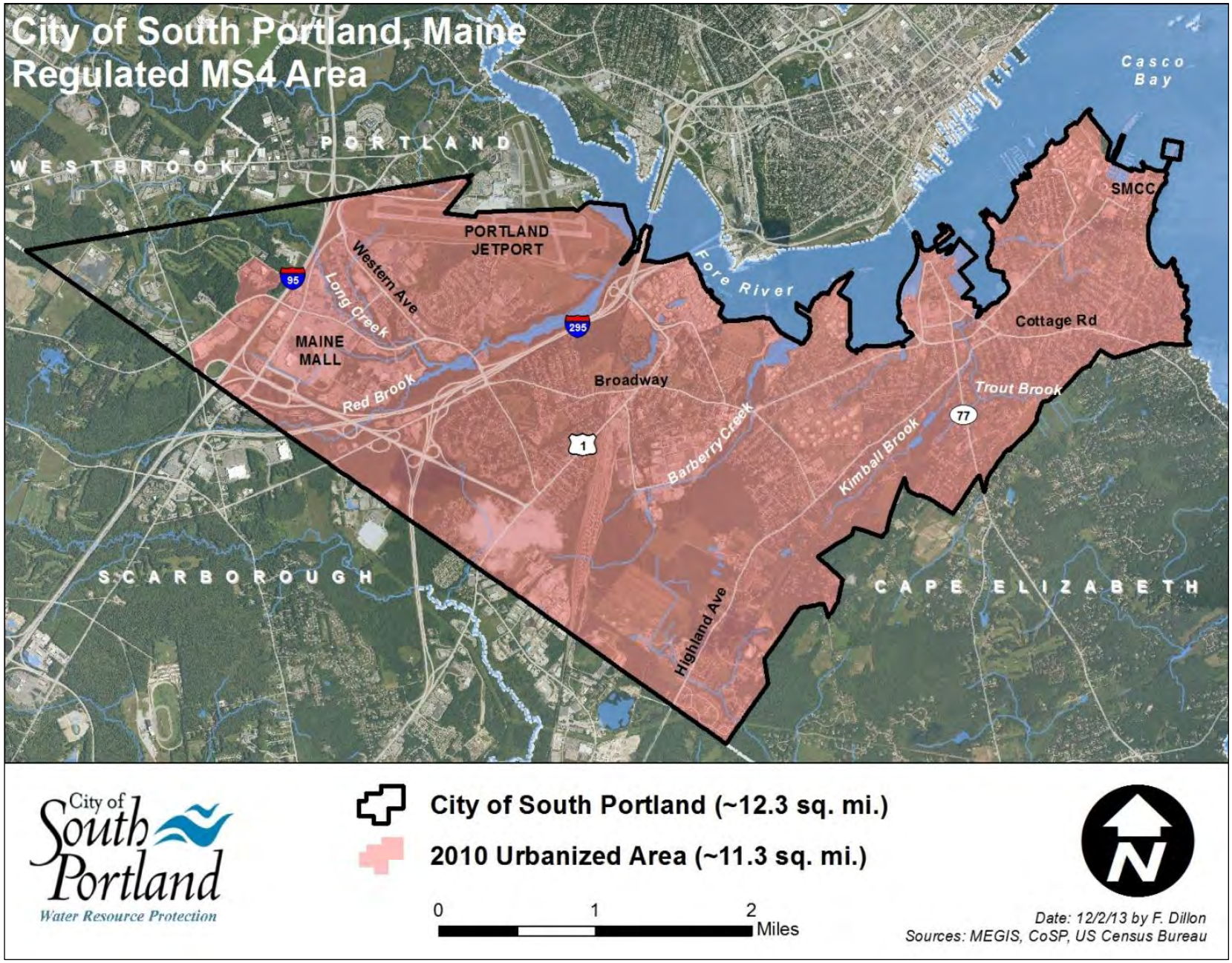
Stormwater Phase II
Annual Report for
Permit Year 7* (2019-20)

City of South Portland
Water Resource Protection

** PY2013-18 permit administratively extended*

Submitted Electronically to MEDEP on 9/15/20



Cover: CCSWCD Americorps member Bryce Neal navigates SeeBoat to measure conductivity in Long Creek (Oct. 2019)

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ACKNOWLEDGEMENTS

This report summarizes a wide variety of activities completed in support of the City's Stormwater Management Program. The following individuals were involved in some capacity:

- **Patrick Cloutier** ~ *Director of Water Resource Protection Department*
- **Dave Thomes** ~ *Collection Systems Manager*
- **Jeff Moulton** ~ *Sewer Maintenance Supervisor*
- **Collection Systems Division Crew:** *Mike Adriance, Jay Cooke, Jarrod Erskine, Lee Gagnon, Randy Keenan, John Larsen, Mike Lorello, Randy Rafuse*
- **Brad Weeks** ~ *City Engineer*
- **Justin Gove** ~ *Civil & Transportation Engineer*
- **Paul Collins** ~ *Treatment Systems Manager*
- **Tom Wiley** ~ *Compliance Administrator*
- **Colleen Mitchell** ~ *WRP Office Manager*
- **Fred Dillon** ~ *Stormwater Program Coordinator*
- **Reegan Leslie** ~ *Stormwater Program Intern*
- **Tom Burns & Aaron Weston** ~ *City's GIS Consultants*

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- **Julie Rosenbach & Lucy Brennan** ~ *Sustainability Department*
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- **Cathy Ramsdell, Ivy Frignoca, Mike Doan, Mary Cerullo & Sarah Lyman** ~ Friends of Casco Bay
- **Damon Yakovleff, Chris Baldwin, Chris Brewer, Heather Huntt, Ali Clift, Jenna Martyn-Fisher & Bryce Neal** ~ *Cumberland County Soil and Water Conservation District*
- **Wendy Garland, Addie Halligan & Jeff Dennis** ~ *Maine Department of Environmental Protection*
- **Peter Carney** ~ *Long Creek Watershed Management District*
- **Meagan Sims** ~ *Maine Healthy Beaches Program*
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- **Tom Mikulka** ~ *Cape Elizabeth Resident and Retired High School Teacher*
- **The many teachers & students involved in the City's Stormwater Program Education & Outreach efforts**

** Tex retired in April after 30 years of service with the Planning Department.*

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), Long Creek Watershed Management District (LCWMD), the Friends of Casco Bay (FOCB), the Casco Bay Estuary Partnership (CBEP), the Maine Healthy Beaches Program (MHB), the South Portland Conservation Commission (SPCC) and the South Portland Land Trust (SPLT) - 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 seventh Permit Year (2019-20) in the third five-year General Permit Cycle for 2013-18 period (permit administratively extended for ongoing negotiations of next MS4 General Permit).

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. Due to the COVID19 pandemic, some of the City's ongoing collaborations with various organizations had to be curtailed. We worked on a more limited basis (or in some cases not at all) with the Maine Department of Environmental Protection, Portland Water District, Maine Healthy Beaches Program, Friends of Casco Bay, South Portland Conservation Commission, South Portland Land Trust, and South Portland & Cape Elizabeth Public Schools (among others) to increase public awareness about stormwater pollution.

Figure 1: Pest Management Advisory Committee member Cathy Chapman volunteers at the informational table for the City's pesticide ordinance during the 2019 WillardFest.

Additionally, WRP staff and committee volunteers provided public education materials and numerous presentations about the City's water resource protection efforts at local events, schools, and professional conferences and workshops (Figure 1). We also submitted articles for publication in statewide professional journals and the City's biweekly electronic newsletter.

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. The 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 education and outreach activities on the sources and impacts of polluted stormwater runoff (Table 1). The COVID19 pandemic restricted the extent of these activities and as a result fewer people were involved than in previous years.

Table 1: presentations & activities provided by City Stormwater Program staff during PY2019-20

Date	School / Organization	# Participants (approx)	Contact	Subjects	Comments
10/17/20	Interlocal Stormwater Working Group	20	Damon Yakovleff	Dry weather outfall monitoring	Workshop demonstrations for municipal staff
10/21/19	Cape Elizabeth High School	30	Kathy Bock & Doug Worthley	Macroinvertebrates as WQ indicators	Classroom presentations (2)
10/31/19	South Portland High School	15	Tania Ferrante	W'shed, WQ and SW concepts	Classroom presentation
12/2/19	Maine Stormwater Conference	50	Ali Clift (CCSWCD)	Pesticides & water quality	From Bees & Bays to Goats: How South Portland's Pesticide Ordinance Enhances the City's MS4 Program
1/27/20	Casco Bay Estuary Partnership	25	Victoria Boundy	Nutrients & water quality	Workshop presentation to municipal staff and volunteer committees
3/31/20	Maine Law School	15	Ivy Frignoca & Anthony Moffa	Clean Water Act, MS4 program, TMDLs & RDA	Zoom presentation for 2nd year environmental law students
2/24/20	Willard Beach Master Plan Committee	15	Kevin Adams (P&R Director)	City's SW Program & Willard WQ monitoring	Meeting presentation
4/6/20	South Portland Conservation Commission	10	Barbara Dee (Chair)	City's SW Program	Zoom presentation
	Total Participants (approx.):	***180***			

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**). Additionally, on 2/24/20 the Stormwater Program Coordinator provided a presentation to the Willard Beach Master Plan Committee on the City's stormwater program and collaboration with the Maine Healthy Beaches Program; and on 4/6/20 the Stormwater Program Coordinator provided a presentation to the South Portland Conservation Commission on how the City's Stormwater Program Management Plan helps maintain compliance with the MS4 General Permit.

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**. In conjunction with ISWG's efforts, the City also continued to implement the Pesticide Use Ordinance, which began applying to private properties (i.e., residents and businesses) on May 1, 2018. The Stormwater Program Coordinator continued to staff the City's Pest Management Advisory Committee (PMAC), which is charged with providing guidance to the Sustainability Director and Council in the implementation of the ordinance. One of the PMAC's more noteworthy activities was the administration of questionnaires to residents and landscape professionals. The questionnaires were tailored to ask both groups how well they understood the ordinance provisions and whether they thought changes or improvements were needed to make the ordinance better. Most respondents wanted to make the ordinance stricter and/or increase education & outreach efforts while others wanted to make the ordinance less strict or repeal it entirely (Figure 2). The complete survey results and a discussion of the PMAC's numerous other activities can be found in their 2019 annual report.

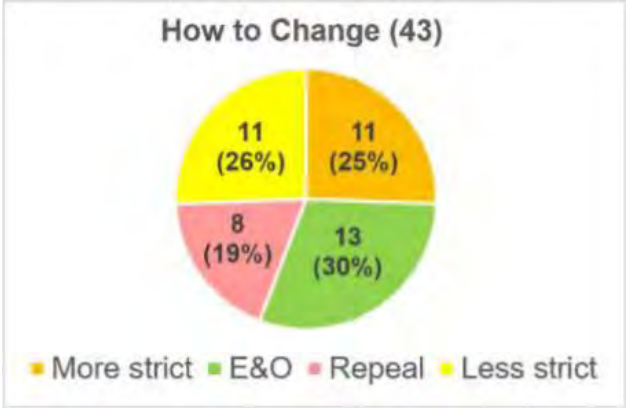


Figure 2: resident responses to question about changes to City's Pesticide Use Ordinance

The Yerxa Park Demonstration Project also progressed with another visit from a small goat herd (also attracting a small herd of reporters) in the fall of 2019. Parks Department staff removed construction rubble and debris and placed heavy impermeable ground cloth and mulch over the area in June of this year to suppress a dense stand of knotweed (Figure 3). The overall project intent is to demonstrate alternative weed and invasive plant control methods that do not rely on the use of synthetic pesticides. The City created an Animal Grazing Ordinance in April 2019 expressly for this purpose.

Figure 3: ground covering and mulch at Yerxa Park to suppress knotweed growth

Closely related to the Pesticide Use Ordinance was the development of a Fertilizer Use Ordinance, which the City began in the spring of 2019 and is now in the final stages of completing (as of 9/15/20). The Stormwater Program Coordinator served on the Fertilizer Working Group, which was charged with creating policies to enhance soil health and fertility while reducing nutrient inputs into local waterways. The two ordinances will likely be combined into a single Low Impact Land Care Ordinance that should greatly enhance the City's efforts to reduce polluted stormwater runoff. The PMAC will help guide implementation of the new combined ordinance and the Grow Healthy South Portland website will be adapted to include information that specifically supports reduced pesticide and fertilizer use throughout the City.

In the late summer and early fall of 2019, the Stormwater Program Coordinator also worked closely with Parks Department staff and Maine DEP to identify an outbreak of cyanobacteria in the ponds at Hinckley Park. The park is a popular destination for dog owners, who are not always diligent about picking up after their pets or preventing them from trampling shoreline vegetation. Consequently, the nutrients in excessive dog waste and eroding soils are likely driving cyanobacteria growth in the ponds. The City used this unfortunate turn of events to educate the public about things they could do to reduce the harmful impacts of polluted stormwater runoff (Figure 4). There were also numerous news stories that alerted the public to the potential dangers associated with the toxins in cyanobacteria while informing them that dogs were a key part of the problem. Prior to the start of the COVID19 pandemic, Parks Department staff were proposing ordinance amendments that would authorize the Park Ranger to issue citations for failure to properly dispose of pet waste and keep dogs under voice command to minimize damage to shoreline vegetation.

Figure 4: warning signs placed at Hinckley Park remind the public that they have a role to play in reducing the adverse impacts of polluted stormwater runoff.

