter half of PY2017-18 to obtain their annual water quality report. 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 (**Appendix 5**).

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 January and February 2018 when temperatures remained below freezing for extended periods. Inspections for the Barberry Creek and Trout Brook watersheds were completed during a cold snap in late March 2018. Due to increasing concerns with the spread of Lyme disease and other even more serious tick-borne illnesses, the City would like to continue conducting outfall inspections during times of the year when the temperatures are well below freezing and ticks are much less likely to be active. The inspection summaries for all three watersheds are included in **Appendix 6**.

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.

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 2018, WRP staff inspected and photographed most of the open ditches in the Long Creek watershed (ditches LCD-21 through LCD-26 were inspected on 7/5/18). The ditches for Barberry Creek were inspected on 8/3/18 (Stormwater Program Coordinator inadvertently neglected to inspect before the end of the permit year on 6/30/18). The summary of inspections is included in **Appendix 7**. We continued to use the ArcGIS Online (AGOL) application for data collection. 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 watershed, no open ditches are present in the public right-of-way and therefore no inspections were necessary.

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

In PY2015-16, drive-by septic system evaluations were conducted for 183 parcels throughout the City (Figure 8). 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. There has been considerable discussion recently within the State's MS4 community about the efficacy and value of drive-by septic system evaluations and the 5th draft of the 2018-23 MS4 General Permit (dated 6/15/18) does not include any such requirements. Therefore, no further actions for septic system evaluations will be completed by the City until or unless additional requirements are specified in the 2018-23 MS4 General Permit.

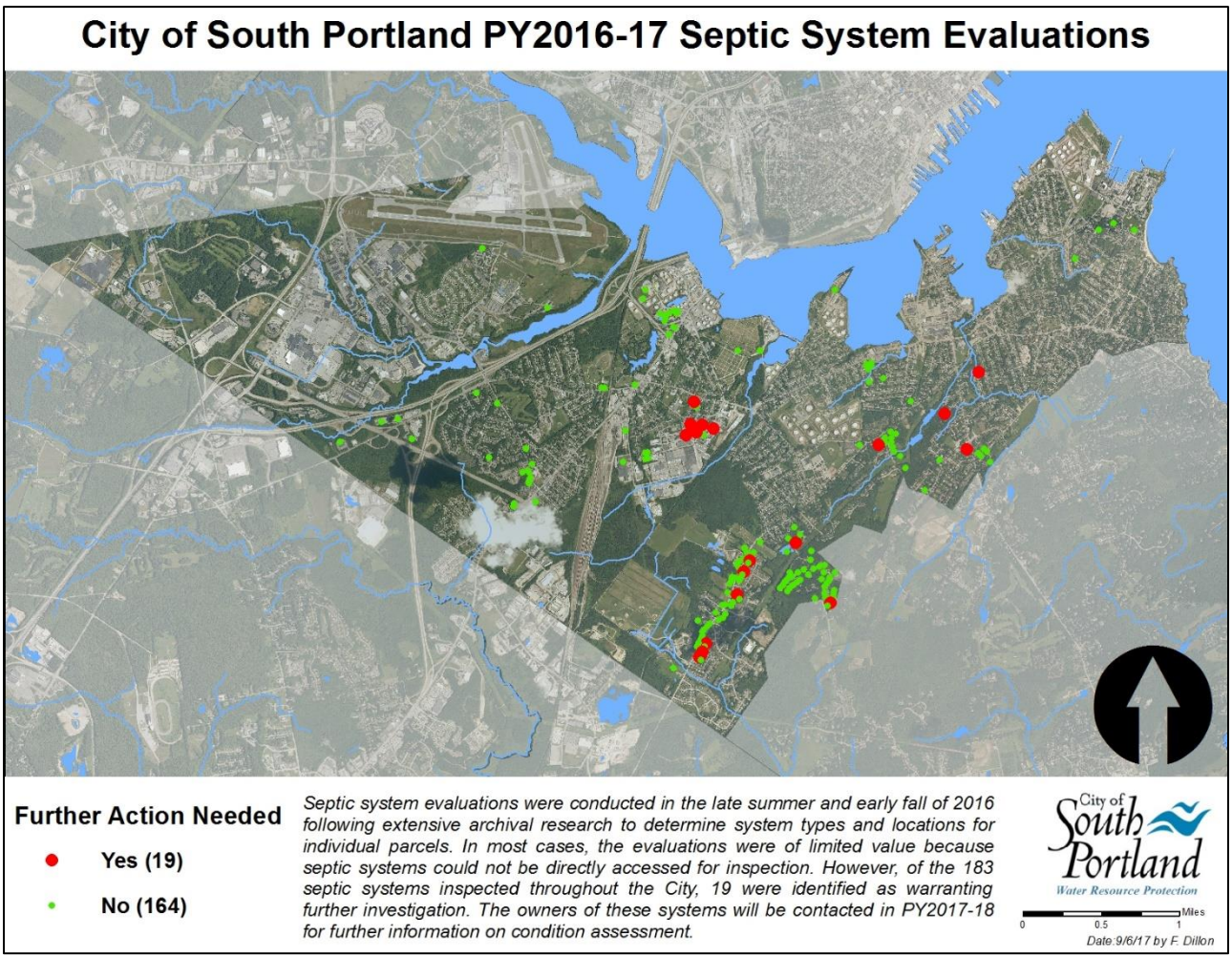


Figure 8: map of septic systems evaluated for PY2016-17

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 once again partnered to hold a combined HHW and Electronic Waste Collection Day on 11/18/17. This event proved to be overwhelmingly successful from the perspectives of public participation and amounts of HHW & E-waste removed from the municipal waste stream. The City invested nearly $25,000 in the event (~$10,000 more than any of the previous events). However, an excess of 500 participants resulted in considerable logistical challenges for the waste processing stations. Long participant wait times (Figure 9) also resulted in unprecedented public complaints prompting the City to hold separate HHW and E-waste events and provide two HHW events for the 2018 calendar year. The first HHW event for 2018 held on 4/14/18 was very well received by the public (according to the participant questionnaires) with approximately 150 participants; the City invested $12,500 in this event. The E-Waste event was also very well received and had 253 participants; the City invested $2,200 in this event. The 2nd annual HHW event for 2018 will be held on 10/6/18. Please refer to summary of activities for BMP 2.2 and **Appendix 2** for more details.

Figure 9: 11/18/17 HHW&E-Waste traffic line and wait time

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 PY2017-18.

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 2 above, when illicit discharge incidents are reported by any means, follow up inspections are almost always 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 received over 1,717 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 Sedimentation 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. 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 site-specific erosion and sediment control plans.

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's Engineering Inspector also continued to use the Fulcrum application 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 construction project oversight duties for PY2017-18. The City continued to use a process flow chart that clearly defines roles & responsibilities for the third party inspector (3PI), relevant City staff, the contractor and the owner (Figure 10). It also establishes processes for submittal and filing of inspection reports and escalating enforcement 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.

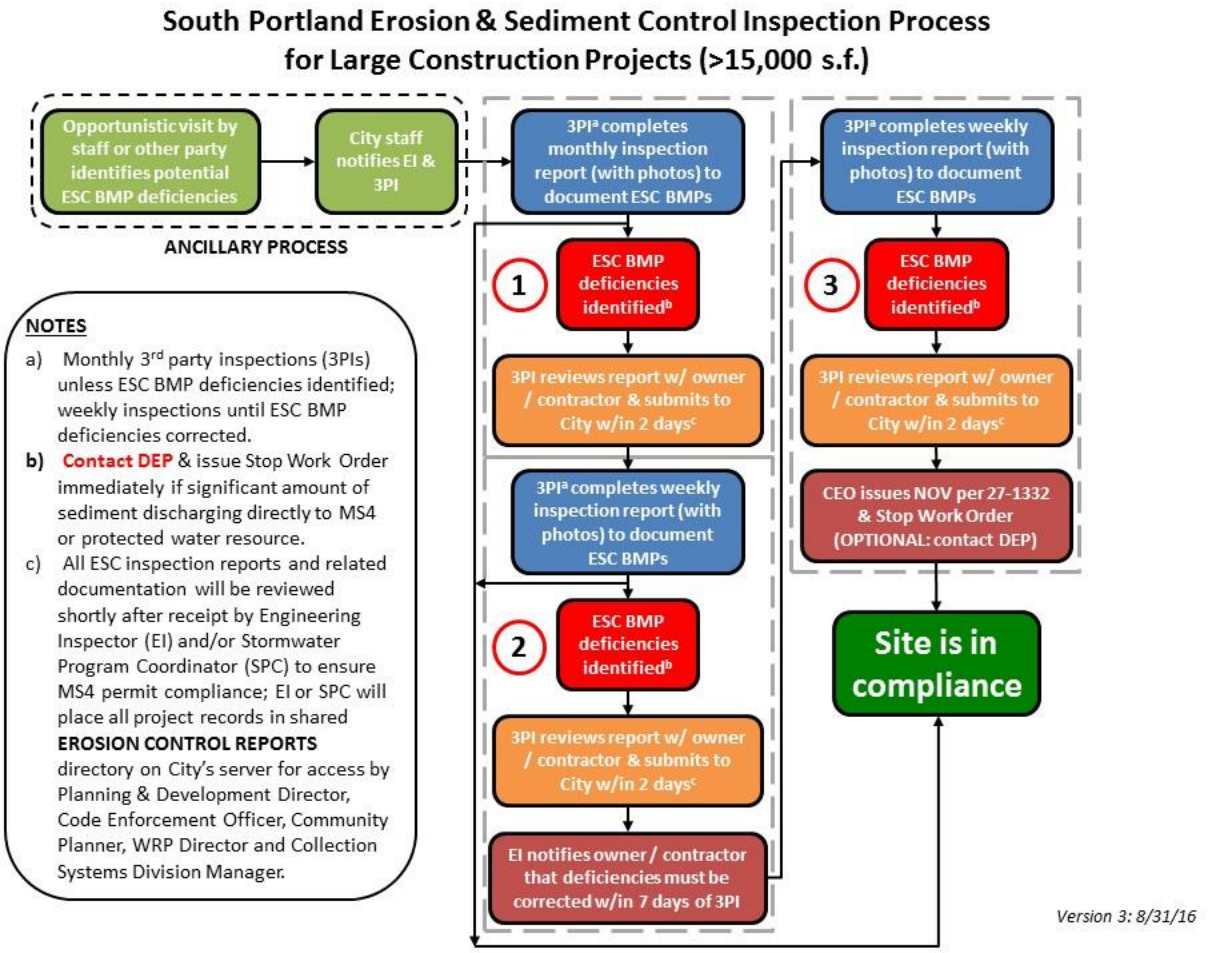
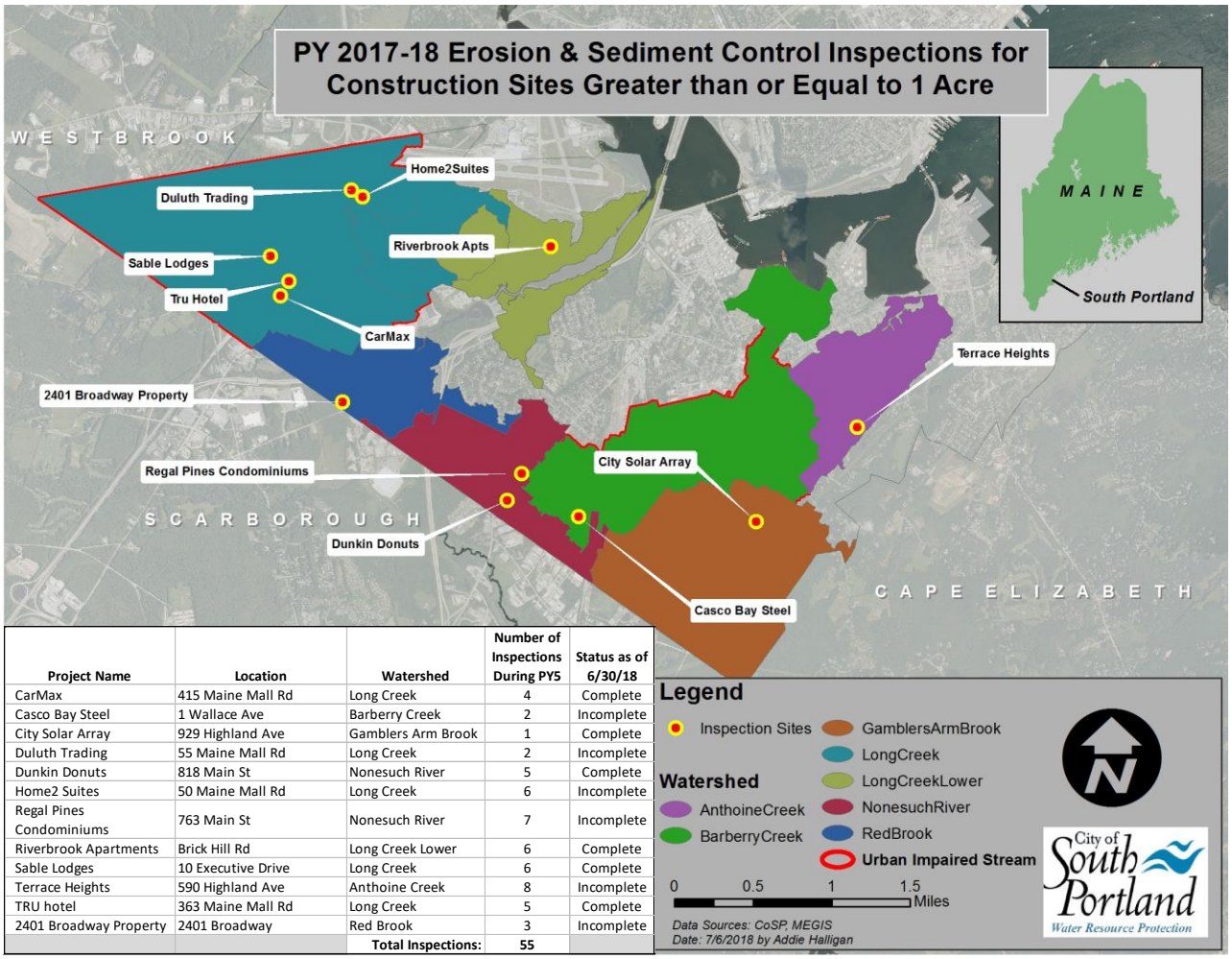


Figure 10: Erosion & Sediment Control inspection process flow chart for larger construction projects

The City and our 3rd party inspectors continued to use a comprehensive erosion & sedimentation control inspection form developed by ISWG and intended to comply with the MS4 General Permit, the MCGP and Chapter 500 (**Appendix 8**). To facilitate nearly real-time report transmittal from City staff and 3rd party inspectors, we adapted this form for use with Fulcrum, a cloud-based data collection application. For

consistency with other GIS applications, we will likely migrate this system from Fulcrum to ArcGIS Online in the coming years as funding allows.