Figure 5: presentation by Stormwater Program Coordinator at BASWG's 6/11/20 regular meeting

Finally, the Stormwater Program Coordinator has been working closely with DEP on an effort to reduce winter salt use in Maine based on similar efforts in New Hampshire that on rely upon limited liability legislation to incentivize participation in their Green SnowPro Program (Figure 5). Given the toxicity impacts to aquatic life from elevated chloride levels in many of Maine's urban impaired streams, virtually all MS4 program staff from agree that some kind of program is needed to meaningfully address the problem. This effort is still underway and will likely

consist of a pilot study in the Long Creek watershed implemented by the Long Creek Watershed Management District.

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 **Enhanced Education & Outreach Plan** as described in **Appendix 1**. South Portland's Community Television (SPCTV) also completed most of the production work for a video featuring the Long Creek Main Stem Restoration Project, which occurred during the fall of 2019. The project was among the first of its kind in the State and consisted of removing excess fill, improving the stream bed, stabilizing the stream bank, creating habitat for aquatic insects and fish, managing

invasive plant species, and establishing native plants along the stream corridor. The primary objective of the restoration project was to enhance aquatic habitat and restore natural stream and floodplain functions so that Long Creek can ultimately meet and sustain its state water quality classification. While the COVID19 pandemic delayed the video production process, the end result was a highly professional piece of work that includes interviews with South Portland City Councilor Susan Henderson, LCWMD Executive Director Pete Carney, Casco Bay Estuary Partnership Director Curtis Bohlen, Project Manager and fluvial geomorphologist John Field, and the City's Stormwater Program Coordinator. The final version was completed in August of 2020 (Figure 6).

Figure 6: SPC-TV video of the Long Creek Main Stem Restoration Project

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 public officials have also been appointed to the **Long Creek Watershed Management District** (LCWMD), 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/DEP 319 grant. The City's Stormwater Program Coordinator was reappointed as the LCWMD's Board Chair and will serve in that capacity (at least) until the end of the second Long Creek General Permit term in 2020 (more likely 2021).

Typically, and in addition to partnering with the ISWG on the Urban Runoff 5K, the City hosts numerous annual public events that provide opportunities for local residents to participate in helping to implement South Portland's Stormwater Management Program. However, due to the COVID19 pandemic the City had to cancel several events as described below.

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

October 12, 2019 – Household Hazardous Waste Collection Day

The Water Resource Protection Department continued to provide the popular annual Household Hazardous Waste Collection Day for South Portland residents in partnership with the Public Works Department. Approximately 246 residents participated in the 10/12/19 event by dropping off a variety of potentially hazardous household products. To reduce the clerical workload, the City began administering the event questionnaire electronically, which while resulting in fewer completed questionnaires also provided an opportunity for respondents to visit relevant websites (Figure 7). Based on the 58 questionnaires that were completed online, the most common HHW materials included paints, solvents, pesticides and cleaners. A considerable number of respondents were familiar with the City's Pesticides Use Ordinance, stormwater management efforts, and Think Blue Maine (**Appendix 2**) and a majority indicated they thought the City's administration of the HHW program was "good" (24%) or "great" (30%).

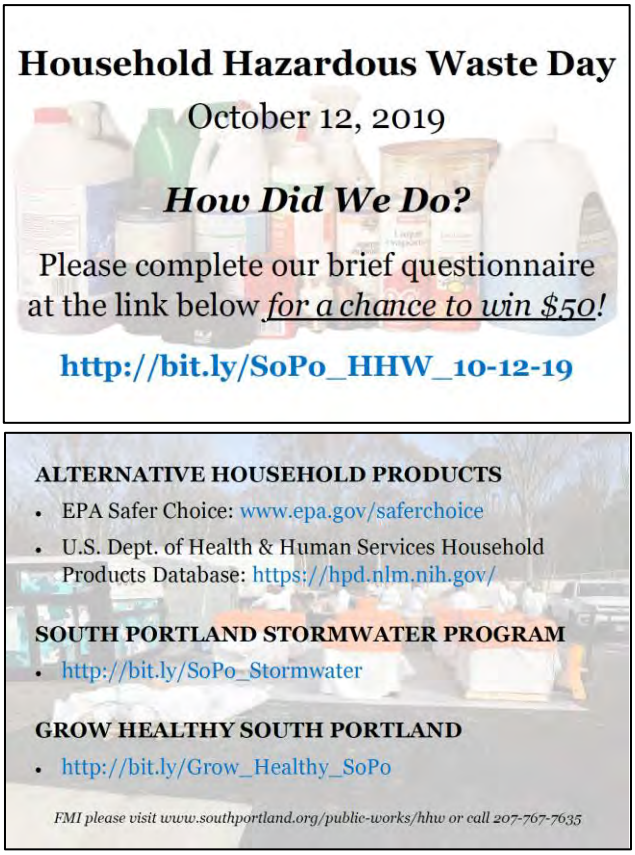


Figure 7: card provided to HHW attendees with links to online questionnaire and websites with relevant info on minimizing HHW, stormwater pollution and pesticide use

Unfortunately, the COVID19 pandemic resulted in the cancellation of several annual public events sponsored or supported by the City.

- Spring 2020 HHW (typically in mid-April)
- 2020 April Stools Day (typically in mid-April)
- Spring 2020 Portland Water District Trout Release events (typically 2-3 events in mid to late-May)
- Electronic waste drop off event (typically in early June)
- Long Creek Stream Cleanup (typically in early to mid-June)

Fortunately, the ISWG was still able to hold a virtual version of the Urban Runoff 5K on the weekend of June 20th-21st (although the Green Neighbor Family Fest had to be cancelled). A more detailed summary of the event is described in **Appendix 1**. The City donated $500 to help fund the effort and the Stormwater Program Coordinator participated in the event.

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. The City's ongoing CSO mitigation

efforts continue to result in the creation of new stormwater infrastructure – often including stormwater treatment systems in addition to more traditional drainage systems (i.e., pipes and catch basins). The following updates were made to our GIS data layers to reflect projects completed during PY2019-20.

Greenbelt Trunk Line Sewer Replacement Project

- Updated Wastewater pipes and Structures located on Mussey Street, Third Street, Margaret Street, Bike/Walking path
- Updated Drainage pipes and Structures located on Mussey Street, Third Street, Margaret Street, Bike/Walking path

Pleasantdale Sewer Separation Project

- Updated Wastewater pipes and Structures located on Broadway, Elm Street, Robinson Street, Mildred Street, Chapel Street, Pearl Street, Chestnut Street, Forest Avenue, North Kelsey Street
- Updated Drainage pipes and Structures located on Broadway, Elm Street, Robinson Street, Mildred Street, Chapel Street, Pearl Street, Chestnut Street, Forest Avenue, North Kelsey Street

Marsh Road Sewer Replacement Project

- Updated Wastewater pipes and Structures located on Marsh Road

Additional layer updates included:

- Wastewater Lateral Lines
- Wastewater Lateral Points
- Wastewater Pipes
- Wastewater Structures
- Drainage Pipes
- Drainage Structures
- Stormwater BMP
- Drainage Culvert Openings
- Drainage Outfalls

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 35 incident reports of potential illicit discharges or spills and followed up on all of these incidents (Table 2). The City contacted the operators or owners of problem properties and issued warnings to cease and desist and/or offered technical assistance as needed. Reports, correspondence on follow up actions and/or photos are available for all of these incidents. Because restaurants have been frequently involved in these incidents, the City had hoped to implement a cloud-based data collection application for restaurants in PY2019-20. However, due to staffing changes in the Planning & Development Department and the COVID19 pandemic, this initiative was put on hold for the time being and will be revisited again during PY2020-21.

The City continued working with the Maine Healthy Beaches (MHB) Program on bacteria source tracking investigations in the Willard Beach watershed, though on a more limited basis due to staffing constraints (the Stormwater Program Coordinator was on restricted duty due to surgeries). Optical brightener, bacteria (enterococcus) and Human Bacteroides (HB) samples were collected at several strategic locations during the 2019 summer swim beach season to isolate potentially problematic subcatchment areas throughout the watershed. Results from these assessments will guide the City's ongoing efforts to identify and eliminate potential bacterial contamination sources from the MS4 and system. Notably, the monitoring of the Willard Beach stormwater system has not been required by the current and previous MS4 permits and is another demonstration of the City's commitment to "go above and beyond" minimum permit requirements.

On a related note, in late June of 2020 the City also conducted HB sampling of groundwater seeps at Willard Beach in response to resident odor complaints (Figure 8). The results indicated there may be sewage leaking from antiquated pipes into the groundwater that drains to a small portion of the beach. To confirm potential sources, the City will be conducting smoke and dye testing in late August / early September of 2020. The owners of any privately owned leaking sewer services that are identified through these efforts will be required to install new pipes and any City-owned sewer mains will be lined and/or replaced as needed.

Figure 8: Civil Engineer Justin Gove and Stormwater Intern Reegan Leslie collect groundwater samples at Willard Beach for Human Bacteroides analysis

Table 2: spills or IDDE incidents reported for PY2019-20

Report Date	Incident Location	Description	Findings / Follow-up	Non-SW to MS4?
7/2/19	Western Ave from Portland to Coca Cola	Hydraulic line rupture resulted in ~10gal spill beginning in downtown Portland and ending at Coca Cola warehouse on Western Ave in S. Portland (most of oil spilled in Portland)	Initially notified by City of Portland SW program staff, who also contacted DEP and coordinated clean up with Coca Cola. Worst parts of spill path cleaned with absorbent material and swept.	No
7/5/19	Turner's Island oil residue in cove	Resident notified DPW of oil spill; DPW notified SW Coordinator who met with resident after spill residue was carreid out by tide.	SW Coordinator contacted Friends of Casco Baykeeper, who suggested contacting Coast Guard and DEP for any future such oil spills.	No
7/10/19	Willard Square Fire Station	Pavement staining incorrectly identified initially as hydraulic oil later determined to be calcium chloride for dust control	Contacted DEP with initial (incorrect) oil spill report and followed up shortly thereafter to provide correction.	No
7/11/19	Kobe sewage discharge	Raw sewage discharge (amount unknown) from SMH into private CB.	Police Dept notified Collection Systems Division; SW Coordinator visited site and contacted owner/manager, CEO, DEP and LCWMD. Sewer line obstruction later excavated and repaired.	Yes
7/11/19	Pleasant Ave potting material discharge	Plant potting material (primarily peat moss) warehouse facility operations spilled excess material onto ground and into combined CB	SW Coordinator contacted facility manager on development of SOPs to prevent future discharges.	No
7/15/19	Turnpike bridge accident / oil spill	Truck became damaged after getting stuck beneath bridge and oil spill resulted	MTA crews cleaned area with absorbent material; SW Coordinator followed up with MTA staff to confirm.	No
7/26/19	697 Main St ballast & groundwater discharge	Underground fuel tank replacement contractor requested permission from City to discharge ballast & groundwater into MS4	City granted permission provided analysis of discharge confirmed no pollutants (which it did).	No
8/8/19	JC Penney cooking oil spill	Pavement staining from dumpster to private CB indicated cooking oil discharge	Met with Mall maintenance staff and unable to identify specific restaurant source; LCWMD contractor cleaned CB.	No
8/8/19	Kobe restaurant dumpster spill	Area around dumpster strewn with rubbish and private CB filled with trash and grease	Followed up with restaurant manager on improving GH-PP.	Yes
8/20/19	Klenda Seafood cooking waste dumping	Request from proprietor of lobster processing business on dumping used cooking water into internally draining CB.	Instructed proprietor to immediately stop dumping and to discharge to public sewer instead.	No
9/24/19	Chambers Ave wastewater dumping	Anonymous report of carpet cleaning wastewater dumping into combined CB	While less than ideal method for disposing of wastewater, dumping is not a violation of City's NSDO.	No
9/24/19	MSF Paint Dumping	Street painting crew washed equipment over CB draining to facility's wet pond.	Developed SOP to wash paint equipment over vehicle wash bay sand/oil separator inlet.	Yes
9/26/19	Hometown Buffet cooking spill	Grease spillage onto pavement from dumpster compactor.	Contacted restaurant manager and Mall maintenance staff to inform them of NSDO violation.	Unknown
10/18/19	Preble St transformer oil spill	CMP pole knocked down during storm with high winds resulting in transformer oil release	CMP replaced pole and cleaned spill area; analysis determined that mineral oil with no PCBs.	No
10/24/19	Turnpike gas spill	Car crash resulted in gas tank leak of ~3 gal fuel	Fire Dept sent notification via AR-1 report on 10/31/19 indicating DEP had been notified on day of crash; FD presumeably cleaned spill area	Unknown
10/31/19	School St oil spill	Anonymous report submitted to DPW via iWorks	CSD staff investigated and observed oil leak under pickup truck with cardboard and absorbent material	No
11/6/19	Clemons St loam pile	CSD staff observed loam pile in street ~260' from CB	SW Coord visited site and spoke with contractor who said loam pile would be removed by end of day	No
1/17/20	VIP Auto Parts	Anonymous report of vehicle bay washing to outside pavemenet	SW Coord visited site but couldn't confirm washing due to recent snow plowing	Unknown
2/3/20	Billy Vachon salt dump	Tractor trailer dump body gate accidentally opened andan spilled road salt	SW Coord contacted owner/operator who had area swept the same day	No
2/27/20	Dawson St sediment discharge	Residential water line repair with no ESC BMPs resulted in sediment plume from construction activities during 1.45" rain event	SW Coord contacted contractor who applied mulch to site 1 day after sediment plume	Yes

Report Date	Incident Location	Description	Findings / Follow-up	Non-SW to MS4?
2/27/20	Broadway sediment discharge	SW detention pond maintenance resulted in sediment discharge during 1.45" rain event	SW Coord contacted owner about installing additional ESC BMPs before rain event; contractor installed BMPs but discharge still occurred due to high runoff volume. SW Coord, owner and contractor met with EJP for recommendations on stabilizing SW pond bottom following week	Yes
2/27/20	Running Hill Rd sediment discharge	New construction at HarborChase resulted in sediment discharge during 1.45" rain event	City's 3PI met with contractor to recommend additional ESC BMPs to avoid reoccurence; contractor installed BMPs following week.	Yes
3/5/20	Broadway yard waste dumping	Anonymous complaint of yard waste into Mildred St SW pond	SW Coord contacted resident and explained how yard waste could impact WQ; resident stated all future yard waste would be taken to Transfer Station (per ordinance)	No
3/6/20	Fickett & Highland car crash	Car crash resulted in small oil discharge (<1 gal)	FD & PD responded to crash site and FD cleaned spill area with absorbent material	No
3/6/20	Firefighter's Park oil spill	Anonymous report of oil spill on park walkway	SW Coord investigated and confirmed/documented spill from vehicle maint garage next door; sent letter to owner/operator instructing to cease and desist immediately	No
3/6/20	VIP Auto Parts	Anonymous report of vehicle bay washing to outside pavement	SW Coord investigated and confirmed/documented non-SW discharge; sent letters to owners/operators to cease and desist immediately	Yes
3/31/20	MSF Hydraulic Oil	Ruptured dump truck hose spilled ~5gal hyrdaulic oil onto ground and into nearby CB	Staff confined oil to single CB and had Clean Harbors remove all contents following day; SW Coord notified DEP	Yes
4/14/20	ON/TI Semiconducter	Potentially contaminated groundwater discharge from Texas Instruments pump & treat operation	ON/TI contracted with Sevee & Maher to conduct investigation and also notified DEP. Sample of discharge will be analyzed for VOCs.	Unknown
4/14/20	Calvary Pond Vegetation Dumping	City staff observed pile of vegetation in pond near culvert inlet which if obstructed could have resulted in flooding.	SW Coord contacted abutting property owners and Calvary grounds manager to stop dumping activities and have vegetation removed.	No
4/29/20	Memory Lane Oil Leak	Neighboring resident contacted SW Coord with complaint about oil leaking from parked pickup truck	SW Coord sent letter to owner of pickup truck requesting repairs to prevent leak	No
5/7/20	Kobe Restaurant	SW Coord conducted pportunistic inspection to check on waste storage area	No obvious sources of SW pollution	No
5/7/20	Macaroni Grill	SW Coord conducted pportunistic inspection to check on waste storage area	No obvious sources of SW pollution	No
6/12/20	ON Water Leak	Facility manager contacted Collection Systems Division to report potable water leak from supply line.	SW Coord spoke with facility manager who reported that some supply water did overflow and discharge to MS4; leak was repaired that same day.	Yes
6/23/20	Yankee Ford Detergent Discharge	City staff observed vehicle washing in front of service bay with soapy water being discharged to MS4	SW Coord spoke with assistant to service manager and explained NSDO prohibition on detergent discharge; assistant stated activity would cease.	Yes
6/26/20	Yankee Ford Detergent Discharge	City staff observed vehicle washing in front of service bay with soapy water being discharged to MS4	SW Coord visited facility and spoke directly with service manager to reiterate NSDO detergent discharge prohibition; sent follow up letter and cc'ed CEO.	Yes

The Portland Water District (PWD) provided their annual water quality report for PY2019-20 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 3**).

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 Barberry Creek, Long Creek and Trout Brook were completed using a cloud-based data collection application in December 2019 and January 2020 when temperatures were below freezing. Due to increasing concerns with the spread of Lyme disease and other tick-borne illnesses, the City would like to continue conducting outfall inspections during times of the year when the temperatures are below freezing and ticks are much less likely to be active. The inspection summaries for all three watersheds are included in **Appendix 4**. 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.

In October 2019, the Stormwater Program Coordinator arranged a visit to South Portland by MIT PhD candidate Laura Perovich, who deployed a "SeeBoat" in Long Creek's South Branch. SeeBoats are remotely controlled and outfitted with probes that continuously sample a variety of water quality parameters, including temperature, pH, turbidity and conductivity. The boats are also equipped with LEDs that change color instantaneously in response to user-defined thresholds for each measured parameter (Figure 9). The Long Creek Watershed Management District (LCWMD) – which includes representatives from the City of South Portland – is particularly interested in chloride contamination since it has been identified as one of the primary stressors to aquatic life.

Figure 9: LED colors can be adjusted to indicated water quality thresholds for various parameters

Conductivity and chloride have been measured throughout the Long Creek watershed for nearly a decade and the relationship between these two parameters is well understood. A conductivity value of around 850 uS/cm equates to EPA's chronic toxicity limit of 230 ppm and a conductivity value of around 3,070 uS/cm equates to EPA's acute toxicity limit of 860 ppm (Figure 10). Chronic and acute toxicities are defined as the highest pollutant concentrations that do not result in harmful effects to aquatic communities during indefinite and brief exposure periods, respectively. The SeeBoat's conductivity readings of the South Branch indicated that many areas of the stream had chloride concentrations well above EPA's 230 ppm chronic toxicity threshold while all readings were below EPA's 860 ppm acute toxicity threshold (Figure 11). These findings are consistent with historical sampling throughout the watershed and provide further evidence of an urban stream syndrome that has resulted in a failure to attain state water quality standards for aquatic life and a number of regulated pollutants.

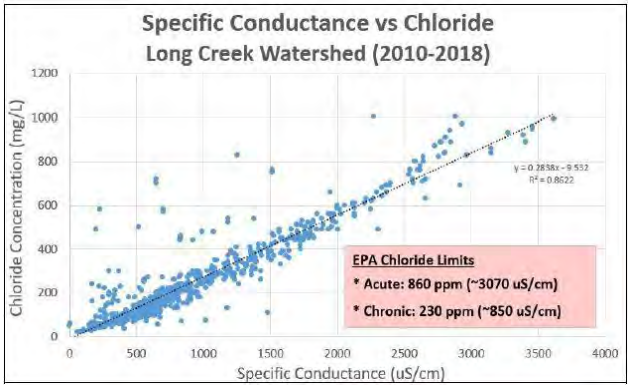


Figure 10: conductivity & chloride correlation in Long Creek watershed

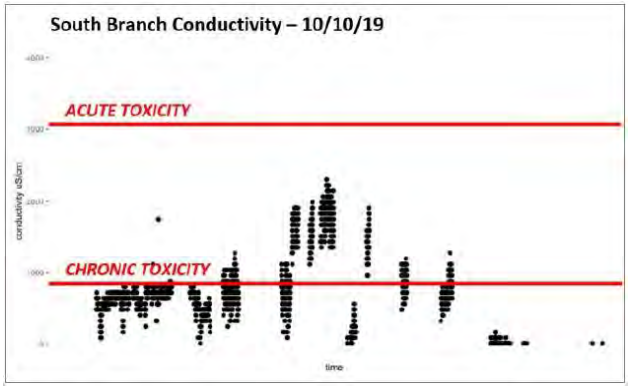


Figure 11: SeeBoat conductivity readings for South Branch

While the in-stream water quality measurements by the SeeBoat were not outfall inspections or monitoring

per se, they confirmed the significance of chlorides (presumably discharged by outfalls) as perhaps the most dominant contaminant of concern in the watershed. This effort resulted in the publication of articles by the Stormwater Program Coordinator in the Maine Water Environment Association's November 2019 Newsletter and South Portland's Community e-Newsletter. More notably, it also prompted discussions with DEP and other MS4 clusters throughout the state about the possibility of proposing limited liability legislation similar to New Hampshire's Certified Green SnowPro Program.

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.

Figure 12: LCD-19 with cattail growth (Long Creek watershed)

ACTIONS COMPLETED DURING PERMIT YEAR

WRP staff inspected and photographed all of the open ditches in the Long Creek and Barberry Creek watersheds (**Appendix 5**). 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 though there were numerous ditches in need of maintenance follow-up for vegetation removal, erosion repair and/or riprap replacement (Figure 12 above). Given the extensive use of piped stormwater systems to provide drainage for the densely developed residential and commercial areas in the Trout Brook watershed, no open ditches are present in the public right-of-way and therefore no inspections are necessary in this watershed.

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

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

INTENT

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

METHODOLOGY

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

MEASURABLE GOALS

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

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

ACTIONS COMPLETED DURING PERMIT YEAR

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 9th preliminary draft of the next MS4 General Permit (dated 6/23/20) 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 next MS4 General Permit.

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 in BMP 2.2, the City's Water Resource Protection and Public Works Departments partnered to hold a HHW collection event on 10/12/19 (the April 2020 event had to be cancelled due to the COVID19 pandemic). The City invested just over $8,100 for another successful event that diverted significant amounts of HHW from the municipal waste stream and reduced potential sources of stormwater pollution (and potentially toxic discharges to the City's wastewater treatment facility). Please refer to the summary of activities for BMP 2.2 and **Appendix 2** for more details.

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 another $5,000 to the Friends of Casco Bay's Boat Pumpout Program for PY2019-20.

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, 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

Due to staffing constraints related to the COVID19 pandemic, the City's catch basin stenciling program had to be curtailed for PY2019-20. However, we were able to hire a Stormwater Intern for PY2020-21 who has been stenciling the "No Dumping Drains to Casco Bay" message for many of our catch basins. The City also has a continuing partnership with the Friends of Casco Bay on their stormwater education and outreach efforts and permits teams of their volunteers to stencil catch basins in the City's right of way. However, the COVID19 pandemic have suspended their stenciling program as well.

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 permitted construction activities from single family residential house lots to large commercial projects constructing principle structures and

disturbing a minimum of 15,000 ft^2 (often less) of land 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 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 also provides an informative brochure for developers and contractors on our construction project oversight procedures that includes an EPA diagram on the types of typical erosion & sediment control (ESC) BMPs needed for most projects (Figure 13). The brochure is available online and on display in the City's Planning Department office.

Figure 13: diagram of typical construction site included with City's Erosion & Sediment Control Guide for Construction Projects

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. 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 (which now include the WRP's Civil Engineer), 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.

Finally, in May 2020 the City's Stormwater Program Coordinator initiated a discussion with representatives for all of the State's MS4 clusters about partnering with DEP on an Erosion & Sediment Control training program that provides more emphasis on MS4 compliance considerations. DEP's John Maclaine expressed a real interest in this partnership as he is in the process of revamping their training program to address a variety of audiences.

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 Community Planners, 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 are 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 and Stormwater Program Coordinator also continued to use the Fulcrum application to document inspections for single family residential house lots (Figure 14).

Figure 14: screen shot of mobile / cloud-based data collection app for documenting inspections for "small" construction projects

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.

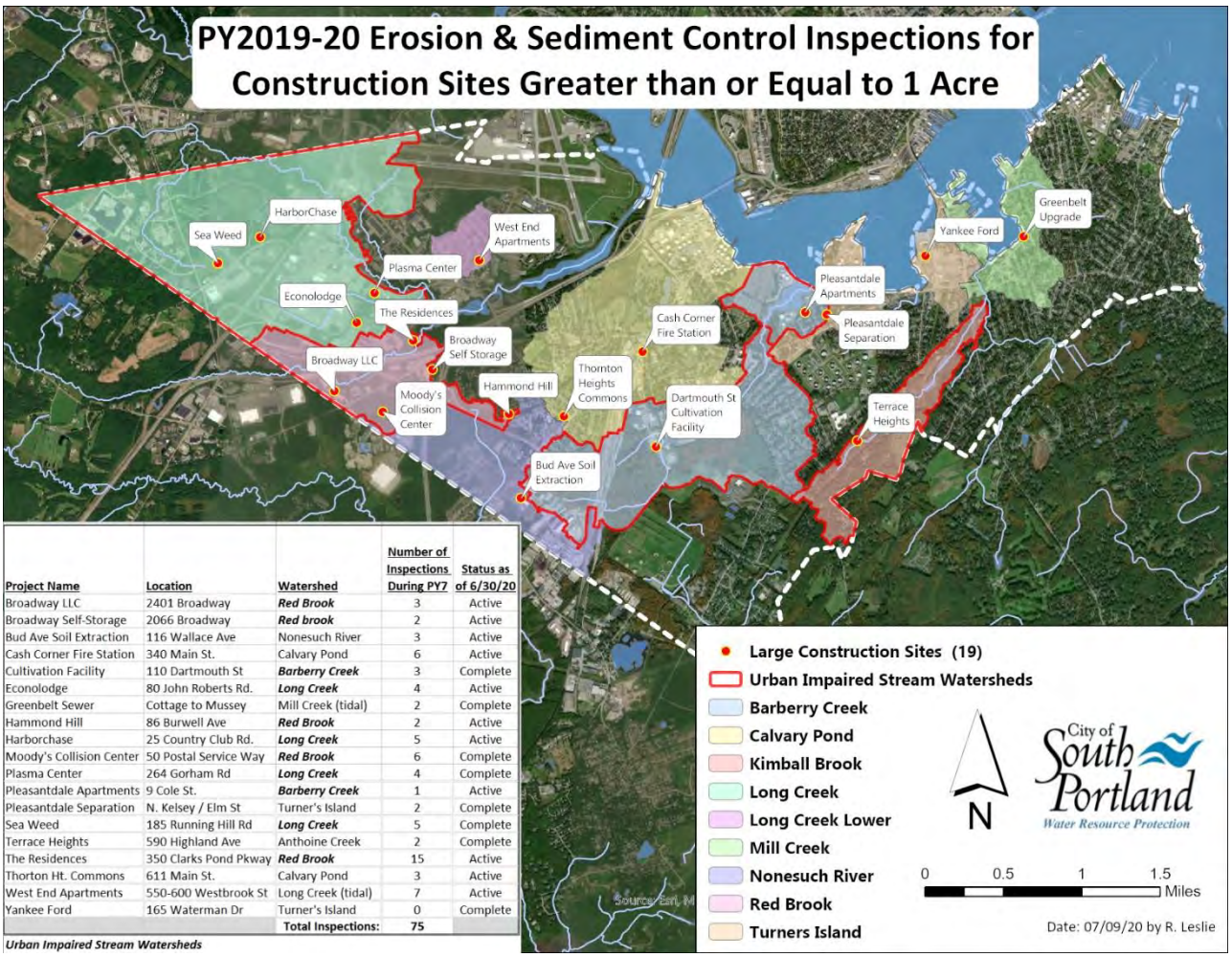
- ***Measurable Goal 4.3.4*** – continue inspecting construction sites located in the watershed of an urban impaired stream a minimum of three times, and inspect construction sites located in all other watersheds a minimum of two times. For all construction sites, at least one of the required inspections 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 PY2019-20 and continued to use the process flow chart that clearly defines roles & responsibilities for the third party inspector (3PI), relevant City staff, the contractor and the owner. It also establishes processes for submitting and filing 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. While there were several instances that required follow up inspections to ensure correction of BMP deficiencies, no formal enforcement actions were necessary to bring construction projects into compliance with applicable erosion & sediment control requirements.