During PY2017-18 there were 12 active construction projects an acre or larger that were inspected 55 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 11). Most projects with only one or a few inspections were either completed shortly after the beginning or started just before the end of PY2017-18. In both cases, most were inspected on multiple occasions during PY2016-17 or PY2018-19.



Project Name	Location	Watershed	Number of Inspections During PY5	Status as of 6/30/18
CarMax	415 Maine Mall Rd	Long Creek	4	Complete
Casco Bay Steel	1 Wallace Ave	Barberry Creek	2	Incomplete
City Solar Array	929 Highland Ave	Gamblers Arm Brook	1	Complete
Duluth Trading	55 Maine Mall Rd	Long Creek	2	Incomplete
Dunkin Donuts	818 Main St	Nonesuch River	5	Complete
Home2 Suites	50 Maine Mall Rd	Long Creek	6	Incomplete
Regal Pines Condominiums	763 Main St	Nonesuch River	7	Incomplete
Riverbrook Apartments	Brick Hill Rd	Long Creek Lower	6	Complete
Sable Lodges	10 Executive Drive	Long Creek	6	Complete
Terrace Heights	590 Highland Ave	Anthoine Creek	8	Incomplete
TRU hotel	363 Maine Mall Rd	Long Creek	5	Complete
2401 Broadway Property	2401 Broadway	Red Brook	3	Incomplete
		Total Inspections:	**55**	

Figure 11: PY2017-18 erosion and sediment control (ESC) inspections for sites greater than 1 acre

The City's Engineering Inspector also conducted 37 inspections for 31 construction projects that disturbed less than one acre. All inspections were recorded using the Fulcrum application and most were for single family residential projects.

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. For PY2018-19, we also hope to revise some provisions of our Stormwater Management Performance Standards to ensure that most new development and redevelopment projects include some level of stormwater treatment.

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 the submittal of certified 3rd party inspection reports for all qualifying properties (Figure 12). 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.).

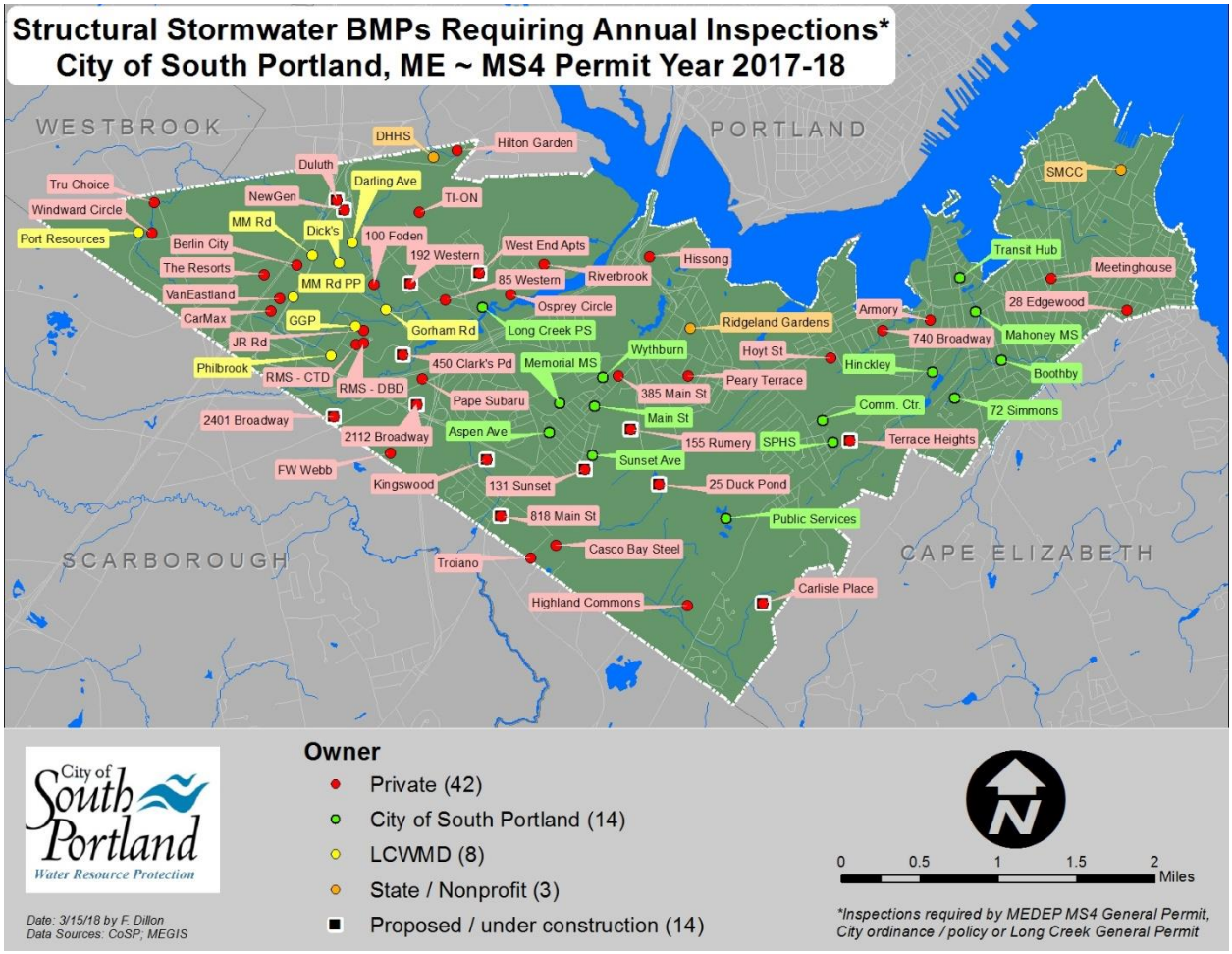


Figure 12: locations of qualifying post-construction structural stormwater BMPs in South Portland for PY2017-18

As of 6/30/18, the properties or projects that currently require (or will require) stormwater BMP inspections were as follows:

- ***42 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)
- ***14 City-owned properties / projects***
- ***3 State or nonprofit properties / projects***

The City sent notification letters in March 2018 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 mid-September 2018, inspection reports for all but seven qualifying properties had been submitted to the City (Table 3). 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

requests inspection reports from the Long Creek Watershed Management District for stormwater systems covered under the Long Creek General Permit.

Table 3: PY2017-18 properties requiring post-construction 3rd party inspections for stormwater treatment BMPs

PY2017-18 INSPECTIONS	3PI Report Received	Follow-up Needed?	Comments
Privately Owned			
100 Foden Road	yes	no	4/25/18: 3PI report received with scheduled pond maint to be completed in Aug-Sept
28 Edgewood Rd	yes	no	Homeowner self-inspection "PASS" on 6/14/18; no maintenance needed
740 Broadway	yes	no	6/20/18: 3PI report received; no maintenance needed
Armory - 682 Broadway	yes	yes	Sent reminder email on 7/9/18 and received 4/18/18 inspection report same day; maintenance needed.
Berlin City Auto Group	no	yes	Contacted Berlin City management on numerous occasions but no report received; last year's 3PI stated considerable maint needed for SW system. **ENFORCEMENT FOLLOW UP?**
CarMax	yes	no	5/10/18 3PI report received.
Casco Bay Steel	no	yes	8/21/18: sent email to owner Bryon Tait on late 3PI report. 9/1/18: Planning Dept working to resolve project improvements & completion of 3PI report.
F.W. Webb	yes	no	7/9/18: sent email reminder on 7/9/18; 7/19/18 3PI report received on 7/26/18.
Highland Commons	no	yes	Sent email reminders on 7/9/18 & 7/26/18. 9/1/18: still no response. **ENFORCEMENT FOLLOW UP?**
Hilton Garden Inn	yes	no	6/20/18:3PI report received; no maintenance needed
Hissong Salt Packaging	yes	no	7/9/18: sent email reminder; 7/18/18: 3PI report received with minor maint needed
Hoyt Street Apartments	yes	no	6/20/18: 3PI report received; minor maintenance needed
John Roberts Rd Office Park	yes	no	11/17/17: 3PI report received; no maintenance needed
Main Street Retail - 385 Main St	no	yes	8/7/18: sent certified letter to Gary Crosby (owner). 8/20/18: owner response that Blais will do 3PI. 9/11/18: Todd Gammon of Blais confirms 3PI done and report pending.
Meetinghouse Lofts	no	yes	Numerous communications with property manager and 3PI and still no report as of 9/11/18. **ENFORCEMENT FOLLOW UP?**
Osprey Circle	yes	no	5/24/18: 3PI report received with maintenance needed; 7/10/18: contacted property manager Daphne Pappas to address confusion about which parcels subject to 3PI requirements; 8/6/18: received amended reportand all SW systems OK.
Pape Subaru	yes	no	6/6/18: 3PI report received with no maintenance needed
Peary Terrace - 50 Peary Terrace	yes	no	4/17/18: 3PI report received with no maintenance needed
Peary Terrace - 52 Peary Terrace	yes	no	4/17/18: 3PI report received with no maintenance needed
Peary Terrace - 54 Peary Terrace	yes	no	4/17/18: 3PI report received with no maintenance needed
Peary Terrace - 56 Peary Terrace	yes	no	4/17/18: 3PI report received with no maintenance needed
Peary Terrace - 64 Southeast Rd	yes	no	4/17/18: 3PI report received with no maintenance needed
Peary Terrace - 70 Southeast Rd	yes	no	4/17/18: 3PI report received with no maintenance needed
Peary Terrace - 76 Southeast Rd	yes	no	4/17/18: 3PI report received with no maintenance needed
Peary Terrace - 82 Southeast Rd	yes	no	4/17/18: 3PI report received with no maintenance needed

PY2017-18 INSPECTIONS	3PI Report Received	Follow-up Needed?	Comments
Privately Owned			
Riverbrook Apartments	no	yes	Numerous communications with property manager and 3PI and no report as of 9/11/18; **ENFORCEMENT FOLLOW UP?**
RMS 28 Chris Toppi Drive	yes	no	7/9/18: sent reminder; 7/24/18; 3PI report received with no maintenance needed
RMS 30 Donald Dean Drive	yes	no	7/9/18: sent reminder; 7/24/18; 3PI report received with no maintenance needed
Sable Lodge	no	yes	Numerous communications with property manager, owner & 3PI with no report as of 9/11/18. **ENFORCEMENT FOLLOW UP?**
Texas Instruments	yes	yes	6/21/18: 3PI report received with minor maintenance needed (including some by City for Foden Rd culvert)
Troiano Waste Services	yes	no	6/6/18: 3PI report received with no maintenance needed
Tru Choice Credit Union	yes	no	5/11/18: 3PI report received with maintenance needed; 6/29/18: reinspection to document maint
VanEastland LLC	yes	no	7/13/18:sent email reminder; 8/20/18: 3PI report received with maint needed
Western Avenue Crossing	yes	yes	6/20/18: 3PI report received with maint needed; 7/26/18: sent letter to owner request maint before next inspection.
Publicly Owned			
72 Simmons Rd Rain Garden	yes	no	5/31/18: 3PI report received with no maintenance needed
Aspen Ave Biofilter	yes	yes	5/31/18: 3PI report received with maintenance needed
Boothy Ave StormTree	yes	no	5/31/18: 3PI report received with no maintenance needed
City Hall / Transit Hub (7 BMPs)	yes	yes	5/17/18: 3PI report received with maintenance needed
Community Center Det. Pond	yes	yes	6/5/18: 3PI report received with maintenance needed
DHHS - State Office Building	yes	no	4/6/18: 3PI report received with maint needed; 5/15/18: reinspection to document maint
Hinckley Park Rain Garden	yes	yes	5/31/18: 3PI report received with maintenance needed
Long Creek PS (3 BMPs)	yes	yes	5/19/18: 3PI report received with maintenance needed
Mahoney Middle School	yes	no	6/15/18: 3PI report received with no maintenance needed
Main St Biofilters (10 BMPs)	yes	yes	6/5/18: 3PI report received with maintenance needed
Memorial MS Gravel Wetland	yes	yes	6/12/18: 3PI report received with maintenance needed
Public Services Facilities (2 BMPs)	yes	yes	5/22/18: 3PI report received with maintenance needed
Ridgeland Gardens	yes	no	7/9/18: sent reminder; 7/12/18: 3PI report received with no maint needed
SMCC Parking Lot	yes	no	6/7/18: 3PI report received with no maintenance needed
South Portland High School (7 BMPs	yes	yes	5/30/18: 3PI report received with maintenance needed
Sunset Ave Gravel Wetlands (2 BMP	yes	yes	5/31/18: 3PI report received with maintenance needed
Wythburn Gravel Wetland	yes	yes	6/15/18: 3PI report received with maintenance needed
Reports received/followup?			
Yes:	44	21	
No:	7	30	
Totals:	**51**	**51**	

We also developed a Stormwater Treatment System Maintenance Manual for use by our staff to document annual maintenance activities for all 37 City-owned stormwater treatment systems. Each system has a unique identifier and 2-page maintenance form that briefly describes the type of system (e.g., bioretention, gravel wetland, etc.), includes a maintenance checklist, location map, photo and schematic diagram.

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

The City continued to maintain and update an inventory of City-owned properties subject to O&M procedures developed to reduce polluted stormwater runoff to the maximum extent practicable. South Portland's most recent cadastral records (from April 2017) identify 208 parcels that are owned by the City (Figure 13). 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.