The City and our 3PIs continued to use a comprehensive erosion & sedimentation control (ESC) inspection report form developed by ISWG and intended to comply with the MS4 General Permit, the MCGP and Chapter 500. To facilitate nearly real-time ESC report transmittal from 3PIs to City staff, we adapted this form for use with Fulcrum, a cloud-based data collection application. 3PIs can also simply submit completed ESC report forms via email provided this is done shortly after the inspections are completed (i.e., within 1 or 2 days). During PY2019-20 there were 19 active construction projects an acre or larger that were inspected 75 times entirely by City-appointed inspectors. All sites were inspected on at least a monthly basis (Figure 15), which greatly exceeds minimum MS4 permit requirements.



Project Name	Location	Watershed	Number of Inspections During PY7	Status as of 6/30/20
Broadway LLC	2401 Broadway	***Red Brook***	3	Active
Broadway Self-Storage	2066 Broadway	***Red brook***	2	Active
Bud Ave Soil Extraction	116 Wallace Ave	Nonesuch River	3	Active
Cash Corner Fire Station	340 Main St.	Calvary Pond	6	Active
Cultivation Facility	110 Dartmouth St	***Barberry Creek***	3	Complete
Econolodge	80 John Roberts Rd.	***Long Creek***	4	Active
Greenbelt Sewer	Cottage to Mussey	Mill Creek (tidal)	2	Complete
Hammond Hill	86 Burwell Ave	***Red Brook***	2	Active
Harborchase	25 Country Club Rd.	***Long Creek***	5	Active
Moody's Collision Center	50 Postal Service Way	***Red Brook***	6	Complete
Plasma Center	264 Gorham Rd	***Long Creek***	4	Complete
Pleasantdale Apartments	9 Cole St.	***Barberry Creek***	1	Active
Pleasantdale Separation	N. Kelsey / Elm St	Turner's Island	2	Complete
Sea Weed	185 Running Hill Rd	***Long Creek***	5	Complete
Terrace Heights	590 Highland Ave	Anthoine Creek	2	Complete
The Residences	350 Clarks Pond Pkway	***Red Brook***	15	Active
Thorton Ht. Commons	611 Main St.	Calvary Pond	3	Active
West End Apartments	550-600 Westbrook St	Long Creek (tidal)	7	Active
Yankee Ford	165 Waterman Dr	Turner's Island	0	Complete
		Total Inspections:	**75**	

Urban Impaired Stream Watersheds

Figure 15: PY19-20 inspections for construction projects 1 acre or larger

In exceedance of MS4 permit requirements for construction site inspections and documentation, a City-appointed 3rd party inspector, City's Engineering Inspector and/or the Stormwater Program Coordinator also conducted 84 inspections for 30 construction projects that disturbed less than one acre (Table 3 below). Most inspections were recorded using the Fulcrum application for numerous single family residential projects, stormwater treatment system maintenance, utility work and several small commercial 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 to contractors about the DEP's erosion and sediment control certification as part of the project proposal and site plan review process. We also provided the following information on our website encouraging the use of contractors certified by DEP in erosion and sediment control practices:

Table 3: PY19-20 construction inspections for projects disturbing less than 1 acre

Location	Project Name/Type	PY2019-20 Inspections	Status as of 6/30/20
10 Coolidge Ave	SFR*	2	Complete
13 Bennett	SFR	1	Complete
16 Bowdoin	Commercial	3	Complete
17 Bennett	SFR	1	Complete
19 Bennett	SFR	1	Complete
19 Virgina Ave	SFR	1	Complete
20 Pillsbury	WRP Sewer Separation	1	Complete
23 Bowdoin	SFR	3	Complete
25 Church St	SFR	1	Active
35 Park Ave	Commercial	4	Complete
45 Ridgeland	SFR Driveway	1	Complete
55 Romano	SFR	2	Complete
61 Dawson	SFR - water line repair	2	Complete
62 Macarthur	Comm Gardens	1	Active
70 Bonnybank	SFR	1	Complete
78 City Line Drive	Commercial	4	Complete
177 Main St	Emergency Dig	2	Complete
280 Gannett Drive	Commercial	10	Active
312 Gannett	Commercial	1	Complete
333 Western Ave	Commercial	10	Active
340 Main St	Commercial	7	Active
373 Broadway	Commercial	1	Complete
463 Westbrook	SW System Maint.	1	Complete
531 Westbrook	Multi-Family	10	Active
700 Broadway	Commercial	2	Complete
1350 Broadway	Multi-Family	2	Complete
1700 Broadway	SW System Maint.	6	Complete
2066 Broadway	Commercial	1	Complete
Marsh Rd Sewer	City Utility Work	1	Complete
Westbrook St	City Utility Work	1	Active
	Total Inspections:	**84**	

**SFR = single family residential*

> *The City strongly encourages property owners and/or developers to use excavation contractors that have been certified by the Maine Department of Environmental Protection (MEDEP) in the proper use of erosion and sediment control (ESC) practices. State law requires excavation contractors working in the shoreland zone to have MEDEP's ESC certification.*

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. We also continue to engage in discussions with the Long Creek Watershed Management District about an interlocal collaboration to develop stormwater treatment standards that will provide increased protections beyond those currently afforded by municipal ordinances in the watershed.

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 16). 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.). Annual inspections must be completed (in most cases by City-approved 3rd parties) by 6/30 of each year and corresponding reports must be received by 7/15.

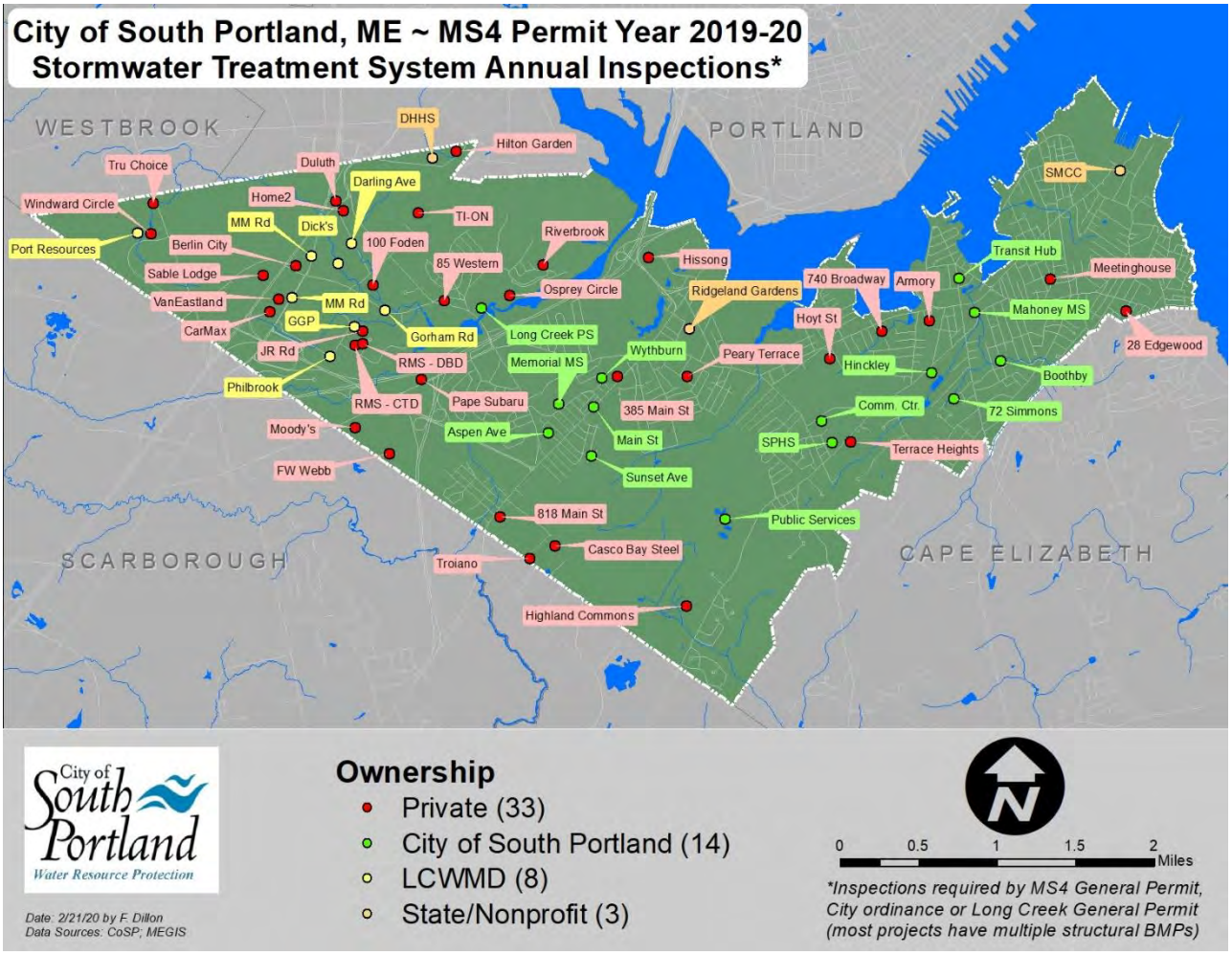


Figure 16: locations of qualifying post-construction structural stormwater BMPs in South Portland for PY2019-20

The City sent notification letters in mid-February 2020 to all qualifying property owners not participating in the Long Creek General Permit informing them of the annual post-construction BMP 3rd party inspection (3PI) requirements specified in the MS4 permit and City's ordinance. Shortly thereafter the COVID19 pandemic swept through the state triggering widespread stay-at-home orders and layoffs. Despite the associated significant adverse impacts on the abilities of local businesses and individuals to maintain and resume normal operations or activities, only 2 stormwater treatment system inspection reports required by the MS4 permit had not been received by 9/1/20 – and both are expected by the end of September 2020 (Table 4). All 3PI reports received indicated that all systems were functioning as designed and intended or would be with minor maintenance tasks. We will be sending certified letters informing the owners of several small residential systems requiring inspections by the City's ordinance (NOT by MS4 permit) to submit their reports. The City also requests inspection reports from the Long Creek Watershed Management District for stormwater systems covered under the Long Creek General Permit.

Table 4: PY2019-20 properties requiring post-construction 3rd party inspections for stormwater treatment BMPs

INSPECTIONS	Discharge to MS4	3PI Report Received	Properly Functioning	Comments
Privately Owned				
1 Industry Rd - Troiano Waste Services	Yes	Yes	Yes	7/27: email to Patrick Gere (PY18-19 3PI) and received report shortly after. 3PI done 6/23 by non-approved SGC staff & report sent to PC on 7/10. Requested resume/quals for Thalia Harrington
1 Lincoln St - Hissong Salt Packaging	No	No		7/27: email to Chris Pizey and informed by SP that Jen Packard new contact; email to Jen w/ original letter. Jen says Chris is still the guy. 8/10: sent followup email to all parties. 8/28: sent email to Rich, Jen & STI, which confirmed 3PI report pending
1 Wallace Ave - Casco Bay Steel	Yes	Yes	Yes	7/27: email to Steve Bushey to check on status of incomplete SW system; Steve Bushey will send update shortly. Email to Bryon & STI on 3PI report status. 8/7: STI 8/3/20 report received
5 Foden Rd - Texas Instruments	Yes	Yes	Yes	7/15/20: STI report notes minor maintenance needed to repair lawn and replace riprap
20 Lydia Ln - Riverbrook Apartments	No	Yes	Yes	7/27: email Amber Ferland / Ransom (PY18-19 3PI); John Mahoney says it will be done ASAP; 8/4 Abby Kimball sent
25 Preservation Ln - Terrace Heights Condos	Yes	Yes	Yes	6/23/20: STI report notes minor maintenance needed to remove forebay sediment and reseed grass
25R Brickhill Ave - Osprey Circle	No	Yes	Yes	8/3: Daphne Pappas sent 5/13/20 report
28 Chris Toppi Dr - RMS Chris Toppi Drive	Yes	Yes	Yes	7/15: Blaise sent 7/7/20 inspection report
28 Edgewood Rd	No	Yes	Yes	6/3: Jeff Fetterer submitted self-inspection checklist
30 Donal Dean Dr - RMS Donald Dean Drive	Yes	Yes	Yes	7/15: Blaise sent 7/7/20 inspection report
31 Hoyt St - Hoyt Street Apartments	Yes	Yes	Yes	7/28: email to Shawn Frank & Mark Loring; 8/10: STI sent 8/6/20 report
33 Chris Toppi Dr - John Roberts Rd Office Park	No	Yes	Yes	7/28: Sterling resent 12/14/19 report which noted need for future maintenance
50 Maine Mall Rd - Home2 Suites by Hilton	Yes	Yes	Yes	7/15/20: maintenance needed for bioretention cell
50 Peary Terrace*	No	No		Send certified letter
52 Peary Terrace*	No	No		Send certified letter
54 Peary Terrace	No	Yes	Yes	6/22: self-inspection report
55 Maine Mall Rd - Duluth Trading	Yes	Yes	Yes	4/24: Acorn sent 4/15/20 report
56 Peary Terrace	No	Yes	Yes	6/29: self-inspection report
64 Southeast Rd - Peary Terrace*	No	No		Send certified letter
70 Southeast Rd - Peary Terrace*	No	No		Send certified letter
74 Running Hill Rd - Sable Lodge	No	Yes	Yes	7/29: email to Tom Gorrivan on 3PI status; inspection done and will send ASAP. 8/20: received report documenting inspection on 4/29 and maint on 6/17
76 Southeast Rd - Peary Terrace*	No	No		Send certified letter
77 Gary Maietta Pk - Highland Commons	No	Yes	Yes	7/29: email to Nathan Marles on 3PI status; 7/31: Nathan Marles sent 5/13/20 report
82 Southeast Rd - Peary Terrace*	No	No		Send certified letter
85 Western Ave - Western Avenue Crossing	Yes	No		7/29: email to Shawn Frank (STI) on 3PI status; 8/10: sent followup email to STI. 8/28: email to STI which responded to confirm 3PI report pending.
100 Foden Rd - The Park at 100 Foden	Yes	Yes	Yes	6/11: SWC sent 6/1/20 report
145 Jetport Blvd - Hilton Garden Inn	Yes	Yes	Yes	5/19: Acorn sent PY19-20 report
150 Postal Service Way - F.W. Webb	Yes	Yes	Yes	7/20: self-inspection indicates minor maintenance needed for CBs, swales and forebays
255 Maine Mall Rd - Berlin City	Yes	Yes	Yes	6/1: SWC sent 5/19 report
312 Gannett Dr - Windward Circle Unit 8	Yes	Yes	Yes	7/29: email to Ed Rowe and Dan Riley; 8/10: sent follow up email; 8/11: STI 8/10/20 report received
332 Cummings Rd - Tru Choice Credit Union	No	Yes	Yes	5/28: DM Roma sent 4/24 & 5/22 reports
341 Pine St - Meetinghouse Lofts	Yes	Yes	Yes	7/27: John Mahoney said Ransom will have report ASAP; 8/10: sent followup email to Paula Beyer of Dirigo Property Management. 8/20: received 6/11/20 report.
363 Maine Mall Rd - VanEastland LLC	Yes	Yes	Yes	7/15: Sterling sent 4/30/20 report

**City ordinance stormwater inspection requirement (inspection NOT required by MS4 permit)*

INSPECTIONS	Discharge to MS4	3PI Report Received	Properly Functioning	Comments
Privately Owned				
385 Main St - Main Street Retail	Yes	Yes	Yes	7/15: Blaise sent 7/14/20 report
415 Maine Mall Rd - CarMax	Yes	Yes	Yes	7/17: Sterling sent 6/24/20 report
682 Broadway - Armory	Yes	Yes	Yes	7/15: Sterling sent 10/4/19 report
740 Broadway	No	Yes	Yes	6/26: Hydro International sent 6/5/20 report
818 Main St - Dunkin' Donuts	Yes	Yes	Yes	7/29: email to Greg Nolan; 8/10: sent followup email. 8/24: received 6/15 3PI report from Scott Braley
2065 Broadway - Pape Subaru	Yes	Yes	Yes	7/21: Chris Baldwin sent 6/19 report; minor maint needed - CB & Downstream Defender grit removal and reseeding
Publicly Owned				
25 Cottage Rd - City Hall / Transit Hub (7)	Yes	Yes	Yes	6/10: STI report indicates all systems functioning though replacement of permeable pavers needed in near future
25 Wythburn Rd - Wythburn Gravel Wetland	Yes	Yes	No	6/17: STI report indicates maint needed (veg & sediment removal); follow-up maint by City staff
30 Broadway - SMCC Parking Lot	Yes	Yes	Yes	7/15: Blaise sent 6/24/20 report
44 Nutter Rd - Community Center Det. Pond	Yes	Yes	No	6/30: STI report indicates maint needed (veg, debris & sediment removal and riprap replacement); follow-up maint by City staff
72 Simmons Rd Rain Garden	Yes	Yes	Yes	6/12: STI report indicates minor sediment removal needed
101 Ridgeland Ave - Ridgeland Gardens	Yes	Yes	Yes	6/29: Dalfonso sent 5/29 report
120 Wescott Rd - Memorial MS Gravel Wetland	Yes	Yes	No	7/15: STI incdicates maint needed (veg, debris & sediment removal and riprap replacement); follow-up maint by City staff
151 Jetport Blvd - DHHS Office Building	Yes	Yes	Yes	7/30: email to Deb Vargo (prop mngr): Nathan Marles says 3PI ASAP; 8/10: sent followup email; SW Comp will report ASAP. 8/21: inspection completed in Apr & May & report dated 5/19/20
240 Ocean St - Mahoney Middle School	Yes	Yes	Yes	6/12: STI report indicates no maint needed
300 Highland Ave - Hinckley Park Rain Garden	No	Yes	Yes	6/12: STI report indicates minor maint needed (install more plants & riprap, remove minor veg & sediment)
463 Westbrook St - Long Creek PS (3)	No	Yes	No	6/15: STI report recommends plantings for bioretention cell and minor sediment removal for porous asphalt and permeable pavers; follow-up maint by City staff
637 Highland Ave - South Portland High School (7)	Yes	Yes	No	6/16: STI report indicates maint needed for subsurface sand filter (clean inspection ports & document maint per manufacturer recommendations): UDSF also needs sed removal & erosion repairs; follow-up maint by City staff
929 Highland Ave - Municipal Services Facilities (2)	No	Yes	Yes	6/16: STI report indicates minor maint needed (remove sed & debris from wetpond forebay and repair erosion
Aspen Ave Biofilter	Yes	Yes	Yes	6/12: STI inspection indicates minor maint needed (remove sed & debris from forebay & outlet)
Boothy Ave StormTree	No	Yes	Yes	6/11: STI report indicates minor maint needed (sediment & veg
Main St Biofilters (10)	Yes	Yes	Yes	6/10: STI inspections indicate most systems OK though CP-BMP-
Sunset Ave Gravel Wetlands	No	Yes	No	6/10: STI inspections indicate maint needed (mowing; veg, debris & sed removal; erosion repair & riprap replacement); follow-up maint by City staff
SUMMARY				
Yes:	34	48	42	
No:	22	8	6	
Totals:	**56**	**56**	**48**	

City staff also continued to use the Stormwater Treatment System Maintenance Manual to guide annual maintenance activities for all 39 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

We 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. To provide stronger inducements to use LID, we embarked on a major partnership with the City of Portland to develop a joint climate action plan (Figure 17), which includes recommendations to expand the use of green infrastructure systems to capture and infiltrate the first inch of runoff.

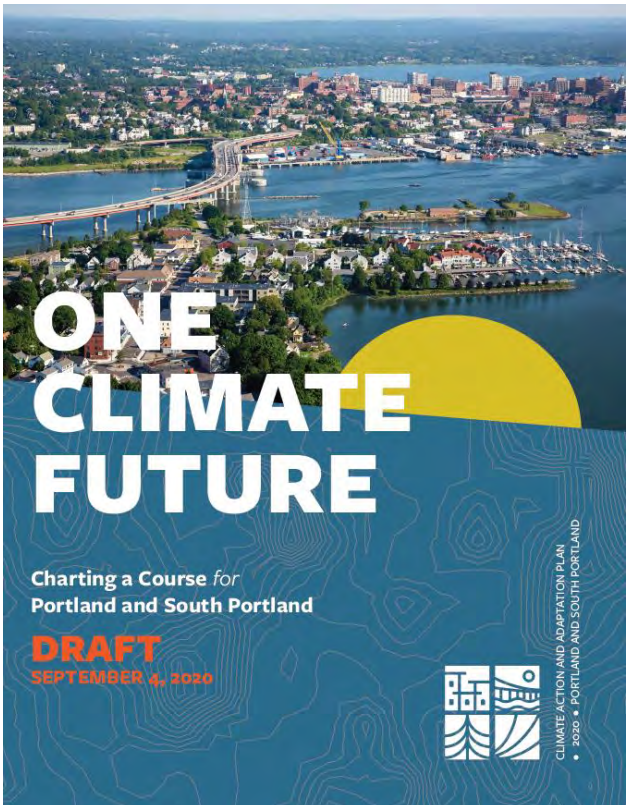


Figure 17: joint draft climate action plan for South Portland & Portland

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 2018) identify 204 parcels that are owned by the City (Figure 18). Various municipal departments are responsible for maintaining these properties in accordance with the Operations & Maintenance Plans developed by the Interlocal Stormwater Working Group.

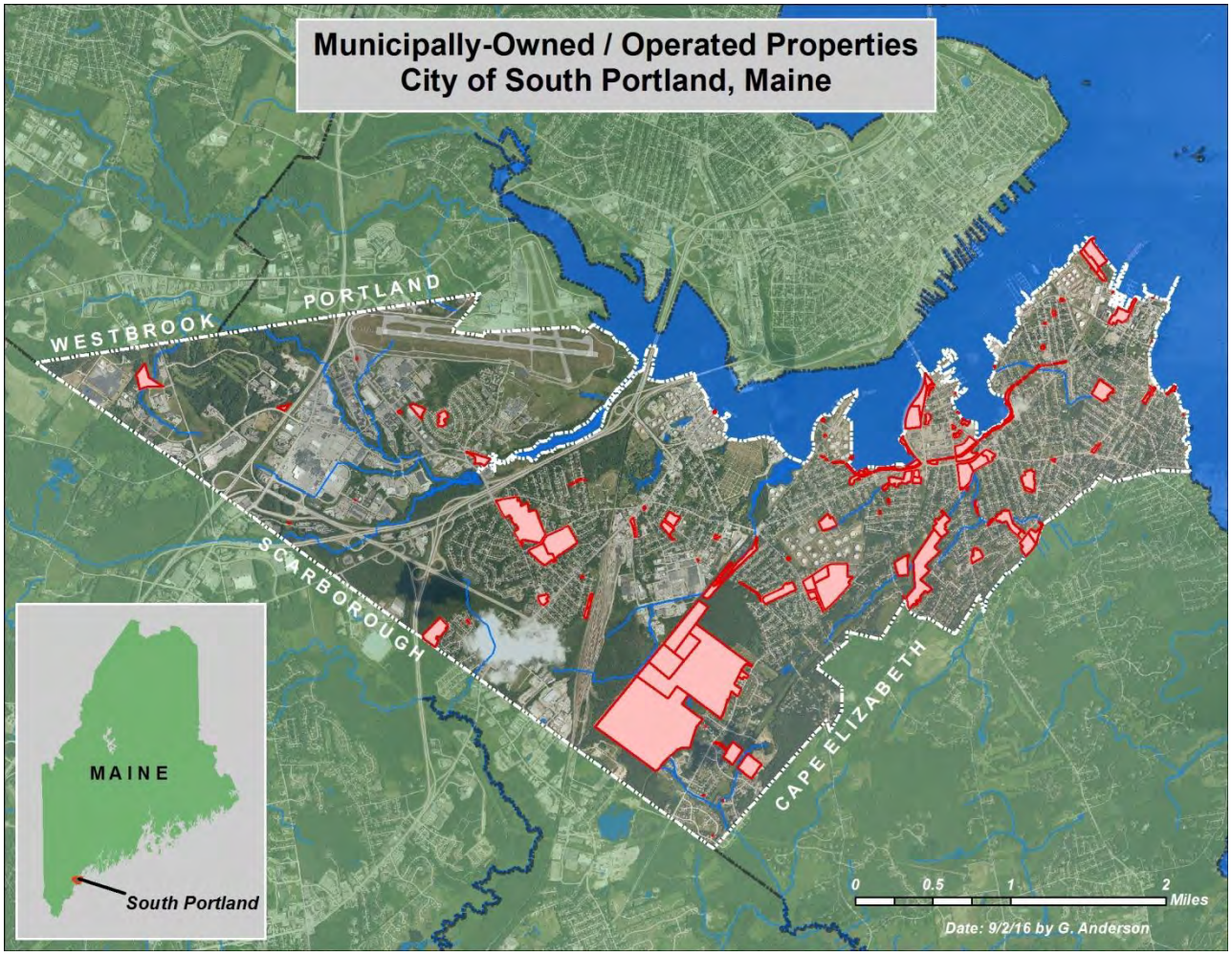


Figure 18: properties owned and operated by the City and subject to O&M plans to minimize / prevent polluted stormwater runoff

BMP 6.2 Continue Implementation of Municipal Employee Training Program

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

INTENT

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

METHODOLOGY

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

MEASURABLE GOALS

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

ACTIONS COMPLETED DURING PERMIT YEAR

The COVID19 pandemic presented some real challenges for Pollution Prevention / Good Housekeeping (PP/GH) training for PY2019-20. Depending on the municipal department, some staff were furloughed, working from home or working only part-time. Consequently, the level of participation in PP/GH training events was much lower than has been the case historically. The initial 5/5/20 training event was virtually hosted (and recorded) by ISWG via Zoom and provided by the City of Westbrook's Sustainability Coordinator Lynn Leavitt. To accommodate participants from numerous ISWG member communities, training content was somewhat general in nature and applied to all municipal operation & maintenance activities with the potential to generate stormwater pollution. City staff from the Water Resource Protection (WRP) Department's Collection Systems Division and School Department's Bus Maintenance Facilities attended the 5/5/20 virtual event while staff from WRP's Treatment Systems Division viewed the video recording of the

training event on 6/30/20 (Figure 19). As with previous years, staff completed questionnaires before and after the training event to measure how well they understood the relevant topics presented. Some evaluation forms were completed in paper format while others were completed electronically and retained by the Cumberland County Soil & Water Conservation District (CCSWCD) on behalf of ISWG members. We anticipate resumption of higher participation rates in PP/GH training by our staff once the COVID19 pandemic has subsided.