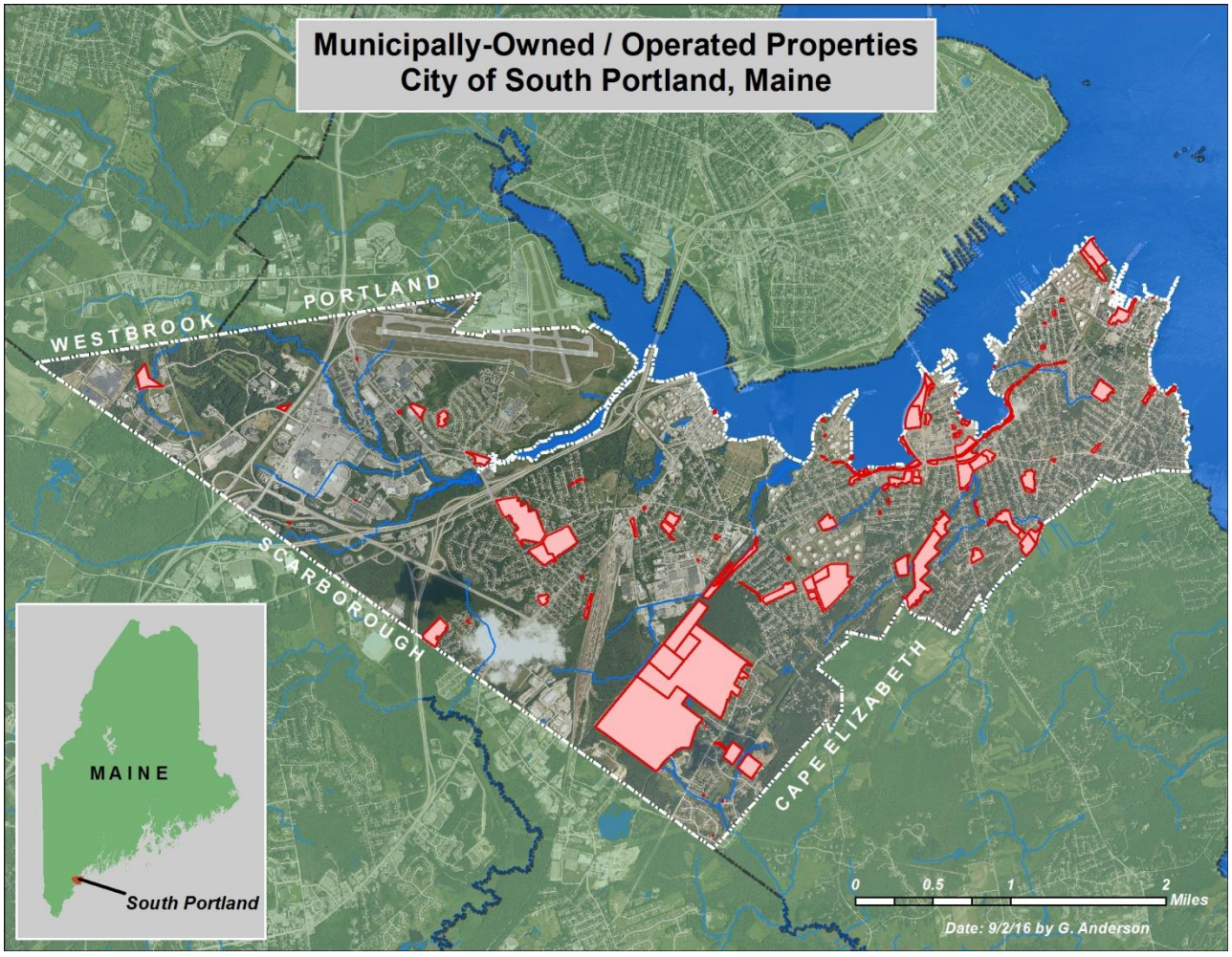


Figure 13: properties owned and operated by the City and subject to O&M plans to minimize / prevent polluted stormwater runoff

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 and/or provided three Stormwater Pollution Prevention Plan (SWPPP) and/or Pollution Prevention / Good Housekeeping (PP/GH) training events in PY2017-18. On 5/23/18, the City partnered with the DEP and ISWG to provide good housekeeping and pollution prevention training to staff from MS4 communities throughout the greater Portland area including 16 South Portland employees (Figure 14). The City of South Portland has hosted

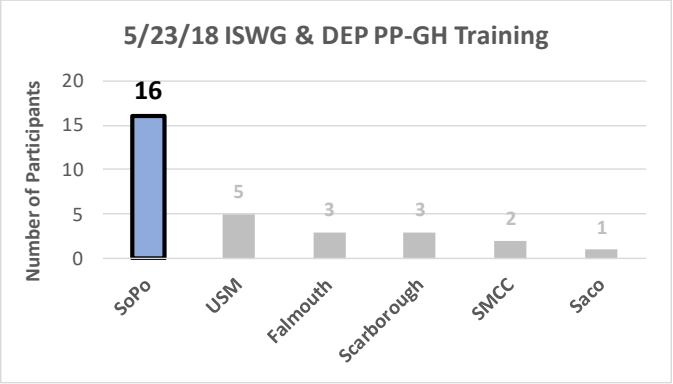


Figure 14: DEP & ISWG Pollution Prevention & Good Housekeeping training event for PY2017-18

this annual event at our Community Center for the past several years. For PY2017-18, a new training component was added to help improve the level of awareness among participants. We presented an online "Stormwater Jeopardy" game developed with the Jeopardy Labs platform that allow users to create customized games for particular topic areas (Figure 15). We also administered questionnaires before and after the training event which established that it was effective in helping municipal staff gain a better understanding of the relevant topics presented.

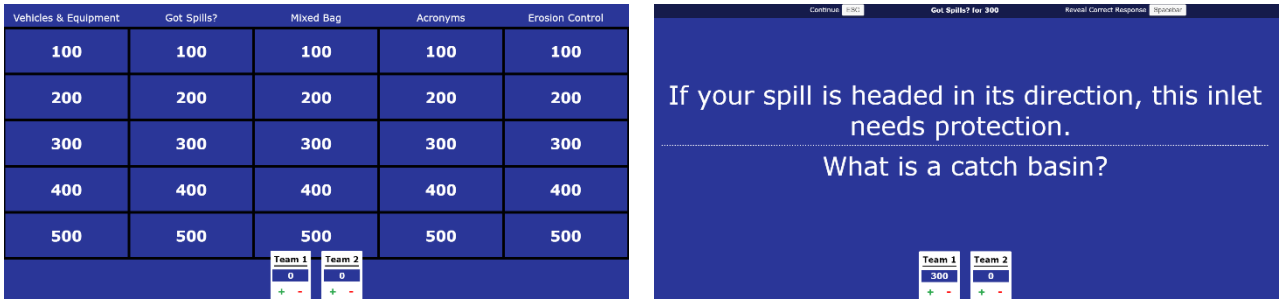


Figure 15: screen shots of "Stormwater Jeopardy" game used for 5/23/18 DEP-ISWG stormwater training event

On 6/20/18, the Stormwater Program Coordinator provided site-specific good housekeeping and pollution prevention training to 28 employees from the Parks & Recreation and Public Works Departments (Figure 16). The presentation was very well received by City staff. Finally, the Stormwater Program Coordinator also provided training to 9 staff members from the City's wastewater treatment facility on 6/25/18. The City will continue partnering with MEDEP and ISWG for ongoing annual SWPPP and GH/PP training and 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.

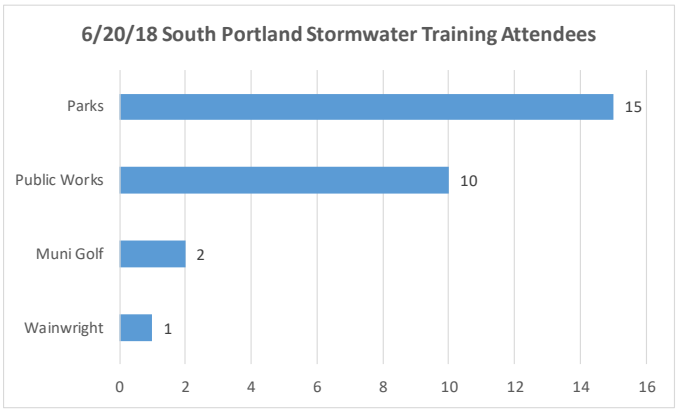


Figure 16: City staff participating in 6/20/18 stormwater training

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. In the spring of 2018, we continued to provide sweeping services to the Long Creek Watershed Management District in support of the ongoing restoration efforts there. Our regenerative air sweeper removed approximately 106 tons of sediment from nearly 57 acres of publicly owned streets (Table 4).

Table 4: spring 2018 summary of City sweeping activities for the Long Creek watershed

Public Road Name	Impervious Area (acres)	Equip[2] & Labor Hours	Labor Cost[3]	Fuel Use (Gal)[4]	Fuel Cost[5]	Equipment Cost[6]	Total Cost[7]
Chris Toppi/Donald Dean Dr	0.901	0.50	$17.36	1.57	$3.14	$26.68	$47.18
Clarks Pond Pkway	1.091	5.00	$173.59	15.75	$31.50	$266.79	$471.89
*Cummings Rd**	4.295	0.50	$17.36	1.57	$3.14	$26.68	$47.18
Darling Ave	1.933	0.25	$8.68	0.79	$1.58	$13.34	$23.60
Foden Rd / Pope Ave	1.464	1.00	$34.72	3.15	$6.30	$53.36	$94.38
Gannett Dr	3.575	0.25	$8.68	0.79	$1.58	$13.34	$23.60
*Gorham Road**	7.635	3.50	$121.52	11.02	$22.04	$186.76	$330.31
James Baka Rd	1.015	0.25	$8.68	0.79	$1.58	$13.34	$23.60
John Roberts Rd	0.512	5.00	$173.59	15.75	$31.50	$266.79	$471.89
Long Creek Dr	0.432	0.50	$17.36	1.57	$3.14	$26.68	$47.18
*Maine Mall Rd**	10.232	11.50	$399.27	36.22	$72.44	$613.63	$1,085.33
Philbrook Ave	5.226	1.75	$60.76	5.51	$11.02	$93.38	$165.16
*Running Hill Road**	7.985	5.00	$173.59	15.75	$31.50	$266.79	$471.89
*Western Avenue**	10.701	8.50	$295.11	26.77	$53.54	$453.55	$802.20
Totals:	**56.997**	**43.50**	**$1,510.27**	**137.00**	**$274.00**	**$2,321.10**	**$4,105.37**

NOTES

1. Sweeping services for spring 2018
2. 2011 Tymco regenerative air sweeper used for all street sweeping.
3. Labor rates based on single employee including fringe benefits: $34.72/hr
4. Fuel use "normalized" for equipment run times on each road segment from overall fuel consumption for entire watershed.
5. Fuel cost = $2.00/gal
6. Based on percentage of total annual hrs. that equip. was used in LC w'shed at 2.5% CPI over extent of service life.
7. Annual O&M and admin. overhead costs NOT included.

**MDOT roads that SoPo maintains and for which the LCWMD allows credit on annual assessments to the City.*

We are currently in the process of implementing an Asset Management (AM) Program that will provide basic data on sweeping locations, amounts of sediment removed and additional relevant information. Since this program won't be fully operational until sometime in 2019, we developed a cloud-based Google Form (Figure 17) prior to the start of the 2018 sweeping season to

Figure 17: screen shot of South Portland's interim street sweeping data collection form

track sweeping activities in the interim. The types of data entered by the Public Works Department's sweeper operators include: sweeping date; operator name and position; sweeper type (i.e., mechanical, vacuum or regenerative air); start and stop times; roads swept; fuel use; and number of sweeper loads. South Portland's sweepers removed approximately 660 tons of sediment from publicly owned streets throughout the City for the 2018 calendar year through 6/30/18. The City's vacuum and regenerative air sweepers were used most frequently and new units being considered for purchase were also tested for overall performance (Figure 18).

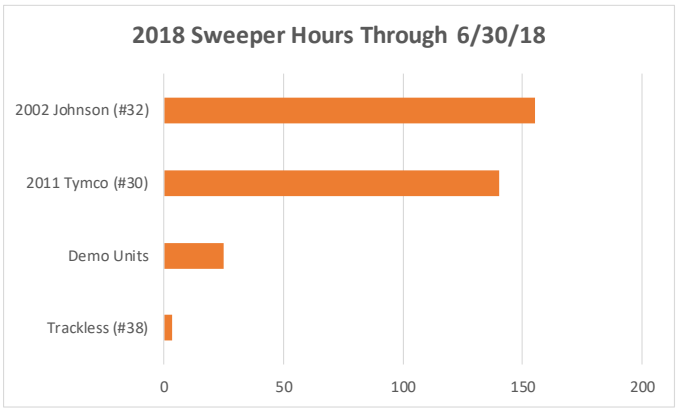


Figure 18: summary of equipment run times for City's sweepers

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 PY2017-18, 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 9/13/18, 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 $11.66 (Table 5).

Table 5: summary of 2018 catch basin cleaning costs

2018 CITY OF SOUTH PORTLAND CATCH BASIN CLEANING SUMMARY (as of 9/13/18)							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	142	23.35	31.00	18.08	0.13	$1,709	0.16	0.22	$94.54	$12.04
Barberry Creek	188	26.00	33.00	23.47	0.12	$2,064	0.14	0.18	$87.94	$10.98
Breakwater	300	53.12	56.58	28.65	0.10	$3,249	0.18	0.19	$113.41	$10.83
Calvary Pond	448	68.25	83.00	47.06	0.11	$4,698	0.15	0.19	$99.82	$10.49
Clarks Pond	109	23.54	28.60	7.89	0.07	$1,211	0.22	0.26	$153.54	$11.11
Danforth Cove	18	7.00	22.00	1.37	0.08	$339	0.39	1.22	$247.74	$18.86
Gamblers Arm Bk	226	30.50	26.00	21.18	0.09	$2,084	0.13	0.12	$98.41	$9.22
Kimball Brook	49	6.50	5.50	5.47	0.11	$491	0.13	0.11	$89.76	$10.02
Long Creek	252	51.25	185.00	35.55	0.14	$3,783	0.20	0.73	$106.42	$15.01
Long Creek Lower	93	10.92	5.48	13.03	0.14	$1,006	0.12	0.06	$77.17	$10.81
Mill Creek	178	47.75	44.00	24.34	0.14	$2,838	0.27	0.25	$116.59	$15.94
Nonesuch River	101	20.59	27.96	15.89	0.16	$1,506	0.20	0.28	$94.77	$14.91
Red Brook	24	5.76	5.76	2.88	0.12	$340	0.24	0.24	$118.22	$14.19
Trout Brook	138	25.00	12.00	16.92	0.12	$1,668	0.18	0.09	$98.60	$12.09
Turners Island	217	26.00	10.00	20.11	0.09	$1,853	0.12	0.05	$92.16	$8.54
Willard Beach	114	17.84	15.96	16.76	0.15	$1,435	0.16	0.14	$85.62	$12.59
Totals/Averages:	**2597**	**443.37**	**591.84**	**298.65**	**0.11**	**$30,276**	**0.17**	**0.23**	**$101.38**	**$11.66**
					(299/2597)		*(443/2597)*	*(592/2597)*	*(30276/299)*	*(30276/2597)*

* Assumes $32.61 hourly labor rate; $2.00/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 98 construction projects for PY2017-18. 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 under $50,000 – or approximately 37% of the annual construction program budget ($136,481) – on a variety of stormwater system repair and replacement projects for the 2017-18 permit year (Figure 19).