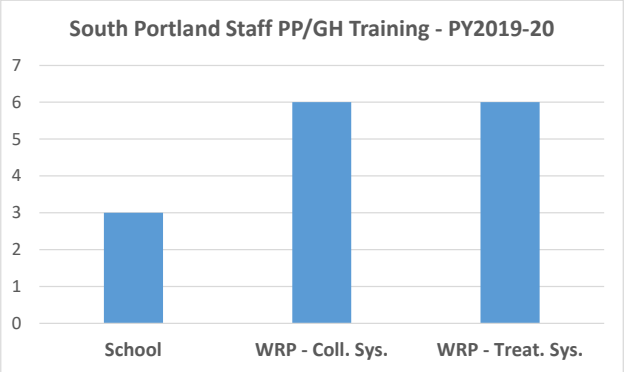


Figure 19: staff attendance for ISWG PP/GH training events

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 fall of 2019 and late winter/early spring of 2020, we also continued to provide sweeping services to the Long Creek Watershed Management District in support of the ongoing restoration efforts there. We purchased a new Tymco 500X regenerative air sweeper to complement our Tymco 600 series regenerative air sweeper. Regenerative air sweepers are generally one of the most effective (and expensive) types of street sweeper for preventing pollutants attached to fine particulate matter from entering local waterways. A portion of the City's streets were also swept using mechanical broom sweepers provided by a private contractor. While the Google Forms we have been using to track sweeping activities have been helpful, we are currently exploring other options for developing a cloud-based application to more closely account for location, labor allocation, fuel use and volume of grit swept across the entire City – potentially on a watershed basis.

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 PY2019-20, the City once again cleaned virtually all publicly-owned catch basins with sumps (2,677 basins for the permit year). We continued using ArcGIS Online (AGOL) with iPads to track data collection and removed approximately 401 tons of grit material, which we disposed of at LP Murray & Sons in Cape Elizabeth. The total operational cost to complete this work was just under $48,000 and the average catch basin cleaning cost was approximately $17.93 (Table 6) – which compares favorably with the private sector.

Table 5: summary of 2019 catch basin cleaning activities and costs

PY2019-20 CITY OF SOUTH PORTLAND CATCH BASIN CLEANING SUMMARY							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	162	48.70	79.31	22.18	0.14	$2,992	0.30	0.49	$134.89	$18.47
Barberry Creek	361	56.37	59.43	36.99	0.10	$4,003	0.16	0.16	$108.22	$11.09
Breakwater	117	13.09	36.62	7.84	0.07	$939	0.11	0.31	$119.81	$8.03
Calvary Pond	394	100.92	116.45	57.89	0.15	$6,739	0.26	0.30	$116.41	$17.10
Clarks Pond	109	27.95	39.02	14.44	0.13	$1,795	0.26	0.36	$124.32	$16.47
Danforth Cove	33	1.74	2.00	0.72	0.02	$101	0.05	0.06	$140.49	$3.07
Gamblers Arm Bk	223	78.02	55.32	19.60	0.09	$3,775	0.35	0.25	$192.60	$16.93
Kimball Brook	53	30.08	42.84	9.11	0.17	$1,587	0.57	0.81	$174.17	$29.94
Long Creek	249	74.66	172.96	33.59	0.13	$4,678	0.30	0.69	$139.25	$18.79
Long Creek Lower	94	43.41	42.00	10.74	0.11	$2,116	0.46	0.45	$197.04	$22.51
Mill Creek	199	69.77	93.46	29.40	0.15	$4,114	0.35	0.47	$139.92	$20.67
Nonesuch River	111	41.58	40.36	15.97	0.14	$2,334	0.37	0.36	$146.16	$21.03
Red Brook	26	11.55	8.30	4.16	0.16	$627	0.44	0.32	$150.73	$24.12
Trout Brook	130	38.73	75.40	89.25	0.69	$6,274	0.30	0.58	$70.29	$48.26
Turners Island	290	52.18	52.35	27.25	0.09	$3,322	0.18	0.18	$121.91	$11.46
Willard Beach	126	39.09	41.76	22.20	0.18	$2,591	0.31	0.33	$116.70	$20.56
Totals/Averages:	**2677**	**727.84**	**957.58**	**401.33**	**0.150**	**$47,986**	**0.27**	**0.36**	**$119.57**	**$17.93**
					(401/2677)		*(727/2677)*	*(958/2677)*	*(47986/401)*	*(47986/2677)*

* Assumes $33.26 hourly labor rate; $2.20/gal fuel cost; and $54 / 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

With the implementation of the Asset Management Program VUEWorks in January 2019, the Water Resource Protection Department has broadened data collection and tracking to incorporate more activities completed by our staff in maintaining the City's piped infrastructure (including City-owned stormwater treatment systems). Additionally, we are now also including equipment costs based on the latest FEMA rates. For PY2019-20, 212 work orders were completed by the Collection Systems Division staff. Collectively, this work represents over $257,000 of investment to operate and maintain the City's sewer and stormwater systems (Figure 20). Approximately 36% ($92,807) of this investment was dedicated to the stormwater system. Previous data collection and tracking efforts have been focused on only construction project activities and have only included materials and labor costs (not equipment). VUEWorks now also collects data on a variety of additional tasks, such as: catch basin cleaning, ditching, outfall inspections, spill response, televising to inspect pipe conditions, and traffic control, among others. Consequently, this more comprehensive approach is not fully comparable with our previous tracking methods. The ultimate goal of the Asset Management Program is to track most (or all) of our activities in conjunction with an ongoing condition assessment of our infrastructure to provide a rational basis for optimizing operations & maintenance and capital improvement planning (i.e., short and long-term budgeting).

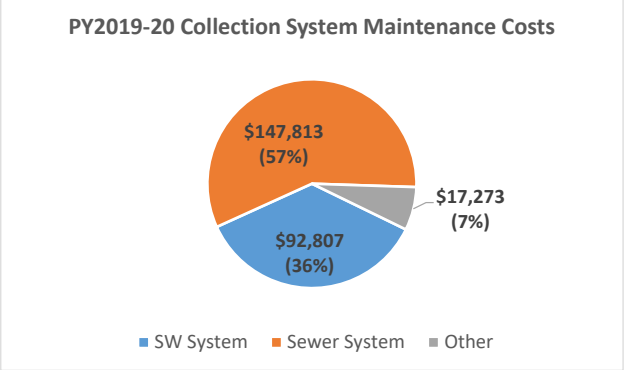


Figure 20: piped infrastructure investments for PY2019-20

Finally, the Collection Systems Division uses a contractor each year to adjust below-ground structures (e.g., catch basins and drain manholes) for various paving projects throughout the City. Expenditures to complete this work for calendar year 2020 (as of 9/4/20) were nearly $39,000 with approximately 57% (~$22K) allocated to the stormwater system and the remainder allocated to the sewer system.

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

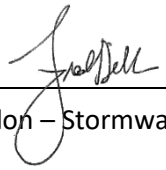
- ***Measurable Goal 6.6.1*** – continue implementing SWPPPs for public works facilities, transfer station and school bus maintenance facilities. Collaborate with DEP and ISWG on developing and implementing a training program for municipal facility staff informing them about the requirements of the SWPPP 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, transfer station and public works facilities. The public works facilities are now housed in a Municipal Services Facility (MSF) that also includes operations for the Parks, City Bus and Fire Departments. As described for BMP 6.2 above, staff from numerous City departments attended municipal GH/PP trainings provided by the City's Stormwater Program Coordinator.

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

9/15/20

Date

APPENDICES

Appendix 1: ISWG Permit Year 5 Summary of MCMs 1 & 2

Permit Year 7 (PY7) Summary of Minimum Control Measures 1 & 2

The following is a summary of work facilitated by the Cumberland County Soil & Water Conservation District (CCSWCD) on behalf of the Interlocal Stormwater Working Group (ISWG). The 2013 MEPDES MS4 Permit expired on June 30, 2018 but was administratively continued. Guidance from the Maine Department of Environmental Protection (Maine DEP) indicated that compliance may be maintained by implementing modified Permit Year 6 activities for "Permit Year 7". CCSWCD submitted an email to Maine DEP clarifying the anticipated modifications to MCMs 1 and 2 on 8/5/2019. In addition, because of the statewide COVID-19 Stay at Home Order and social distancing restrictions, the DEP issued guidance in March and April 2020, and CCSWCD submitted a clarifying email to Maine DEP on 4/9/2020 describing modifications to remaining MCM 1 and 2 BMP action items.

This report includes a summary of all four education & outreach plans required under MCM 1 of the 2013 MEPDES MS4 Permit including the Stormwater Public Awareness Plan, the Targeted BMP Adoption Plan, the Municipal Permit Awareness Plan, and the Enhanced Outreach Plan. This report also includes a summary of the regional public event (Urban Runoff) in fulfillment of MCM 2 of the 2013 MEPDES MS4 Permit. Additional voluntary (not required by the permit) outreach activities are also included.

MCM1: Public Education and Outreach on Stormwater Impacts

Stormwater Public Awareness Plan

Task	Status	Details[1]
Summarize plan implementation to date	Complete	Plan goal: As a result of our efforts, at the end of this permit cycle, 50% of homeowners, aged 35-55, in the 30 regulated small MS4 municipalities will understand that water does run off their property, not all is absorbed, and it will carry with it pollutants, such as lawn chemicals, pet waste, and oil drops. This polluted water will enter the storm drain system and discharge, untreated, directly to water bodies used for drinking, fishing, and swimming.
Conduct online ad campaign for a minimum of 6 months	Complete	CCSWCD coordinated an online media campaign for the ISWG region through the placement of ads on Facebook. The Think Blue video PSA "Don't Fowl Our Waters" was updated by Think Blue Massachusetts with New England visuals and adapted for Think Blue Maine in PY7. The PSA ran from December 30, 2019 through June 30, 2020 on Facebook. Ads were targeted to the identified awareness audience (homeowners, aged 35-55). The following data were obtained from Facebook's advertising metrics for the ducky video:

Reach[2]	10,856
Frequency[3]	4.21
Impressions[4]	45,755
Post Engagement[5]	6,939
Video Plays at 50%[6]	1,296
Link Clicks[7]	613
Link Click-Through Rate[8]	1.34%

Additional Facebook ads were used in the ISWG region to highlight individual stormwater pollutants (chlorides and pet waste). The chlorides ad ran February 11, 2020 through March 31, 2020 and encouraged people to manually remove snow and

[1] CCSWCD maintains documentation for all MCM 1 & 2 activities detailed in this summary report.
[2] Reach is the number of people who saw the ad at least once.
[3] Frequency is the average number of times each person saw the ad.
[4] Impressions are the number of times the ad was on screen.
[5] Post engagement is the total number of actions that people take involving the ad (reacting to, commenting, sharing, viewing a photo or video, or clicking on a link).
[6] Video play at 50% is the number of times the video was played at 50% of its length, including plays that skipped to this point.
[7] Link clicks are the number of clicks on a link within the ad that led to destinations on or off Facebook.
[8] Link click-through rate is the percentage of times people saw the ad and performed a link click.

<table>
<tr><td></td><td></td><td>ice with shovels, snow blowers, or plows instead of using sand and salt to remove snow and ice. The pet waste ad ran April 1, 2020 through June 30, 2020 and encouraged people to scoop the poop and dispose of it in the trash. The following data were obtained from the Facebook advertising metrics for these ads:
<table>
<tr><th></th><th>Chlorides</th><th>Pet Waste</th></tr>
<tr><td>Reach</td><td>19,500</td><td>26,056</td></tr>
<tr><td>Frequency</td><td>2.64</td><td>3.40</td></tr>
<tr><td>Impressions</td><td>51,536</td><td>88,675</td></tr>
<tr><td>Post engagement</td><td>58</td><td>67</td></tr>
<tr><td>Link Clicks</td><td>31</td><td>54</td></tr>
<tr><td>Link Click-Through Rate</td><td>0.06%</td><td>0.06%</td></tr>
</table>
Based on WordPress analytics, visits to the Think Blue Maine website during the online media campaign were more than 2.5 times higher than hits between July 1, 2019 and December 31, 2019 when the online ad campaign was inactive. Between July 1, 2019 and December 31, 2019, there were 523 visits. Between January 1, 2020 and June 30, 2020, there were 1,348 visits. These visit numbers reflect traffic being directed from AVSWG, ISWG, and SMSWG online ads.</td></tr>
<tr><td>Promote and participate in local public event</td><td>Complete</td><td>USM STEM Expo
Promotion
Promotion for this event was conducted by Portland Public Schools.
Participation
CCSWCD staff attended the event on November 1, 2019 to provide stormwater education activities and demonstrations. CCSWCD interacted with approximately 300 Portland students (elementary through high school).</td></tr>
<tr><td></td><td></td><td>USM Sustainability Fair
Promotion
Promotion for this event was conducted by the University of Southern Maine.
Participation
CCSWCD staff attended the event on November 15, 2019 to provide stormwater educational activities, demonstrations, and take-home information. CCSWCD interacted with 28 fair participants.</td></tr>
<tr><td></td><td></td><td>Urban Runoff 5k
Promotion
ISWG community members assist CCSWCD with the promotion of their public event, the Urban Runoff 5k, via social media, paid online ads, and direct email communication to participants. WMTW/CW Channel 8 developed a 15 second ad that ran on their station throughout the month of June 2020. The event was also featured in the Press Herald on June 11[9], the Portland Phoenix on May 6[10], and News Center Maine on June 20[11].
Participation
Staff from the ISWG municipalities participated in the event on June 20th & 21st. Please see the MCM2 summary for more details about the events.</td></tr>
</table>