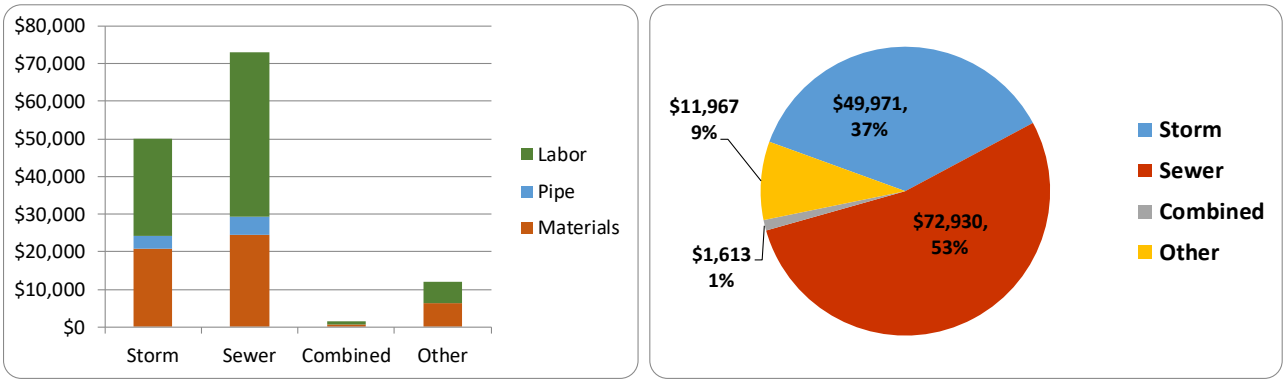


Figure 19: summary of construction project expenses for South Portland's stormwater and sewer systems

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

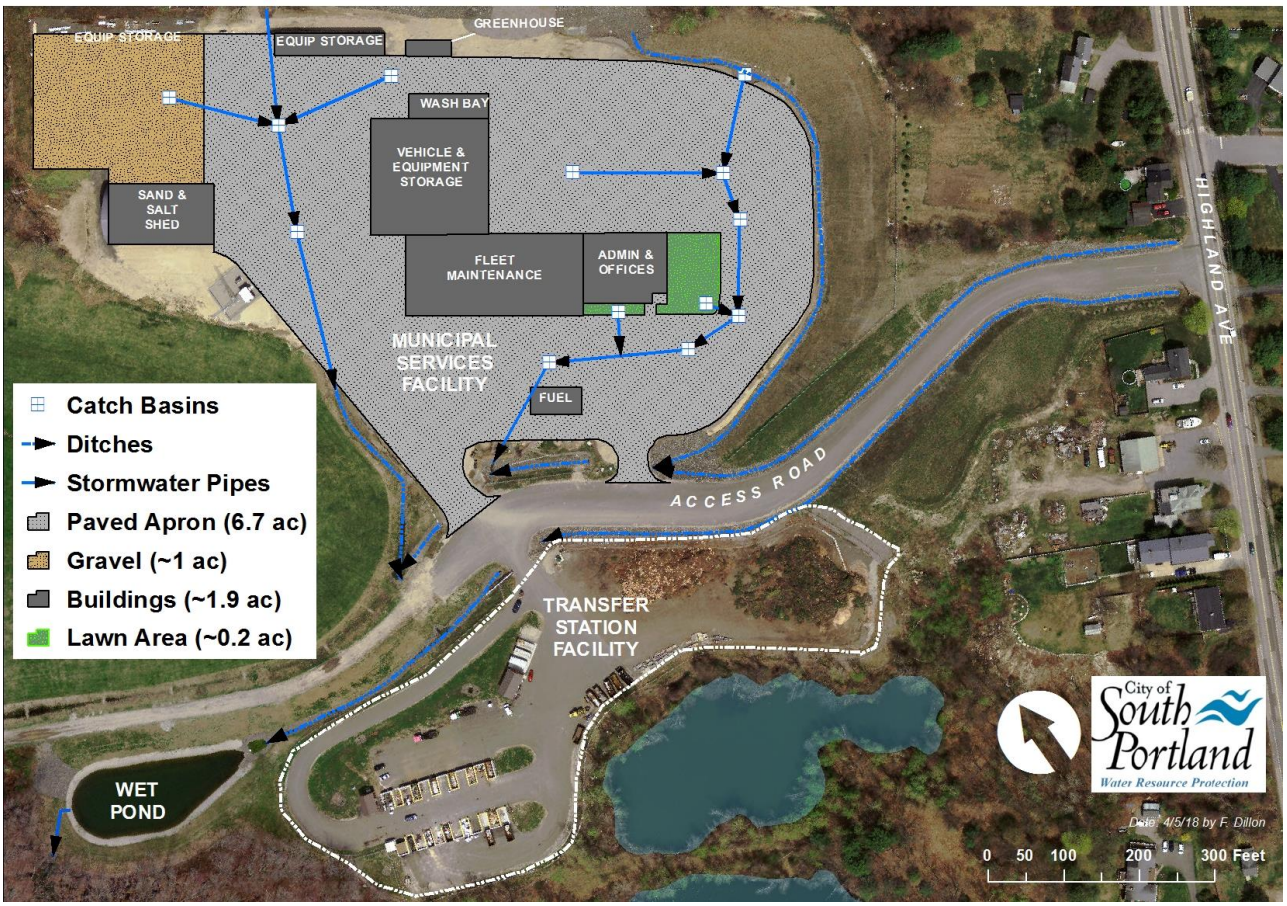
- ***Measurable Goal 6.6.1*** – continue implementing SWPPPs for public works facilities, transfer station and school bus maintenance facilities. Collaborate with DEP and ISWG on developing and implementing a training program for municipal facility staff informing them about the requirements of the SWPPP 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 school bus maintenance garage and transfer station. The City is currently in the process of completing the SWPPP for the new Municipal Services Facility, which the Public Works, Parks and Transportation Departments began occupying in January 2018 (Figure 20). DEP staff person Alison Moody visited the facility in April 2018 to provide recommendations and technical assistance for what to include in the SWPPP which we expect to have completed by the end of September 2018. 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.

South Portland Municipal Services Complex



Certification Statement

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

Fred Dillon – Stormwater Program Coordinator

9/14/18
Date

APPENDICES

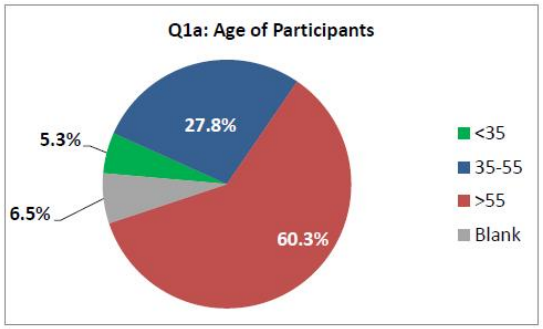
Appendix 1: ISWG Permit Year 5 Summary of MCMs 1 & 2 (provided separately due to large electronic file size)

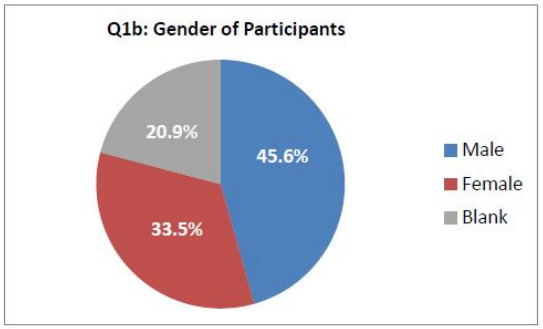
Appendix 2: Household Hazardous Waste Day Questionnaire Results

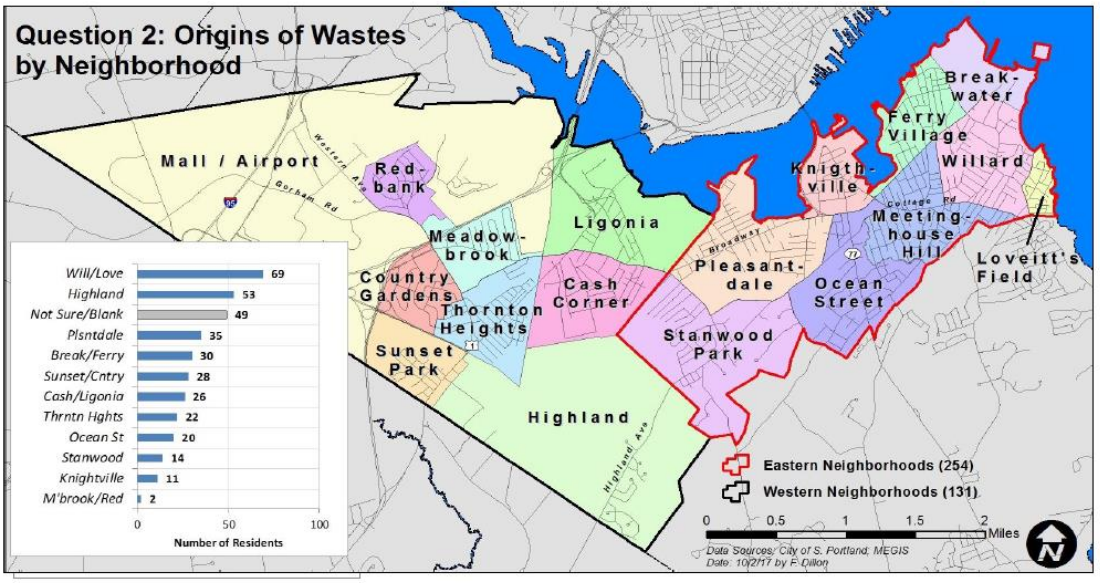
Household Hazardous Waste and E-Waste Collection Day ~ 11/18/17

QUESTIONS ***(~500 questionnaires were distributed and 432 were returned)***

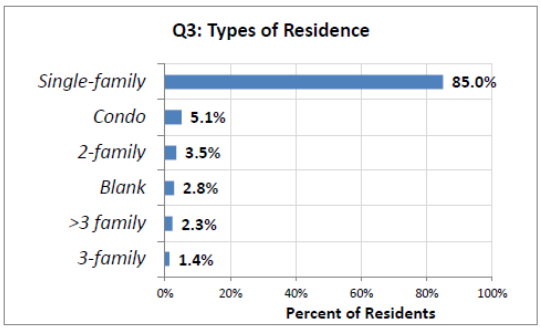
1a. What is your age? *Most respondents (~60%) were over 55 years old, ~28% were 35-55 and ~5% were less than 35 years old.*
1b. Are you male or female? *~46% of respondents were men, 34% were women and 21% opted not to respond.*
2. Origins of wastes by neighborhood? *The majority of respondents (59%) came from the the City's eastern neighborhoods.*
3. Please indicate the type of residence in which you live. *The vast majority (~85%) 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. *Computers and computer accessories were the most common items followed by TVs & stereos.*
6. How long have you had wastes? *Most respondents (~51%) 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 was the most common reason for participating.*
10. Will you participate in future HHW events? *Vast majority of respondents (~97%) will return for future HHW / E-waste events.*
11. Are you aware of the following WQ protection efforts? *The City's Pesticide Ordinance was the most common effort with which respondents were aware; numerous respondents were also familiar with the City's Stormwater Program.*
12. Does the HHW program need to be improved? *Approximately 48% of respondents suggested program improvements; the most common suggestion was to increase event frequency to reduce wait times (~8% were happy with the program as-is).*

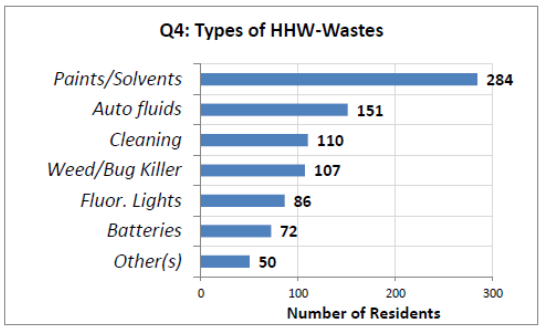


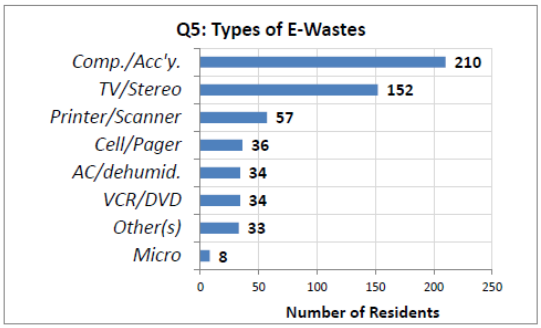


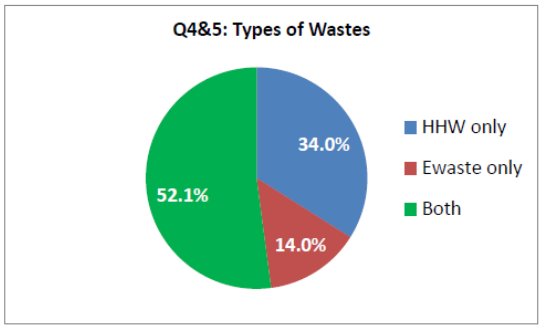


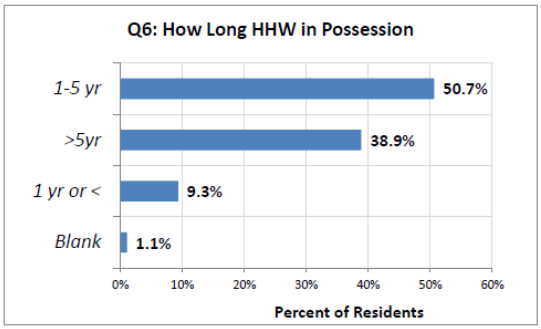
Household Hazardous Waste and E-Waste Collection Day ~ 11/18/17

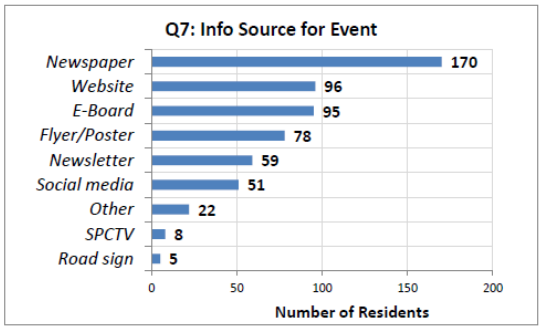


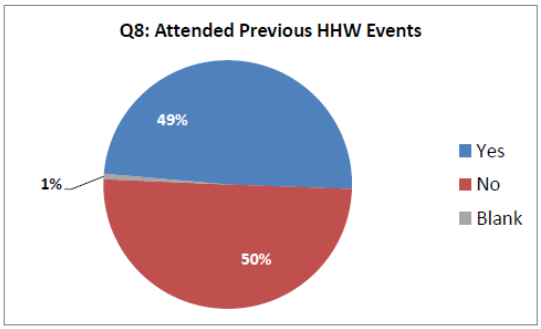


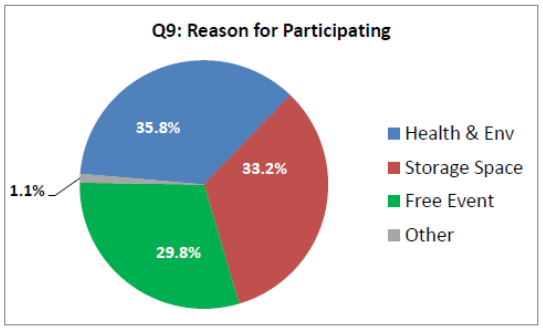




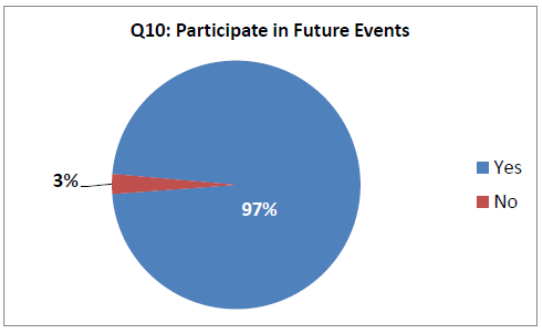


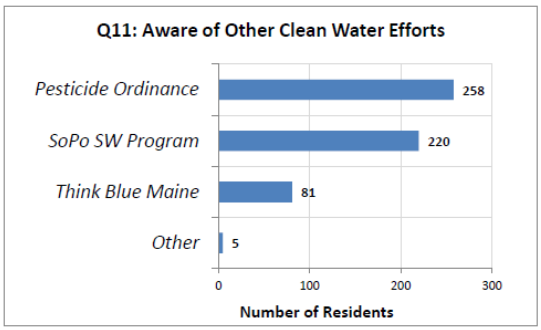


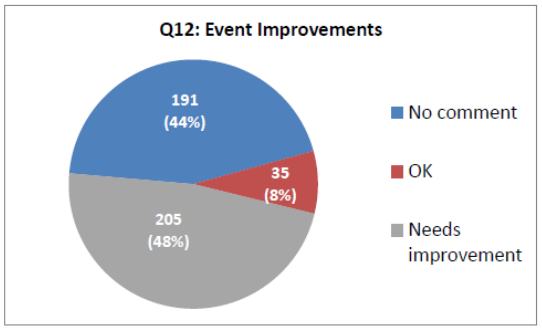




Household Hazardous Waste and E-Waste Collection Day ~ 11/18/17





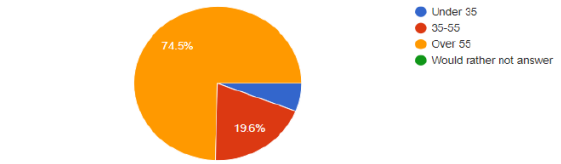


South Portland Household Hazardous Waste Collection Event - 4/14/18

Participant Questionnaire Results Summary

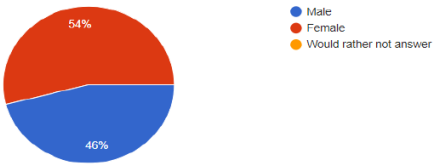
What is your age?

51 responses



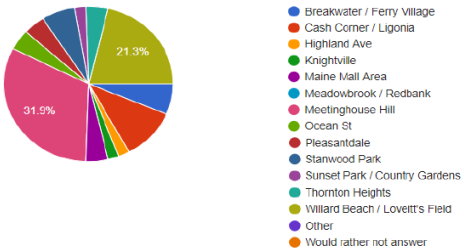
What is your gender?

50 responses



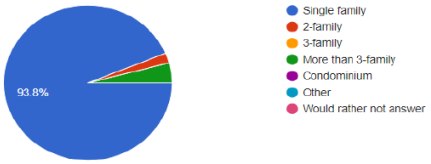
In which neighborhood do you live?

47 responses



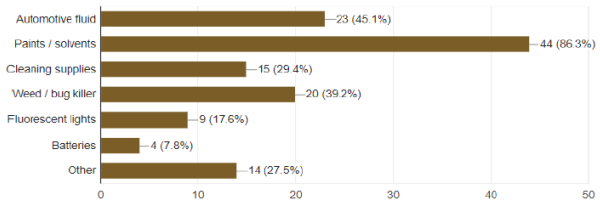
In which type of residence do you live?

48 responses



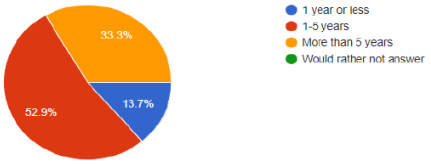
What types of Household Hazardous Wastes did you drop off for the 4/14/18 event?

51 responses



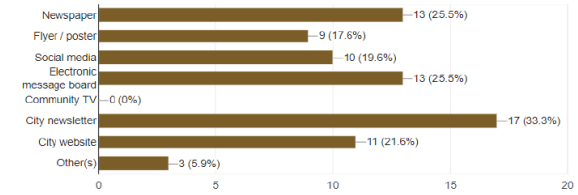
How long have you had these waste items?

51 responses



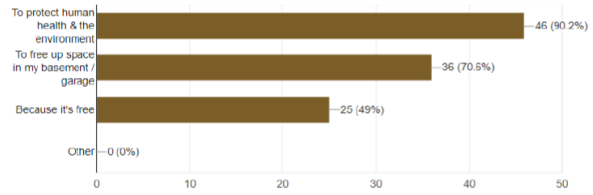
How did you learn about the 4/14/18 HHW event?

51 responses



Why did you participate in the 4/14/18 HHW event?

51 responses

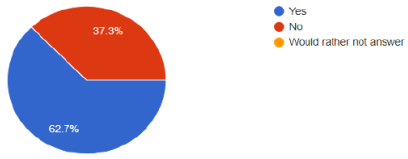


South Portland Household Hazardous Waste Collection Event - 4/14/18

Participant Questionnaire Results Summary

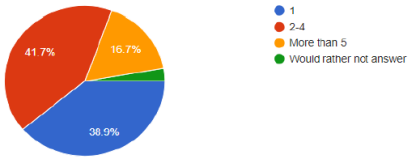
Have you participated in previous HHW events?

51 responses



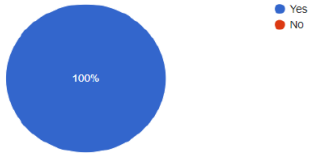
About how many previous HHW events have you attended?

36 responses



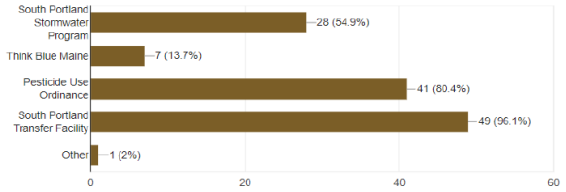
Will you participate in future events?

51 responses

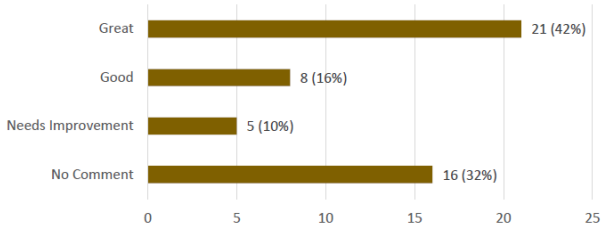


Are you aware of any of the following sustainability efforts?

51 responses



How Did We Do?



Appendix 3: Draft Restaurant Checklist for Potential Stormwater Pollution

LOCATION:	**DATE:**			**INSPECTOR:**
FOOD WASTE DISPOSAL DUMPSTER(S)	**YES**	**NO**	**N/A**	**COMMENTS**
Dumpster lid intact, closes tightly and can be locked if needed				
Dumpster not excessively filled				
Dumpster drain plug in place and tight				
No evidence of food waste, trash or liquid staining on pavement around dumpster				
Dumpster not located near or next to catch basin				
No evidence of food waste or trash in nearby catch basins				
Employee awareness of proper food waste disposal methods				
Has establishment been found deficient in proper food waste management practices				
WASTE FATS OILS & GREASE CONTAINER(S)				
Waste FOG container lid intact and closes tightly				
Waste FOG container not excessively filled				
No evidence of Waste FOG staining on pavement around container				
Waste FOG container not located near or next to catch basin				
No evidence of Waste FOG in nearby catch basins				
Service contract documentation available for regular Waste FOG removal / recycling				
Employee awareness of proper Waste FOG disposal methods				
Has establishment been found deficient in proper Waste FOG management practices				
GREASE TRAPS - INTERNAL / EXTERNAL (circle one)				
Staff awareness about proper grease disposal methods				
Signage posted alerting staff not to dump grease down sinks or in dishwashers				
Internal grease trap appears to be intact without cracks or defects				
No evidence of grease discharge in area around internal grease trap				
No evidence of grease in internal trap discharge cleanout				
Documentation or log for grease trap cleaning & maintenance frequency				
ADDITIONAL COMMENTS / FOLLOW UP NEEDED	**MANAGER or OWNER SIGNATURE:**			

Appendix 4: Documentation for Cross-Connection Removal

City of South Portland

Water Resource Protection

Fred Dillon, Stormwater Program Coordinator

MEMORANDUM

DATE: 3/22/18 (transmitted via email)

TO: Pat Cloutier, WRP Director
Paul Collins, Treatment Systems Manager
Tom Wiley, WRP Compliance Administrator
Dave Thomes, Collection Systems Manager
Jeff Moulton, Collection Systems Maintenance Supervisor
Sally Daggett, Corporation Counsel
Melissa Richter, Property Owner of 12 Angell Avenue

RE: Plumbing reconfiguration at 12 Angell Avenue

I met with Melissa Richter earlier today to inspect the plumbing in the basement of 12 Angell Avenue and confirm that it has been redirected to the City's sanitary sewer system per the 3/9/18 Notice of Violation. As the photos below document, all of the interior plumbing is now connected solely to the City sewer and the violation cited in the 3/9/18 NOV has been addressed. I commend Ms. Richter for helping to protect the City's valuable water resources.

Right rear corner of basement and plumbing from upstairs apartments

New pipe for upstairs apartments & disconnected pipe to City's separated stormwater system

P.O. Box 9422 • South Portland, Maine 04116-9422 • 207-347-4138 (office) • 207-321-9437 (mobile)
fdillon@southportland.org • www.southportland.org

New pipe crossing from right to left side of basement towards sewer service line

New pipe connecting to sewer service line on left side of building

Appendix 5: Portland Water District Memo on BMPs for MS4 Requirements

Portland Water District
FROM SEBAGO LAKE TO CASCO BAY

To: Charly Wojtysiak, Southern Maine Community College
From: James Wallace – Director of Water Services
Date: June 30, 2018
Re: Summary of Portland Water District BMP for Addressing MS4 Requirements

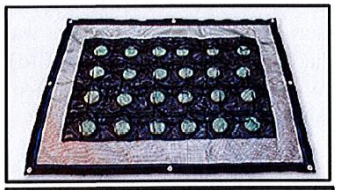
Introduction

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.

The District has a water main flushing program to remove sediment from the main. Due to the size of the distribution system, our goal is to flush one-third of the system every year. During the months of July 2017 through December 2017, the District performed hydrant flushing in Cumberland and Portland. In addition, in the months of March 2018 through June 2018, the District performed hydrant flushing in South Portland and Westbrook.

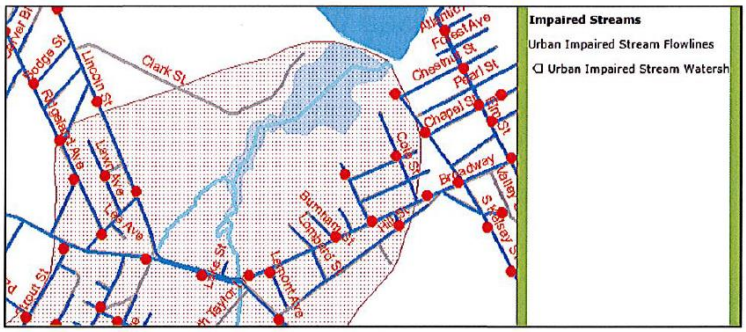
Dechlorination

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 the devices. These devices and this product are achieving total residual chlorine concentrations that are consistently below the detection limit of our field chlorine analyzers, currently the Hach Colorimeter II.



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 may choose to discharge water directly to the ground, if they are certain the residual will degrade before mixing with a water body.

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. If the District considers this option again, qualified staff will determine the streamflow and discharge rates to ensure final dilution includes a significant safety factor.

Statewide BMP's

In 2017, Maine Rural Water Association and Maine Water Utilities Association received a grant to create statewide BMP's for de-chlorination, and then provided training to water operators across the state. The District was involved in the review of DEP's hydrant flushing profile and had input in the creation of BMP's. The BMP Manual of Public Water System Discharges to Water Resources was published in January 2018, and District is working to incorporate these into our processes.

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. Staff training includes Basic Contractor Erosion and Sediment Control certification by the Maine DEP Nonpoint Source Pollution program.

In addition, a number of District staff attended training by Maine Rural Water on the state-wide BMP's during the summer of 2017.