[9] https://www.pressherald.com/2020/06/11/participate-in-the-urban-runoff-virtual-5k-june-20-and-21/
[10] https://portlandphoenix.me/no-better-time-to-run-swim-paddle-or-bike/?fbclid=IwAR28WPAWPC0Rwu8EVo4W58SwdVNaGlpfbypFsvBfnl75fgXrYia_MszYsSE
[11] https://www.newscentermaine.com/video/news/9th-annual-urban-runoff-5-k-looks-a-bit-different-this-time-around/97-478d1db9-60d7-46a2-a1de-5b8ec9c0f7ee

ISWG Permit Year 7 (2019-2020) Summary of Minimum Control Measures 1 & 2

Targeted Best Management Practices Adoption Plan

Task	Status	Details
Summarize plan implementation to date	Complete	Plan goal: As a result of our efforts, at the end of this permit cycle, 15% of college-educated homeowners, aged 35-55, residing in the urbanized area and/or the priority watershed within the ISWG communities and who currently apply fertilizers and pesticides to their lawns will reduce their use of lawn chemicals.
Point of Sale		
Provide YardScaping information in a minimum of 21 Point of Sale locations in the ISWG communities	Complete	The ISWG YardScaping Point of Sale Program continued to be maintained at more than the 21 locations required. Twenty-three stores participated in Fall PY7. Due to COVID-19, many stores only offered online or curbside pickup shopping this spring. Two stores posted YardScaping products online while the other stores indicated they still wished to participate in the program later when the products could be marked on the shelves. The distribution of the stores in PY7 is as follows:
		Biddeford: 1
		Cape Elizabeth: 0
		Cumberland: 1
		Falmouth: 3
		Freeport: 1
		Gorham: 2
		Old Orchard Beach: 0
		Portland: 3
		Saco: 1
		Scarborough: 1
		South Portland: 3
		Westbrook: 2
		Windham: 3
		Yarmouth: 2
Maintain Point of Sale program in Home Depot stores within ISWG communities	Complete	The ISWG YardScaping Point of Sale program continued to be maintained in the four Home Depot stores located in ISWG municipalities (Biddeford, Portland, South Portland, and Windham). Program components include distribution of educational materials to the general public and an educational event for customers and staff at each store. Due to COVID-19, the spring educational events held in the stores were canceled.
Adult Education		
Offer a minimum of seven YardScaping classes	Complete	The number of YardScaping educational events offered in the ISWG municipalities exceeded the minimum required in the Plan. In PY7, YardScaping events were provided as follows (spring workshops were held as online webinars due to COVID-19; spring Home Depot education events were not held due to COVID-19):
		Portland: 8/19/19, Wayside's Boyd Street Pop Up Picnic, 13 interactions
		Windham: 8/31/19, Home Depot community education event, 2 interactions
		Portland: 9/1/19, Home Depot community education event, 5 interactions
		Cape Elizabeth: 9/3/19, community workshop, 28 participants
		Portland: 9/5/19, community workshop, 6 participants
		Portland: 9/7/19, Green Fest, 63 interactions
		Biddeford: 9/14/19, Home Depot community education event, 6 interactions
		South Portland: 9/15/19, Home Depot community education event, 2 interactions
		Westbrook: 9/18/19, community workshop, 11 participants
		Yarmouth: 9/26/19, Yarmouth Water District community workshop, 12 participants

		Portland: 10/19/19, Green & Healthy Maine Home & Energy Show community workshop, 11 participants
		Portland: 3/26/20, Maine Flower Show panel presentation (canceled due to COVID-19)
		Cumberland: 3/26/20, online community webinar, 15 participants
		Gorham: 4/1/20, online community webinar, 5 participants
		South Portland: 4/7/20, online community webinar, 12 participants
		Scarborough: 4/15/20, online community webinar, 8 participants
		Old Orchard Beach: 5/7/20, online community webinar, 16 participants
Promote adult education classes	Complete	Information on YardScaping classes was promoted in local adult education catalogs, in local newspaper and online calendars, using social media, and through host locations.
Track behavior change	Complete	CCSWCD staff documented class evaluations and contacted past class participants to determine which YardScaping practices were implemented. Please see the summary of behavior change reported by participants of PY6 classes, as well as those practices participants of PY7 classes intend to implement below.

Adult Education Behavior Change Tracking

During the fall of 2019, emails and phone calls were made to participants of YardScaping workshop classes held in the fall of 2018 and spring of 2019 to determine class participants' level of implementation of the YardScaping practices. Follow up emails and phone calls are made six months to one year after the class to allow participants a growing season to implement the recommended practices. Our follow up provided an anticipated rate of behavior change for the YardScaping practices that class participants intended to implement. Of the 99 class participants, 81 participants completed a survey upon completion of the class. A third of the class participants responded to the fall 2019 follow up emails and phone calls.

Follow up from Permit Year 6 Adult Education Classes			
Lawn Care Practice	**Plan to implement**	**Implemented Practice**	**% behavior change**
Set Mower to a height of 3"	32	7	21.9%
Leave grass clippings	21	4	19.0%
Sharpen mower blades	32	5	15.6%
Aerate	49	5	10.2%
Topdress	58	8	13.8%
Overseed	51	7	13.7%
Use low maintenance seed	63	6	9.5%
Weed Control	65	5	7.7%
Get a soil test	51	5	9.8%
Use nitrogen-only fertilizer	49	3	6.1%
Use compost tea	44	3	6.8%

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

- *Practices were too expensive*
- *Lack of time to implement practices*
- *Implementing practices in phases to better understand the lawn*

A total of 113 people participated in the YardScaping adult education classes in PY7. Below are the results of the Permit Year 7 post-class evaluations completed by the YardScaping class participants.

Permit Year 7 Post-Class Evaluations			
Lawn Care Practice	**Plan to implement**	**Currently do not implement**	**% planning to implement**
Set Mower to a height of 3"	14	16	87.5%
Leave grass clippings	10	15	66.7%
Sharpen mower blades	22	24	91.7%
Aerate	34	46	73.9%
Topdress	36	48	75.0%
Overseed	32	37	86.5%
Use low maintenance seed	31	36	86.1%
Outcompete weeds	36	51	70.6%
Get a soil test	40	47	85.1%
Use nitrogen-only fertilizer	30	46	65.2%
Use compost tea	41	54	75.9%

CCSWCD staff will contact the class participants from the Permit Year 7 classes in Permit Year 8 to determine which behaviors have been adopted.

Targeted Information Distribution

Provide outreach to residents of one targeted neighborhood per ISWG community — Complete

ISWG used online Facebook ads directed at the target audience for behavior change (college educated homeowners, aged 35-55) in each of the ISWG impaired watersheds. The ads discussed lawncare product impacts in watersheds, provided a YardScaping tip, and directed people to CCSWCD's YardScaping program.
The following data were selected from Facebook's advertising metrics:

Watershed	Reach	Frequency	Impressions	Post Engagement	Link Clicks	Link Click-Through Rate
What's a Watershed?[12]	9,502	2.76	26,196	269	3	0.01%
Brickyard Hollow (Yarmouth)	993	1.81	1,802	116	1	0.06%
Capisic Brook (Portland)	3,112	1.39	3,112	94	11	0.35%
Concord Gully Brook (Freeport)	1,771	1.31	2,327	74	6	0.26%
East Brach Piscataqua River (Cumberland)	2,431	1.28	3,123	128	7	0.22%
Goosefare Brook (Old Orchard Beach & Saco)	3,403	1.49	5,067	146	13	0.26%
Mill Brook (Westbrook)	1,991	1.78	3,540	142	11	0.31%
Mill Creek (Falmouth)	2,190	1.29	2,827	106	5	0.18%

[12] This ad was targeted to all of the ISWG communities through the Think Blue Maine Facebook page during its run time (March 11, 2020 through May 14, 2020).

		Pleasant River (Windham)	2,992	1.33	3,990	119	3	0.08%
		Red Brook (Scarborough)	3,047	1.55	4,724	102	2	0.04%
		Tannery Brook (Gorham & USM)	2,361	1.31	3,091	115	0	0%
		Thatcher Brook (Biddeford)	2,390	2.14	5,125	216	17	0.33%
		Trout Brook (Cape Elizabeth & South Portland)	2,774	1.60	4,441	160	151	3.40%

Websites & Free Media

Maintain and monitor CCSWCD YardScaping website	Complete	The YardScaping page on CCSWCD's website is up to date with partner stores and updated fact sheets. YardScaping event information is posted on both CCSWCD's website and Facebook page.
Newspaper coverage related to YardScaping activities and healthy lawn care	Complete	*Portland Press Herald:* Portland grants Cushing Island group first waiver from new pesticide ban (August 7, 2019)
		Portland Press Herald: At Common Ground fair, dire warnings about pesticide dangers (September 21, 2019)
		Portland Press Herald: Letter to the editor: Towns should pass their own pesticide bans (September 30, 2019)
		Portland Press Herald: How to halt global warming for $300 billion (October 26, 2019)
		Portland Press Herald: Commentary: Maine arborists look to shield living things from anti-moth treatment (November 8, 2019)
		Portland Press Herald: Falmouth considering registration, reports for pesticide use (November 12, 2019)
		Portland Press Herald: Pesticide survey available in S. Portland (December 4, 2019)
		Portland Press Herald: Public hearing set for Falmouth's new pesticide ordinance (December 13, 2019)
		The Forecaster: South Portland's goal of limiting fertilizer use still 'a work in progress' (January 16, 2020)
		The Forecaster: Falmouth looks to educate residents on lawn care (April 23, 2020)
		Portland Press Herald: Maine Gardener: Do the environment a big favor, shrink your lawn (May 31, 2020)
		Scarborough Leader: Transitioning to organic lawn care this summer (June 12, 2020)

Municipal Permit Awareness Plan

Municipalities may have conducted additional outreach outside of the efforts tracked through the ISWG Municipal Permit Awareness Plan.

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

Materials Development

Develop permit awareness materials	Complete	Fact sheets developed in PY2 were updated for ISWG municipalities as needed in PY7. These fact sheets were provided to incoming municipal staff and elected officials in ISWG municipalities.

Targeted Outreach

Provide updated information on MS4 permit compliance to all ISWG nested and municipal administrators or equivalents	Complete	CCSWCD provided updated information on MS4 compliance to ISWG nested and municipal administrators or equivalent in PY7. These meetings focused on identifying ISWG member strengths and areas for improvement in MCMs 1-6. These conversations led to an increase in inter-community collaboration and sharing of ideas.
		Biddeford: 1/28/20
		Cape Elizabeth: 2/20/20
		Cumberland: 6/3/20
		Falmouth: 1/7/20
		Freeport: no information provided
		Gorham: 2/25/20
		Old Orchard Beach: 1/28/20
		Portland: 6/24/20
		Saco: 1/28/20
		Scarborough: 3/12/20
		South Portland: 12/13/19
		Southern Maine Community College: 12/12/19
		University of Southern Maine: 2/20/20
		Westbrook: no information provided
		Windham: 1/31/20
		Yarmouth: 12/9/19
		Based on these meeting conversations, common MS4 tasks that require large amounts of effort to complete include: outfall inspections; catch basin cleanings; site inspections; chasing compliance issues; 3PI; and other reports. Many communities noted staff are working at or over capacity, which creates additional challenges at times of staff turnover. Nearly every community expressed concern about additional staff and materials expenditures that will be required in the new MS4 permit. Communities were proud of their efforts to increase chloride management, increase watershed management work, increase site inspections, have good teamwork and communication, and conduct extra education & outreach efforts. In future permit years, ISWG members look to increase cross trainings (especially dry weather trainings, mock audits, and other hands-on opportunities), construction inspection trainings for municipal staff, and streamlined and consistent templates to aid in their MS4 program implementation.

General Outreach

ISWG representative outreach to municipal officials in municipally sanctioned groups	Complete	ISWG representatives provided municipal officials with information and updates regarding the municipal stormwater program at a minimum of one municipally sanctioned Board, Council, Committee, or Commission meeting. Due to COVID-19, some ISWG representatives provided their presentation materials to their municipal officials for review outside of a virtual meeting.
		Biddeford: 2/19/20
		Cape Elizabeth: 4/9/20
		Cumberland: 6/16/20

		Falmouth: 2/12/20, 2/24/20
		Freeport: no information provided
		Gorham: 10/7/19
		Old Orchard Beach: 5/7/20
		Portland: 6/24/20
		Saco: 6/15/20
		Scarborough: 4/27/20
		South Portland: 4/6/20
		Westbrook: 6/1/20
		Windham: 3/15/20
		Yarmouth: 1/23/20

Municipalities may have conducted additional outreach outside of the efforts tracked through the ISWG Municipal Permit Awareness Plan.

Provide outreach through a minimum of one partner organization — Complete

Casco Bay Coastal Academy

ISWG/CCSWCD partnered with the Casco Bay Estuary Partnership, Greater Portland Council of Governments, and New England Environmental Finance Center to provide stormwater related trainings to municipal boards, commissions, and councils.