Appendix 6: Dry Weather Outfall Inspection Summaries

PY2017-18 Dry Weather Stormwater Outfall Inspections - City of South Portland, Maine

Feature ID	Watershed	Inspection Date	Inspector	Precipitation In Past 3 Days ?	Precipitation Amount	Approximate Temperature	Wind Present ?	Pipe Submerged ?	Pipe Material	Pipe Shape	Pipe Dimension 1	Debris Foam	Debris Floating Green Scum	Debris Oil / Film	Debris Vegetatative Mat	Debris Sewage Solids
BC_11	Barberry Creek	3/20/2018, 11:13 AM	Mike Lorello	No		35	No	No	RCP	Circular	24"	No	No	No	No	No
BC_2	Barberry Creek	3/21/2018, 10:17 AM	Mike Lorello	No		30	No	Partially	Steel	Circular	16"	No	No	No	Yes	No
BC_3	Barberry Creek	3/21/2018, 10:21 AM	Mike Lorello	No		30	No	Partially	Steel	Circular	36"	No	Yes	No	Yes	No
BC_1	Barberry Creek	3/21/2018, 10:30 AM	Mike Lorello	No	0	30	No	Partially	RCP	Circular	12"	No	No	Yes	No	No
BC_14	Barberry Creek	3/21/2018, 10:47 AM	Mike Lorello	No		30	Yes	No	HDPE	Circular	12"	No	No	No	No	No
BC_15	Barberry Creek	3/21/2018, 8:03 AM	Mike Lorello	No		25	No	No	PVC	Circular	4"	No	No	No	No	No
BC_8	Barberry Creek	3/21/2018, 8:10 AM	Mike Lorello	No		25	No	No	RCP	Circular	18"	No	No	No	Yes	No
BC_6	Barberry Creek	3/21/2018, 8:16 AM	Mike Lorello	No		25	No	No	RCP	Circular	30"	No	Yes	No	Yes	No
BC_12	Barberry Creek	3/21/2018, 8:57 AM	Mike Lorello	No	0	30	No	No	RCP	Circular	12"	No	No	No	No	No
BC_10	Barberry Creek	3/21/2018, 9:36 AM	Mike Lorello	No		30	No	No	PVC	Circular	12"	No	No	No	No	No
BC_9	Barberry Creek	3/21/2018, 9:39 AM	Mike Lorello	No		30	No	Partially	PVC	Circular	18"	No	No	Yes	No	No
LC_69	Long Creek	1/30/2018, 7:00 PM					No	No		Circular		No	No	No	No	No
LC_110	Long Creek	1/30/2018, 7:00 PM					No	No		Circular		No	No	No	No	No
LC_68	Long Creek	1/31/2018, 1:11 PM	Jarrod Erskine	No		25	Yes	No	HDPE	Circular	12"	No	No	No	No	No
LC_70	Long Creek	1/31/2018, 1:16 PM	Mike Lorello	No	0	28	No	Partially	RCP	Circular		No	Yes	No	Yes	No
LC_99	Long Creek	1/31/2018, 1:17 PM	Jarrod Erskine				No	No		Circular		No	No	No	No	No
LC_112	Long Creek	1/31/2018, 1:21 PM	Jarrod Erskine	No		25	Yes	No	PVC	Circular	6"	No	No	No	No	No
LC_66	Long Creek	1/31/2018, 1:24 PM	Mike Lorello	No		28	No	Partially	Other	Circular		No	No	No	No	No
LC_69	Long Creek	1/31/2018, 1:26 PM	Jarrod Erskine				No	No		Circular		No	No	No	No	No
LC_111	Long Creek	1/31/2018, 1:33 PM	Jarrod Erskine	No		25	Yes	No	HDPE	Circular	12"	No	No	No	No	No
LC_67	Long Creek	1/31/2018, 1:57 PM	Jarrod Erskine	No		25	Yes	Fully	RCP	Circular		No	No	No	No	No
LC_108	Long Creek	1/31/2018, 1:58 PM	Mike Lorello	No		28	No	No	PVC	Circular		No	No	No	No	No
LC_25	Long Creek	1/31/2018, 10:02 AM	Jarrod Erskine	No		13	Yes	No	Steel	Circular	24"	No	No	Yes	Yes	No
LC_84	Long Creek	1/31/2018, 10:20 AM	Mike Lorello	No		15	Yes	No	Steel	Circular		No	No	No	No	No
LC_109	Long Creek	1/31/2018, 2:01 PM	Mike Lorello	No		28	No	No	HDPE	Circular		No	No	No	No	No
LC_107	Long Creek	1/31/2018, 2:13 PM	Jarrod Erskine	No		25	Yes	No	HDPE	Circular	12"	No	No	No	No	No
LC_1	Long Creek	1/31/2018, 2:32 PM	Jarrod Erskine	No			Yes	No		Circular		No	No	No	No	No
LC_28	Long Creek	1/31/2018, 9:09 AM	Mike Lorello	No		15	No	No	Steel	Circular		No	No	No	No	No
LC_3	Long Creek	1/31/2018, 9:11 AM	Jarrod Erskine	No		13	Yes	No	PVC	Circular	3"	No	No	No	No	No
LC_29	Long Creek	1/31/2018, 9:15 AM	Mike Lorello	No		15	No	No	Steel	Circular		No	No	No	No	No
LC_55	Long Creek	1/31/2018, 9:19 AM	Jarrod Erskine	No		13	Yes	No	PVC	Circular	12"	No	No	No	No	No
LC_86	Long Creek	1/31/2018, 9:24 AM	Mike Lorello	No		15	No	No	Steel	Circular		No	No	Yes	No	No
LC_54	Long Creek	1/31/2018, 9:33 AM	Jarrod Erskine	No		13	Yes	No	PVC	Circular	15"	No	No	No	No	No
LC_2	Long Creek	1/31/2018, 9:50 AM	Mike Lorello	No		15	Yes	No	Steel	Circular		No	No	No	No	No
LC_24	Long Creek	1/31/2018, 9:54 AM	Mike Lorello	No		15	Yes	No	Steel	Circular		No	No	No	No	No
LC_83	Long Creek	1/31/2018, 9:55 AM	Jarrod Erskine	No		13	Yes	No	Steel	Circular	15"	No	No	No	Yes	No
LC_11	Long Creek	2/6/2018, 7:00 PM	Randy Keenan	No		21	No	No	RCP	Circular	60"	No	No	No	No	No
LC_30	Long Creek	2/7/2018, 9:01 AM	Randy Keenan	No		21	No	No		Circular		No	No	No	No	No
LC_31	Long Creek	2/7/2018, 9:14 AM	Randy Keenan	No		21	No	Fully		Circular		No	No	No	No	No
LC_10	Long Creek	2/7/2018, 9:35 AM	Randy Keenan	No		21	No	No	RCP	Circular	60"	Yes	No	No	No	No
LC_9	Long Creek	2/7/2018, 9:37 AM	Randy Keenan	No		21	No	No	RCP	Circular	48"	No	No	No	No	No
LC_89	Long Creek	3/19/2018, 1:05 PM	Mike Adriance	No		30	Yes	No	HDPE	Circular	12"	No	No	No	No	No
LC_43	Long Creek	3/19/2018, 1:08 PM	Mike Adriance	No		30	Yes	No	HDPE	Circular	30"	No	No	No	No	No
LC_72	Long Creek	3/19/2018, 1:13 PM	Mike Adriance	No	0	30	Yes	Partially	CMP	Circular	24"	No	No	No	No	No
LC_113	Long Creek	3/19/2018, 1:16 PM	Randy Keenan	No	0	25	Yes	No	CMP	Circular		No	No	No	No	No
LC_74	Long Creek	3/19/2018, 1:19 PM	Mike Adriance	No		30	Yes	Partially	CMP	Circular	12"	No	No	No	Yes	No
LC_26	Long Creek	3/19/2018, 1:31 PM	Randy Keenan	No	0	25	Yes	No	HDPE	Circular		No	No	No	No	No
LC_22	Long Creek	3/19/2018, 1:31 PM	Mike Adriance	No		30	Yes	No	RCP	Circular	30"	No	No	No	No	No

PY2017-18 Dry Weather Stormwater Outfall Inspections - City of South Portland, Maine

Feature ID	Watershed	Inspection Date	Inspector	Precipitation In Past 3 Days ?	Precipitation Amount	Approximate Temperature	Wind Present ?	Pipe Submerged ?	Pipe Material	Pipe Shape	Pipe Dimension 1	Debris Foam	Debris Floating Green Scum	Debris Oil / Film	Debris Vegetatative Mat	Debris Sewage Solids
LC_18	Long Creek	3/19/2018, 1:39 PM	Mike Adriance	No	0	30	Yes	No	CMP	Circular	12"	No	No	No	No	No
LC_119	Long Creek	3/19/2018, 1:42 PM	Mike Adriance	No		30	Yes	No	CMP	Circular	15"	No	No	No	No	No
LC_98	Long Creek	3/19/2018, 1:45 PM	Randy Keenan	No	0	27	No	No	PVC	Circular		No	No	No	No	No
LC_118	Long Creek	3/19/2018, 1:46 PM	Mike Adriance	No		30	Yes	No	PVC	Circular	4"	No	No	No	No	No
LC_17	Long Creek	3/19/2018, 1:48 PM	Mike Adriance	No		30	Yes	No	CMP	Circular	12"	No	No	No	No	No
LC_114	Long Creek	3/19/2018, 1:50 PM	Mike Adriance	No		30	Yes	No	RCP	Circular	24"	No	No	No	No	No
LC_117	Long Creek	3/19/2018, 1:53 PM	Mike Adriance	No		30	Yes	No	HDPE	Circular	12"	No	No	No	No	No
LC_15	Long Creek	3/19/2018, 10:03 AM	Mike Adriance	No		20	Yes	No	Other	Circular	12"	No	No	No	No	No
LC_4	Long Creek	3/19/2018, 10:07 AM	Mike Adriance	No		20	Yes	No	Other	Circular	12"	No	No	No	No	No
LC_12	Long Creek	3/19/2018, 10:14 AM	Mike Adriance	No		20	Yes	No	HDPE	Circular	18"	No	No	No	No	No
LC_92	Long Creek	3/19/2018, 10:18 AM	Mike Adriance	No		20	Yes	No	RCP	Circular	20"	No	No	No	No	No
LC_19	Long Creek	3/19/2018, 10:22 AM	Mike Adriance	No		20	Yes	No	RCP	Circular	12"	No	No	No	Yes	No
LC_23	Long Creek	3/19/2018, 10:26 AM	Mike Adriance	No		20	No	No	RCP	Circular	24"	No	No	No	No	No
LC_87	Long Creek	3/19/2018, 10:43 AM	Mike Adriance	No		20	No	No	PVC	Circular	18"	No	No	No	No	No
LC_45	Long Creek	3/19/2018, 12:56 PM	Mike Adriance	No		25	Yes	No	HDPE	Circular	36"	No	No	No	No	No
LC_44	Long Creek	3/19/2018, 12:59 PM	Mike Adriance	No		25	Yes	No	HDPE	Circular	18"	No	No	No	No	No
LC_85	Long Creek	3/19/2018, 2:07 PM	Randy Keenan	No	0	27	No	No	Steel	Circular		No	No	No	No	No
LC_59	Long Creek	3/19/2018, 2:20 PM	Randy Keenan	No	0	27	No	Partially	CMP	Circular		No	No	No	No	No
LC_6	Long Creek	3/19/2018, 8:22 AM	Mike Adriance	No		18	No	No	HDPE	Circular	24"	No	No	No	No	No
LC_64	Long Creek	3/19/2018, 8:28 AM	Mike Adriance	No		18	No	No	PVC	Circular	3"	No	No	No	No	No
LC_65	Long Creek	3/19/2018, 8:34 AM	Mike Adriance	No		18	No	No	RCP	Circular	12"	No	No	No	No	No
CP_1	Long Creek	3/19/2018, 8:35 AM	Randy Keenan	No	0	12	Yes	No	PVC	Circular	4"	No	No	No	Yes	No
LC_7	Long Creek	3/19/2018, 8:36 AM	Mike Adriance	No		18	No	No	RCP	Circular	18"	Yes	No	No	No	No
LC_8	Long Creek	3/19/2018, 8:40 AM	Mike Adriance	No		18	No	No	PVC	Circular	18"	No	No	No	No	No
LC_8	Long Creek	3/19/2018, 8:41 AM	Mike Adriance			18	No	No	PVC	Circular	12"	No	No	No	No	No
LC_88	Long Creek	3/19/2018, 8:48 AM	Mike Adriance	No		19	No	No	HDPE	Circular	12"	No	No	No	No	No
LC_36	Long Creek	3/19/2018, 8:54 AM	Mike Adriance	No		19	No	No	HDPE	Circular	12"	No	No	No	No	No
LC_5	Long Creek	3/19/2018, 9:02 AM	Mike Adriance	No		19	No	No	PVC	Circular	18"	No	No	No	No	No
LC_39	Long Creek	3/19/2018, 9:21 AM	Mike Adriance	No		19	No	No	RCP	Circular	18"	No	No	No	No	No
LC_104	Long Creek	3/19/2018, 9:25 AM	Mike Adriance	No		19	No	No	HDPE	Circular	18"	No	No	No	Yes	No
LC_38	Long Creek	3/19/2018, 9:34 AM	Mike Adriance	No		19	No	No	CMP	Circular		No	No	No	No	No
LC_38	Long Creek	3/19/2018, 9:35 AM	Mike Adriance	No		20	No	No	CMP	Circular	60"	No	Yes	No	No	No
LC_41	Long Creek	3/19/2018, 9:41 AM	Mike Adriance	No		20	No	No	Other	Circular	12"	No	No	No	No	No
LC_49	Long Creek	3/19/2018, 9:44 AM	Mike Adriance	No		20	Yes	No	RCP	Circular	48"	No	No	No	No	No
LC_46	Long Creek	3/19/2018, 9:48 AM	Mike Adriance	No		20	Yes	Partially	RCP	Circular	36"	No	No	No	Yes	No
LC_16	Long Creek	3/19/2018, 9:57 AM	Mike Adriance	No		20	Yes	No	PVC	Circular	12"	No	No	No	No	No
LC_58	Long Creek	3/20/2018, 10:01 AM	Randy Keenan	No	0	17	No	No	Steel	Circular		No	No	No	No	No
LC_60	Long Creek	3/20/2018, 10:18 AM	Randy Keenan	No	0	17	No	Partially	Steel	Circular		No	No	No	No	No
LC_61	Long Creek	3/20/2018, 10:23 AM	Randy Keenan	No	0	17	No	No	HDPE	Circular		Yes	No	No	No	No
LC_62	Long Creek	3/20/2018, 10:26 AM	Randy Keenan	No	0	17	No	No	PVC	Circular		No	No	No	No	No
LC_35	Long Creek	3/21/2018, 10:18 AM	Jarrod Erskine	No		29	Yes	No	RCP	Circular		No	No	Yes	No	No
LC_56	Long Creek	3/21/2018, 10:22 AM	Jarrod Erskine	No		29	Yes	No	Steel	Circular		Yes	No	No	No	No
LC_20	Long Creek	3/21/2018, 8:27 AM	Jarrod Erskine	No	0	25	No	No	Steel	Circular		No	No	No	No	No
LC_21	Long Creek	3/21/2018, 8:31 AM	Randy Keenan	No	0	25	No	No	Steel	Circular		No	No	No	No	No
LC_90	Long Creek	3/21/2018, 8:57 AM	Randy Keenan	No	0	27	No	Partially	Steel	Circular		No	No	No	No	No
LC_33	Long Creek	3/21/2018, 9:46 AM	Jarrod Erskine	No		29	Yes	Fully	RCP	Circular		No	No	No	Yes	No
LC_32	Long Creek	3/21/2018, 9:57 AM	Randy Keenan	No	0	29	No	Partially	RCP	Circular		No	No	Yes	Yes	No
LC_121	Long Creek	5/29/2018, 1:03 PM	Jarrod Erskine			75	Yes	No	RCP	Circular	12"	No	No	No	No	No
LC_103	Long Creek	5/29/2018, 1:17 PM	Jarrod Erskine			75	Yes	No	HDPE	Circular	10"	No	No	No	No	No
LC_116	Long Creek	5/29/2018, 1:21 PM	Jarrod Erskine			75	Yes	No	HDPE	Circular	12"	No	No	No	No	No

PY2017-18 Dry Weather Stormwater Outfall Inspections - City of South Portland, Maine

Feature ID	Watershed	Inspection Date	Inspector	Precipitation In Past 3 Days ?	Precipitation Amount	Approximate Temperature	Wind Present ?	Pipe Submerged ?	Pipe Material	Pipe Shape	Pipe Dimension 1	Debris Foam	Debris Floating Green Scum	Debris Oil / Film	Debris Vegetatative Mat	Debris Sewage Solids
LC_102	Long Creek	5/29/2018, 1:32 PM	Jarrod Erskine			75	Yes	No	HDPE	Circular	10"	No	No	No	No	No
LC_100	Long Creek	5/29/2018, 1:36 PM	Jarrod Erskine			75	Yes	No	RCP	Circular	30"	No	No	No	No	No
LC_105	Long Creek	5/29/2018, 1:39 PM	Jarrod Erskine			75	Yes	No	HDPE	Circular	10"	No	No	No	No	No
LC_91	Long Creek	5/29/2018, 1:58 PM	Jarrod Erskine			75	Yes	No	RCP	Circular	30"	No	Yes	No	No	No
LC_37	Long Creek	5/29/2018, 10:02 AM	Jarrod Erskine			70	No	Partially	HDPE	Circular	18"	No	No	No	Yes	No
LC_73	Long Creek	5/29/2018, 10:04 AM	Jarrod Erskine			70	No	Partially	RCP	Circular	18"	No	No	No	No	No
LC_51	Long Creek	5/29/2018, 10:43 AM	Jarrod Erskine			75	Yes	Partially	Steel	Circular		No	No	No	No	No
LC_14	Long Creek	5/29/2018, 10:47 AM	Jarrod Erskine			75	Yes	No	RCP	Circular	12"	No	No	No	No	No
LC_13	Long Creek	5/29/2018, 10:52 AM	Jarrod Erskine			75	Yes	No	RCP	Circular	12"	No	No	No	No	No
LC_101	Long Creek	5/29/2018, 10:56 AM	Jarrod Erskine			75	Yes	No	HDPE	Circular	12"	No	No	Yes	No	No
LC_42	Long Creek	5/29/2018, 11:10 AM	Jarrod Erskine			75	Yes	Partially	HDPE	Circular	15"	No	No	No	No	No
LC_57	Long Creek	5/29/2018, 12:17 PM	Jarrod Erskine			75	Yes	Partially	Steel	Circular	18"	No	No	Yes	No	No
LC_120	Long Creek	5/29/2018, 12:58 PM	Jarrod Erskine			75	Yes	Partially	RCP	Circular	12"	No	No	No	Yes	No
LC_71	Long Creek	5/29/2018, 9:58 AM	Jarrod Erskine			70	No	No	RCP	Circular		No	No	No	No	No
TB_6	Trout Brook	3/20/2018, 8:28 AM	Mike Lorello	No	0	23	No	Fully		Circular		No	No	No	No	No
TB_9	Trout Brook	3/20/2018, 8:47 AM	Mike Lorello	No		25	No	No	PVC	Circular	12"	No	No	No	No	No
TB_7	Trout Brook	3/20/2018, 8:51 AM	Mike Lorello	No		25	No	No	RCP	Circular	10"	No	No	No	No	No
TB_2	Trout Brook	3/20/2018, 8:56 AM	Mike Lorello	No		25	No	No	PVC	Circular	8"	No	No	No	No	No
TB_3	Trout Brook	3/20/2018, 9:34 AM	Mike Lorello	No	0	30	No	No	Steel	Circular	14"	No	No	No	No	No
TB_3	Trout Brook	3/20/2018, 9:43 AM	Mike Lorello	No		26	No	No	RCP	Circular	36"	No	No	No	No	No
TB_1	Trout Brook	3/20/2018, 9:45 AM	Mike Lorello	No	0	26	No	No	CMP	Circular	30"	No	No	No	No	No
TB_4	Trout Brook	3/21/2018, 12:52 PM	Mike Lorello	No		30	No	Partially	RCP	Circular	24"	No	No	No	No	No
TB_8	Trout Brook		Mike Lorello	No		23	No	No	Steel	Circular	10"	No	No	No	No	No

PY2017-18 Dry Weather Stormwater Outfall Inspections - City of South Portland, Maine

Feature ID	Watershed	Odor	Water Clarity	Pipe Flow	Seepage Flow	Flow Color	Sediment Condition	Structure Condition	Trash / Litter	Yard Waste	Total Inspection Score	Follow-Up Required	Comments
BC_11	Barberry Creek	None	Clear	Steady	None	No Flow	Open	Fair	No	No	0		
BC_2	Barberry Creek	None	Clear	Steady	None	Clear	1/2 Full	Needs Attention	No	No	9		
BC_3	Barberry Creek	None	Clear	Steady	None	No Flow	Open		Yes	No	17		
BC_1	Barberry Creek	None	Opaque	None	None	No Flow	1/4 Full	Needs Attention	No	No	19		
BC_14	Barberry Creek			None	None	No Flow	Open		No	No	0		
BC_15	Barberry Creek	None	Clear	Steady	None	No Flow	Open	Poor	No	No	0		
BC_8	Barberry Creek	None	Clear	Steady	None	No Flow	Open	Fair	No	No	9		
BC_6	Barberry Creek	None	Clear	None	None	No Flow	Open	Fair	No	No	17		
BC_12	Barberry Creek	None	Clear	Steady	None	No Flow	Open		No	No	0		
BC_10	Barberry Creek	None	Clear	Trickle	None	No Flow	Open	Fair	No	No	0		
BC_9	Barberry Creek	None	Cloudy	Steady	None	No Flow	Open	Needs Attention	No	No	14		
LC_69	Long Creek			None	None	No Flow	Open		No	No	0		Snowed in
LC_110	Long Creek			None	None	No Flow	Open		No	No	0		Couldn't locate
LC_68	Long Creek	None		None	None	No Flow	Open	Good	No	No	0		
LC_70	Long Creek	None	Clear	Steady	None	No Flow	Open		No	No	17		
LC_99	Long Creek			None	None	No Flow	Open		No	No	0		Buried in snow or vegetation could not locate
LC_112	Long Creek	None		None	None	No Flow	Open	Good	No	No	0		
LC_66	Long Creek	None	Clear	None	None	No Flow	Open	Poor	No	No	0		
LC_69	Long Creek			None	None	No Flow	Open		No	No	0		Buried in snow
LC_111	Long Creek	None		None	None	No Flow	Open	Good	No	No	0		
LC_67	Long Creek				None	No Flow	Open		Yes	No	0	Yes	Completely submerged
LC_108	Long Creek	None	Clear	None	None	No Flow	Open		No	No	0		
LC_25	Long Creek	None	Clear	None	None	No Flow	1/4 Full	Fair	No	No	18	Yes	Should dig out end of pipe
LC_84	Long Creek			None	None	No Flow	Open	Fair	Yes	Yes	0		Froze
LC_109	Long Creek	None		None	None	No Flow	Open		No	No	0		
LC_107	Long Creek	None		None	None	No Flow	Open	Good	No	No	0		
LC_1	Long Creek			None	None	No Flow	Open		No	No	0		Could not locate. Submerged
LC_28	Long Creek			None	None	No Flow	Open		No	No	0		Frozen
LC_3	Long Creek			None	None	No Flow	Open	Good	No	No	0		Frozen. Ice coming out of pipe
LC_29	Long Creek	None		None	None	No Flow	Open		No	No	0		
LC_55	Long Creek	None		None	None	No Flow	Open		No	No	0	No	
LC_86	Long Creek	None	Clear	Trickle	None	No Flow	Open	Poor	Yes	No	9		
LC_54	Long Creek	None		None	None	No Flow	Open		No	No	0		
LC_2	Long Creek	None		None	None	No Flow	Open	Fair	No	No	0		Half covered by leaves
LC_24	Long Creek	None		None	None	No Flow	Open		No	No	0		
LC_83	Long Creek	None	Clear	Trickle	None	Clear	Open	Good	No	No	9		
LC_11	Long Creek	None	Clear	None	Trickle	Clear	Open	Good	No	No	0	No	Outlet is open with quarter pipe of standing ice.
LC_30	Long Creek	None		None	None	No Flow	Open	Poor	Yes	Yes	0		Lots of trash and restaurant waste up hill and down hill from CB and outfall
LC_31	Long Creek			None	None	No Flow	Open	Needs Attention	No	Yes	0	Yes	Completely buried underneath yard waste.
LC_10	Long Creek	None	Cloudy	Trickle	Trickle	No Flow	Open	Good	No	No	8		
LC_9	Long Creek	None	Cloudy	Trickle	Trickle	Other	Open	Good	No	No	5		
LC_89	Long Creek	None	Clear	Trickle	None	Clear	Open	Excellent	Yes	No	0		
LC_43	Long Creek	None	Clear	Steady	None	Clear	Open	Excellent	Yes	No	0		
LC_72	Long Creek	None	Clear	Trickle	None	Clear	1/4 Full	Fair	No	No	0		
LC_113	Long Creek	None	Clear	None	None	No Flow	Open	Good	No	No	0		
LC_74	Long Creek	None		None	None	No Flow	1/4 Full	Poor	No	No	9		
LC_26	Long Creek	None	Clear	None	None	No Flow	Open	Good	No	No	0		
LC_22	Long Creek	None	Clear	Steady	None	Clear	Open	Poor	Yes	No	0		One section of pipe fell off

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Feature ID	Watershed	Odor	Water Clarity	Pipe Flow	Seepage Flow	Flow Color	Sediment Condition	Structure Condition	Trash / Litter	Yard Waste	Total Inspection Score	Follow-Up Required	Comments
LC_18	Long Creek	None	Clear	Trickle	None	Clear	Open	Fair	Yes	No	0		
LC_119	Long Creek	None	Clear	Steady	None	Clear	Open	Fair	Yes	No	0		
LC_98	Long Creek	None	Clear	None	None	No Flow	Open	Good	No	No	0		
LC_118	Long Creek	None		None	None	No Flow	Open	Good	Yes	No	0		Flow is frozen
LC_17	Long Creek	None		None	None	No Flow	Open	Poor	Yes	No	0		Bottom of pipe is rotting
LC_114	Long Creek	None	Clear	Trickle	None	Clear	1/4 Full	Fair	Yes	No	0		
LC_117	Long Creek	None	Clear	Trickle	None	Clear	Open	Good	No	No	0		
LC_15	Long Creek	None	Clear	Steady	None	Clear	Open	Fair	No	No	0		
LC_4	Long Creek	None	Clear	Trickle	None	Clear	Open	Fair	Yes	No	0		
LC_12	Long Creek	None	Clear	Trickle	None	No Flow	Open	Good	No	No	0		
LC_92	Long Creek	None	Clear	Steady	None	Clear	Open	Good	No	No	0		
LC_19	Long Creek	None	Clear	Trickle	None	Clear	Open	Fair	No	No	9		
LC_23	Long Creek	None	Clear	Steady	None	Clear	Open	Needs Attention	Yes	No	0		Flow is exiting outside of pipe (joint separated ?)
LC_87	Long Creek	None	Clear	Steady	None	Clear	Open	Fair	Yes	No	0		Some contraption on end of pipe
LC_45	Long Creek	None	Clear	Steady	None	Clear	Open	Good	Yes	No	0		
LC_44	Long Creek	None	Clear	Steady	None	Clear	Open	Good	Yes	No	0		
LC_85	Long Creek	None	Clear	Trickle	None	Clear	Open	Good	No	No	0		
LC_59	Long Creek	None	Clear	None	None	Clear	Open	Good	No	No	0		
LC_6	Long Creek	None	Clear	Steady	None	Clear	Open	Good	No	No	0		
LC_64	Long Creek	None	Clear	Steady	None	Clear	Open	Good	No	No	0		Green algae in pipe
LC_65	Long Creek			None	None	No Flow	Open	Good	No	No	0		Flow is frozen
CP_1	Long Creek	None	Clear	None	None	No Flow	Open	Good	No	No	9		
LC_7	Long Creek	None	Clear	Steady	None	Clear	Open	Good	No	No	3		
LC_8	Long Creek			None	None	No Flow	Open		No	No	0		
LC_8	Long Creek	None		None	None	No Flow	Open	Fair	No	No	0		
LC_88	Long Creek	None		None	None	No Flow	Open	Good	No	No	0		Flow is frozen
LC_36	Long Creek	None	Clear	Steady	None	Clear	Open	Fair	No	No	0		
LC_5	Long Creek	None	Clear	Steady	None	Clear	Open	Fair	No	No	0		
LC_39	Long Creek	None	Clear	Steady	None	No Flow	Open	Fair	No	No	0		
LC_104	Long Creek	None	Clear	Trickle	None	Clear	Open	Needs Attention	No	No	9		Ditch could use some cleaning
LC_38	Long Creek			None	None	No Flow	Open		No	No	0		
LC_38	Long Creek	None	Clear	Steady	None	Clear	Open	Fair	No	No	8		
LC_41	Long Creek	None	Clear	Trickle	None	Clear	Open	Fair	No	No	0		
LC_49	Long Creek	None	Clear	Steady	None	Clear	Open		Yes	No	0		
LC_46	Long Creek	None		None	None	No Flow	Open	Fair	Yes	No	9		Flow is frozen
LC_16	Long Creek	None	Clear	Steady	None	Clear	Open	Good	No	No	0		
LC_58	Long Creek	None	Clear	Steady	None	No Flow	Open	Good	No	No	0		
LC_60	Long Creek	None	Clear	None	None	No Flow	Open	Good	No	No	0		
LC_61	Long Creek	None	Clear	None	Steady	Clear	Open	Good	No	No	3		
LC_62	Long Creek	None	Clear	None	None	No Flow	Open	Good	No	No	0		
LC_35	Long Creek		Opaque	None	None	No Flow	Open	Good	No	No	19		
LC_56	Long Creek		Clear	None	None	No Flow	Open	Poor	No	No	3		
LC_20	Long Creek	None	Clear	Steady	None	No Flow	Open	Good	No	No	0		
LC_21	Long Creek	None	Clear	Steady	None	No Flow	Open	Good	No	No	0		
LC_90	Long Creek	None	Clear	None	None	Clear	Open	Good	No	No	0		
LC_33	Long Creek	None	Clear	None	None	No Flow		Needs Attention	Yes	No	9		
LC_32	Long Creek	None	Clear	None	None	No Flow	Open	Good	No	No	18		Oil sheen
LC_121	Long Creek			None	None	No Flow	Open	Fair	Yes	No	0		
LC_103	Long Creek	None		None	None	No Flow	Open	Good	No	No	0		
LC_116	Long Creek	None	Clear	None	None	No Flow	Open	Good	No	No	0		

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Feature ID	Watershed	Odor	Water Clarity	Pipe Flow	Seepage Flow	Flow Color	Sediment Condition	Structure Condition	Trash / Litter	Yard Waste	Total Inspection Score	Follow-Up Required	Comments
LC_102	Long Creek	None		None	None	No Flow	Open	Good	No	No	0		
LC_100	Long Creek	None	Clear	Trickle	None	Clear	Open		No	No	0		
LC_105	Long Creek	None		None	None	No Flow	Open	Good	No	No	0		
LC_91	Long Creek	None	Clear	Trickle	None	Clear	Open	Good	No	No	8		
LC_37	Long Creek		Clear	None	None	No Flow	Open	Good	No	No	9		
LC_73	Long Creek	None		None	None	No Flow	1/2 Full		No	No	0		Lots of cat nine tailed at outlet. Removed trash
LC_51	Long Creek		Cloudy	None	None	No Flow	Open	Fair	No	No	5		
LC_14	Long Creek	None		None	None	No Flow	Open	Good	No	No	0		
LC_13	Long Creek	None	Clear	None	None	Clear	Open	Fair	No	No	0		Some erosion around pipe
LC_101	Long Creek	None	Opaque	None	None	No Flow	Open	Good	No	No	19		
LC_42	Long Creek	None	Opaque	None	None	No Flow	1/2 Full	Fair	Yes	No	10		
LC_57	Long Creek	None	Cloudy	None	None	No Flow	1/4 Full	Good	No	No	14		
LC_120	Long Creek	None	Clear	None	None	No Flow	1/2 Full	Fair	Yes	No	9		
LC_71	Long Creek	Musty	Opaque	None	None	Orange	Open	Good	No	No	15		
TB_6	Trout Brook	None	Clear	None	None	No Flow	Open	Needs Attention	No	No	0		
TB_9	Trout Brook	None		None	None	No Flow	Open	Good	No	No	0		
TB_7	Trout Brook	None	Cloudy	Trickle	Trickle	No Flow	Open	Poor	No	No	5		Could cut back vegetation
TB_2	Trout Brook	None	Clear	Steady	None	No Flow	Open	Good	No	No	0		
TB_3	Trout Brook	None	Clear	Trickle	None	No Flow	Open	Poor	No	No	0		
TB_3	Trout Brook	None	Clear	Steady	None	No Flow	Open	Fair	No	No	0		
TB_1	Trout Brook	None	Clear	Steady	None	No Flow	Open	Fair	No	No	0		
TB_4	Trout Brook	None	Cloudy	4 Pipe or Mo	None	No Flow	Open	Poor	No	No	5		
TB_8	Trout Brook	None		None	None	No Flow	Open	Fair	No	No	0		

Appendix 7: Dry Weather Ditch Inspection Summary

PY2017-18 Dry Weather Stormwater Ditch Inspections - City of South Portland, ME

Ditch ID	Watershed	Date	Inspector	Wind Present (Y/N)	Temperature	Precipitation In Past 2 Days (Y/N)	Precipitation Depth	Yard Waste (Y/N)	Trash/Litter Present (Y/N)	Debris / Pollution Types	Odor	Standing Water	Water Clarity	Water Color	Inlet Condition	Outlet Conditions	Sediment Accumulation
BCD-1	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	Yes	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
BCD-2	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	Yes	None	None / Natural	Yes	Not Applicable	Not Applicable	Stable	Stable	Natural
BCD-3	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	Yes	None	None / Natural	Yes	Clear Water	Clear	Stable	Obstructed	Natural
BCD-4	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	Yes	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
BCD-5	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
BCD-6	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	Yes	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
BCD-7	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	Yes	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
BCD-8	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	Yes	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
BCD-9	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	Yes		None / Natural	No	Not Applicable	Not Applicable	Stable	Obstructed	Depth < 2"
BCD-10	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
BCD-11	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	No	None	None / Natural	Yes	Clear Water	Clear	Stable	Stable	Depth < 2"
BCD-12	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
BCD-13	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Unstable		Depth < 2"
BCD-14	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	No	None	None / Natural	Yes	Clear Water	Clear	Stable	Stable	Natural
BCD-15	Barberry Creek	8/3/18	Fred Dillon	Yes	85	Yes	0	No	No	None	None / Natural	Yes	Clear Water	Clear	Stable	Stable	Depth < 2"
LCD-01	Long Creek	6/27/18	Fred Dillon	Yes	81	No	0	No	Yes	Vegetative Mat	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth > 2"
LCD-02	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	Yes	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Natural
LCD-03	Long Creek	6/27/18	Fred Dillon	Yes	81	No	0	No	Yes	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Natural
LCD-04	Long Creek	6/27/18	Fred Dillon	Yes	81	No	0	No	Yes	None	None / Natural	Yes	Not Applicable	Not Applicable	Stable	Stable	Natural
LCD-05	Long Creek	6/27/18	Fred Dillon	Yes	81	No	0	No	Yes	None	None / Natural	Yes	Clear Water	Clear	Stable	Stable	Natural
LCD-06	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	Yes	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Natural
LCD-07	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Natural
LCD-08	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Natural
LCD-09	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
LCD-10	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	Floating Green Scum	None / Natural	Yes	Clear Water	Brown	Stable	Stable	Natural
LCD-12	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	None	None / Natural	No	Clear Water	Clear	Stable	Stable	Natural
LCD-13	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
LCD-14	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
LCD-15	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Natural
LCD-16	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Natural
LCD-17	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Natural
LCD-18	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	Floating Green Scum	None / Natural	Yes	Clear Water	Green	Stable	Stable	Natural
LCD-19	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	Floating Green Scum	None / Natural	Yes	Clear Water	Brown	Stable	Stable	Depth < 2"
LCD-20	Long Creek	6/27/18	Fred Dillon	Yes	80	No	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Obstructed	Depth > 2"

PY2017-18 Dry Weather Stormwater Ditch Inspections - City of South Portland, ME

Ditch ID	Watershed	Date	Inspector	Wind Present (Y/N)	Temperature	Precipitation In Past 2 Days (Y/N)	Precipitation Depth	Yard Waste (Y/N)	Trash/Litter Present (Y/N)	Debris / Pollution Types	Odor	Standing Water	Water Clarity	Water Color	Inlet Condition	Outlet Conditions	Sediment Accumulation
LCD-21	Long Creek	7/5/18	Fred Dillon	Yes	85	No	0	No	Yes	None	None / Natural	Yes	Clear Water	Clear	Stable	Stable	Depth < 2"
LCD-22	Long Creek	7/5/18	Fred Dillon	No	85	No	0	No	Yes	Floating Green Scum	None / Natural	Yes	Clear Water	Clear	Stable	Obstructed	Depth < 2"
LCD-23	Long Creek	7/5/18	Fred Dillon	Yes	85	No	0	No	Yes	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"
LCD-24	Long Creek	7/5/18	Fred Dillon	Yes	85	No	0	No	Yes	None		No	Not Applicable	Not Applicable	Stable	Obstructed	Depth < 2"
LCD-25	Long Creek	7/5/18	Fred Dillon	Yes	85	No	0	No	Yes	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Obstructed	Depth > 2"
LCD-26	Long Creek	7/5/18	Fred Dillon	Yes	85	No	0	No	No	None	None / Natural	No	Not Applicable	Not Applicable	Stable	Stable	Depth < 2"

PY2017-18 Dry Weather Stormwater Ditch Inspections - City of South Portland, ME

Ditch ID	Watershed	Date	Inspector	Structural Condition	Vegetation Coverage	Vegetation Height	Vegetation Type	Erosion / Scouring	Follow Up Required	Follow Up Reason	Comments
BCD-1	Barberry Creek	8/3/18	Fred Dillon	Stable	Grass Greater Than 90%	Less Than 3 Inches	Normal Grass	No	No		
BCD-2	Barberry Creek	8/3/18	Fred Dillon	Stable	Grass Greater Than 90%	Excessively Tall	Woody	No	Yes	Over grown with shruby vegetation	
BCD-3	Barberry Creek	8/3/18	Fred Dillon	Stable	Grass Greater Than 90%	Excessively Tall	Woody	No	Yes	Over grown and outlet obstructed	
BCD-4	Barberry Creek	8/3/18	Fred Dillon	Stable				No	No		
BCD-5	Barberry Creek	8/3/18	Fred Dillon	Stable	Grass	Less Than 3 Inches	Normal Grass	No	No		
BCD-6	Barberry Creek	8/3/18	Fred Dillon	Stable	Grass	Less Than 3 Inches	Woody	No	No		Couple tall plants (3') growing in
BCD-7	Barberry Creek	8/3/18	Fred Dillon	Stable	Grass	Excessively Tall	Weeds	No	No		Some weeds growing 2-3'
BCD-8	Barberry Creek	8/3/18	Fred Dillon	Stable	Grass	Less Than 3 Inches	Normal Grass	No	No		
BCD-9	Barberry Creek	8/3/18	Fred Dillon	Woody Vegetation Present	Grass	Excessively Tall	Weeds	No	Yes		Trash from hannafords and vegetation blocking outlet pipe
BCD-10	Barberry Creek	8/3/18	Fred Dillon	Stable		6-12 Inches	Weeds	No	No		Some weeds in riprap
BCD-11	Barberry Creek	8/3/18	Fred Dillon	Stable				No	No		
BCD-12	Barberry Creek	8/3/18	Fred Dillon	Stable				No	No		
BCD-13	Barberry Creek	8/3/18	Fred Dillon	Stable	Natural	Excessively Tall	Natural	No			
BCD-14	Barberry Creek	8/3/18	Fred Dillon	Stable	Grass Greater Than 90%	Less Than 3 Inches	Normal Grass	No	No	Outlet to inlet could use a clear path	
BCD-15	Barberry Creek	8/3/18	Fred Dillon	Stable	Natural	Excessively Tall	Natural	No	Yes	Outlet may need clearing soon	
LCD-01	Long Creek	6/27/18	Fred Dillon	Stable	10% or Greater Bare Soil	Less Than 3 Inches	Invasive	No	Yes	Remove debris from sump area	Riprap in place, not bare soil but entirely stone. 2" of leaf and vegetative debris
LCD-02	Long Creek	6/27/18	Fred Dillon	Stable	Grass Greater Than 90%	Less Than 3 Inches	Normal Grass	Yes	No	None	Small amount of erosion
LCD-03	Long Creek	6/27/18	Fred Dillon	Stable	Natural	Excessively Tall	Invasive	No	Yes	Knotweed present. Probably need to remove veg	Knotweed present. Probably need to remove veg
LCD-04	Long Creek	6/27/18	Fred Dillon	Woody Vegetation Present	Natural	Excessively Tall	Natural	No	Yes	Prob need to remove veg	
LCD-05	Long Creek	6/27/18	Fred Dillon	Woody Vegetation Present	Natural	Excessively Tall	Natural	No	Yes	May need to have some veg removed	
LCD-06	Long Creek	6/27/18	Fred Dillon	Stable	Grass	Less Than 3 Inches	Normal Grass	No	No		2/3 mowed grass, 1/3 vegetation. No piping, all natural
LCD-07	Long Creek	6/27/18	Fred Dillon	Stable	Grass	Less Than 3 Inches	Normal Grass	No	No		Outlet broken by new development, add new ditch
LCD-08	Long Creek	6/27/18	Fred Dillon	Stable	Grass	Less Than 3 Inches	Normal Grass	No			Nonpiped inlet and outlet in the public row
LCD-09	Long Creek	6/27/18	Fred Dillon	Stable	Grass Greater Than 90%	Less Than 3 Inches	Normal Grass	No	No		No outlet- flows straight to wetland
LCD-10	Long Creek	6/27/18	Fred Dillon	Stable	Natural	Less Than 3 Inches	Normal Grass	Yes	No		First half grass, after check dam, bare soil with some algae bloom
LCD-12	Long Creek	6/27/18	Fred Dillon	Stable	10% or Greater Bare Soil	Less Than 3 Inches	Natural	Yes			Erosion/bare soil- holding water. On map extend ditch to 236 gannett rd
LCD-13	Long Creek	6/27/18	Fred Dillon	Stable					No		Riprap in entire ditch, 2"sediment near and in outlet
LCD-14	Long Creek	6/27/18	Fred Dillon	Stable	Grass	Less Than 3 Inches	Normal Grass	Yes	No		Slight scouring. Inlet 2" sediment and vegetation growth slightly blocking it
LCD-15	Long Creek	6/27/18	Fred Dillon	Woody Vegetation Present	Natural	Excessively Tall	Woody	No	Yes	Woody vegetation on outlet side	Inlet obstructed by vegetation but still flowing
LCD-16	Long Creek	6/27/18	Fred Dillon	Stable				No	No		Riprap intact
LCD-17	Long Creek	6/27/18	Fred Dillon	Stable				No	No		Newly installed riprap, still looks good
LCD-18	Long Creek	6/27/18	Fred Dillon	Stable	Grass	Less Than 3 Inches	Normal Grass	No	No		
LCD-19	Long Creek	6/27/18	Fred Dillon	Stable	Natural	Less Than 3 Inches	Normal Grass	No	No		Partially obstructed. Outlets 1/3 full
LCD-20	Long Creek	6/27/18	Fred Dillon	Stable	Grass Greater Than 90%	Less Than 3 Inches	Normal Grass	No	Yes	Outlet has more than 2" sedimentation to be remove	

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Ditch ID	Watershed	Date	Inspector	Structural Condition	Vegetation Coverage	Vegetation Height	Vegetation Type	Erosion / Scouring	Follow Up Required	Follow Up Reason	Comments
LCD-21	Long Creek	7/5/18	Fred Dillon	Stable	Natural	Excessively Tall	Natural	No	No		Ditch entirely lined with riprap. Cat tails on edge of ditch. Privately owned ditch above city owned ditch clogged with cat tail growth.
LCD-22	Long Creek	7/5/18	Fred Dillon	Stable	Natural	Excessively Tall	Natural	No	Yes	outlet pipe partially obstructed with cat tails	Most of ditch lined with rip rap. Some cat tail growth along edges.
LCD-23	Long Creek	7/5/18	Fred Dillon	Stable	Grass Greater Than 90%	Less Than 3 Inches	Normal Grass	No	No		
LCD-24	Long Creek	7/5/18	Fred Dillon	Stable	Grass Greater Than 90%	Less Than 3 Inches	Normal Grass	Yes	Yes	Remove rip rap from outlet	LC 24 should actually be broken into two separate ditches.
LCD-25	Long Creek	7/5/18	Fred Dillon	Stable	Natural	Excessively Tall	Woody	Yes	Yes	Excessive vegetation growth in ditch line.	
LCD-26	Long Creek	7/5/18	Fred Dillon	Stable	Grass Greater Than 90%	Less Than 3 Inches	Normal Grass	No	No		

Appendix 8: 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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