Number of Members Participating			
Municipality	**Development Review 10/29/19 (2 hours)**	**Nutrients 1/27/20 (2 hours)**	**Stream Crossings 4/28/20 (1.5 hours)**
Biddeford	0	0	1
Cape Elizabeth	2	0	0
Cumberland	2	1	0
Falmouth	4	5	4
Freeport	4	0	0
Gorham	1	0	1
Old Orchard Beach	0	0	2
Portland	1	2	1
Saco	2	0	4
Scarborough	1	0	1
South Portland	3	1[13]	0
SMCC	0	0	0
USM	1	0	0
Westbrook	1	0	0
Windham	2	0	2
Yarmouth	0	0	0

MS4 Dry Weather Outfall Training

Integrated Environmental Engineering and GZA provided review of dry weather field kit use for field personnel and sample language for IDDE Plans (included management of surfactant waste as hazardous waste, Safety Data Sheet

Municipality	**10/17/19**	**11/14/19**
Biddeford	2	0
Cape Elizabeth	0	2
Cumberland	0	0
Falmouth	1	0
Freeport	0	1
Gorham	1	0
Old Orchard Beach	2	3
Portland	2	0

[13] Fred Dillon, City of South Portland Stormwater Program Coordinator, was one of the presenters for this workshop.

		review, sample data sheets, chain of custody review). Each training lasted 2.5 hours.	Saco	1	0
			Scarborough	1	1
			South Portland	4	0
			SMCC	1	0
			USM	0	1
			Westbrook	1	0
			Windham	4	0
			Yarmouth	3	0
		Maine Stormwater Conference 2019 – December 2 and 3 The 2019 Maine Stormwater Conference focused on identifying and creating resiliency in preparation for changing conditions while maintaining their clean water goals.	**Municipality**	**Number of Attendees**	**Presented**
			Biddeford	2	0
			Cape Elizabeth	3	1
			Cumberland	4	0
			Falmouth	1	0
			Freeport	1	0
			Gorham	6	0
			Old Orchard Beach	2	0
			Portland	21	3
			Saco	1	1
			Scarborough	5	0
			South Portland	5	1
			SMCC	1	0
			USM	4	0
			Westbrook	6	0
			Windham	7	1
			Yarmouth	6	0
		Effective Education, Outreach, and Public Participation for MS4 Permits by Ryan Lizanecz	CCSWCD and the New England Environmental Finance Center hosted a summer Bates College student intern to perform MCM 1 & MCM 2 research on behalf of ISWG and the other Maine MS4 clusters. The intern identified a variety of MS4 communities from around the United States and noted their MCM 1 and MCM 2 requirements, sources of funding, target pollutants, target audiences, outreach and evaluation methods, and any interlocal collaborations.		
Provide regional Good Housekeeping Pollution Prevention Training	Complete	CCSWCD facilitated an online cross training opportunity with Lynn Leavitt, City of Westbrook on May 5, 2020 for 1 hour. This cross training featured an updated GHPP presentation and was recorded for staff unable to attend the live online training. *Note: Some municipalities did not attend this training because they*	**Municipality**	**Staff Participation**	
			Biddeford	2	
			Cape Elizabeth	0	
			Cumberland	0	
			Falmouth	3	
			Freeport	0	
			Gorham	7	
			Old Orchard Beach	2	
			Portland	0	
			Saco	1	
			Scarborough	1	
			South Portland	22	

		chose to provide their own in-house training.	SMCC	4
			USM	4
			Westbrook	1
			Windham	1
			Yarmouth	0
		Evaluation of Good Housekeeping Pollution Prevention Training: An online quiz assessing attendees' understanding of stormwater issues was given before and after the training. The quiz contains the same 10 questions for before and after the training. Fewer wrong answers given after the training indicates the level of effectiveness of the messages. Two thirds of the questions had an increase in correct answers between the pre-training quiz and the post-training quiz. Based on the question responses and comments after the training, additional training on spill prevention, reporting, and cleanup would be beneficial.		
Additional municipal staff training *This activity was done as a replacement for the canceled 2020 APWA Maine Highway Congress	Complete	CCSWCD facilitated an online cross training opportunity with Mike Shaw, Town of Scarborough. This cross training featured a Public Works Department perspective on chloride use and winter maintenance BMPs and was recorded for staff unable to attend the live online training.	**Municipality**	**6/4/2020 Staff Participation (1.5 hours)**
			Biddeford	3
			Cape Elizabeth	1
			Cumberland	0
			Falmouth	3
			Freeport	1
			Gorham	1
			Old Orchard Beach	1
			Portland	2
			Saco	1
			Scarborough	1
			South Portland	0
			SMCC	3
			USM	1
			Westbrook	1
			Windham	1
			Yarmouth	2

Evaluation

Conduct annual survey of ISWG municipalities to gauge awareness	Complete	The survey was administered to ISWG representatives in PY7. A summary of survey responses is provided at the end of this report.

Enhanced Outreach Plan

Task	Status	Details
Summarize plan implementation to date	Complete	Plan goal: Raise awareness of new coal tar legislation to consumers. On behalf of ISWG and SMSWG, CCSWCD and the SMSWG consultant provided DEP with proposed activities for PY7 on 8/5/2019. After several emails back and forth, the proposed plan was accepted by DEP on 9/27/2019, and a clarification was made by CCSWCD on 10/2/2019 with DEP confirmation of the clarification on 10/4/19. The following summarizes the actions accepted by the DEP for this BMP.
Educate consumers through Think Blue Maine and CCSWCD/SMSWG Facebook pages through	Complete	ISWG used three 30-day Facebook ads directed at three audiences: residents in the ISWG region, commercial property managers and contractors in the ISWG region, and the public in the ISWG region. The ads discussed pavement sealing tips and directed people to the Think Blue Maine pavement webpage for more information. The following data were selected from Facebook's advertising metrics:

three 30-day promoted posts		**Topic**	**Reach**	**Frequency**	**Impressions**	**Post Engagement**	**Link Clicks**	**Link Click-Through Rate**
		Resident	16,576	2.06	34,133	58	55	0.16%
		Commercial	5,872	2.50	14,698	12	12	0.08%
		Spot the Difference	15,576	1.83	28,466	40	32	0.11%
Provide information to raise awareness regarding the new law, the impacts of coal tar, and alternative methods and products on the Think Blue Maine website	Complete	Factsheets on coal-tar sealant use impacts and pavement maintenance methods are posted on the Think Blue Maine website, additional information and edits will be made as needed when the law goes into effect.						

Additional Outreach Activities not identified in the Permit or Outreach Plans

Maine Water Environment Association (MEWEA)

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

ISWG Youth Education

Although not a permit requirement, ISWG provides funding to deliver clean water education to K-12 students in each municipality. CCSWCD staff provide the education on behalf of ISWG member communities. In addition, the City of Portland also supports additional stormwater education efforts in four Portland schools through their *Greener Neighborhoods Cleaner Streams* program. Portland Water District (PWD) provides clean water lessons in many ISWG communities which enhance ISWG's efforts. Yarmouth Water District provides additional funds for water lessons in their service area. A summary of students reached, contact hours, and topics covered is provided below.

Educator contact information

CCSWCD: Ali Clift, Education & Outreach Coordinator, aclift@cumberlandswcd.org, 207-892-4700
CCSWCD: Jenna Martyn-Fisher, Educator & Technical Specialist, jfisher@cumberlandswcd.org, 207-892-4700
PWD: Sarah Plummer, Environmental Education Coordinator, splummer@pwd.org, 207-774-5961 x 3324
PWD: Carina Brown, Environmental Educator, cbrown@pwd.org, 207-774-5961 x 3320

Overall:

	Total Students	Total Contact Hours
CCSWCD	819	1,724.5
PWD	1202	4884
Total	**2,021**	**6,608.5**

Municipality	Instructor	Total Students	Total Contact Hours	School(s)	Lesson Topics	Notes
Biddeford	CCSWCD	18	90	Biddeford High School	Water quality parameters and testing; bioassessment using macro-invertebrate sampling; river characteristic observations	
Cape Elizabeth	CCSWCD	121	500	Cape Elizabeth Middle School	WaterWays Program: water movement, water quality, human impact, stewardship[14]; TroutKids Program: water quality, brook trout life cycle and habitat; water cycle	
Cumberland	CCSWCD	81	121.5	Mabel I. Wilson Elementary School*, Greely High School, Greely Middle School	Water movement and watersheds; nonpoint source pollution; water quality and nonpoint source pollution and prevention; groundwater model; groundwater resources and pollution prevention[15]; TroutKids Program: water quality, brook trout life cycle and habitat	*Mabel I. Wilson Elementary School lessons were canceled due to COVID-19.
	PWD	160	No trout release, so no contact hours			

[14] CCSWCD implemented PWD WaterWays Systems Theme on PWD's behalf. Additional funding for WaterWays lessons provided by PWD.
[15] Additional funding for groundwater lessons provided by the Yarmouth Water District

Municipality	Instructor	Total Students	Total Contact Hours	School(s)	Lesson Topics	Notes
Falmouth	CCSWCD	0	0	Falmouth Middle School		Lessons were canceled due to COVID-19.
Freeport	CCSWCD	0	0	Freeport Middle School		Lessons were canceled due to COVID-19.
Gorham	CCSWCD	72	72	Gorham Middle School, Gorham High School	Soil nutrient cycles; nonpoint source pollution; water quality; local foods, agriculture, nutrition, environmental & economic impacts of food production; WaterWays Program: water movement, water quality, human impact, stewardship; TroutKids Program: water quality, brook trout life cycle and habitat; advanced chemistry/water treatment tour at the Sebago Lake Water Treatment Facility; field trips: water chemistry, bioassessment, hydropower, history; historical and current resource use of Sebago/Presumpscot region; water quality testing & data analysis	A student intern from Portland High School spent 3.5 hours on 1/31/2020 shadowing Matt LaCroix, Stormwater Compliance Officer/GIS Technician, to learn about the position requirements and common tasks and then conducted 12 outfall inspections. *Additional CCSWCD lessons at Gorham Middle School were canceled due to COVID-19.
	PWD	338	1,723			
Old Orchard Beach	CCSWCD	52	156	Loranger Middle School	Amount of water in the world, conservation, and the water cycle; watersheds, watershed models; transport of nonpoint source pollutants; nonpoint source pollution, stormwater, storm drains and cumulative impact; impervious/pervious surfaces, runoff and best management practices	
Portland	CCSWCD	98	275	Lincoln Middle School, Rowe Elementary School, Riverton Elementary School, Lyman Moore Middle School	Nonpoint source pollution, stormwater, storm drains, water quality monitoring, bioassessment; environmental stewardship[16]; WaterWays Program: water movement, water quality, human impact, stewardship; TroutKids Program: water quality, brook trout life cycle and habitat	*CCSWCD lessons at Longfellow Elementary School, King Middle School, and additional lessons at Rowe Elementary School and Riverton Elementary School were canceled due to COVID-19.
	PWD	345	1,225			

[16] Additional funding for Portland Schools provided by the City of Portland

Municipality	Instructor	Total Students	Total Contact Hours	School(s)	Lesson Topics	Notes
Saco	CCSWCD	160	160	Saco Middle School	Amount of water in the world, conservation, and the water cycle; water quality; nonpoint source pollution; stormwater, storm drains, and cumulative impacts	*Additional CCSWCD lessons at Saco Middle School were canceled due to COVID-19.
Scarborough	PWD	11	22	Scarborough High School	Tour of the East End Wastewater Treatment Facility	*CCSWCD Scarborough Middle School lessons were canceled due to COVID-19.
South Portland	PWD	115	124	Mahoney Middle School, Memorial Middle School	TroutKids Program: water quality, brook trout life cycle and habitat; water cycle; watersheds/water movement & collection	*CCSWCD Dora E. Small Elementary School lessons were canceled due to COVID-19.
Westbrook	CCSWCD	0	0	Westbrook High School		*Westbrook High School lessons were canceled due to COVID-19.
Windham	CCSWCD	84	84	Windham Middle School	Water quality; macroinvertebrate identification & bioassessment; water quality and nonpoint source pollution and prevention; WaterWays Program: water movement, water quality, human impact, stewardship; TroutKids Program: water quality, brook trout life cycle and habitat; water quality sampling; water cycle; water quality; expert panel: local water quality issues	*Additional CCSWCD lessons at Windham Middle School were canceled due to COVID-19.
	PWD	233	1,790			
Yarmouth	CCSWCD	133	266	Frank H. Harrison Middle School	Amount of water in the world, conservation, and the water cycle; groundwater model; groundwater resources and pollution prevention[17]	

[17] Additional funding for groundwater lessons provided by the Yarmouth Water District

MCM2: Public Involvement and Participation

Urban Runoff & Green Neighbor Family Fest

2020 marked the ninth year ISWG supported, promoted, and participated in the Urban Runoff 5k, a community event that promotes clean water and raises awareness of water pollution. In addition to raising awareness, funds raised from the Urban Runoff help support in-school youth education programs in Cumberland and parts of York Counties. Due to COVID-19, the Urban Runoff 5k had to be held virtually June 20 through June 21, 2020. The race served as the Public Involvement and Participation event for all ISWG communities. Participation by each ISWG municipality is summarized in the table below.

Despite the pandemic, over 300 runners and walkers registered for the race. Many local businesses supported the race through sponsorships, in-kind donations, and employee participation as race participants. Local media outlets advertised the events, including the donation of tv advertisement by Channel 8 WMTW/CW who developed and ran a 15-second ad promoting the event. Social media, paid online advertising, and email were also used to promote the race and included a clean water message. Additional clean water messages were included on the event website, social media, eblasts, and other marketing tools that were sent to all registered participants, sponsors, and partners. Participants submitted photos of their completed Stormwater Hero Bingo cards, sights (including stormwater BMPs) they saw along their route, and their route course designs through Facebook, Instagram, and email.

The *Green Neighbor Family Fest* was canceled this year due to COVID-19.

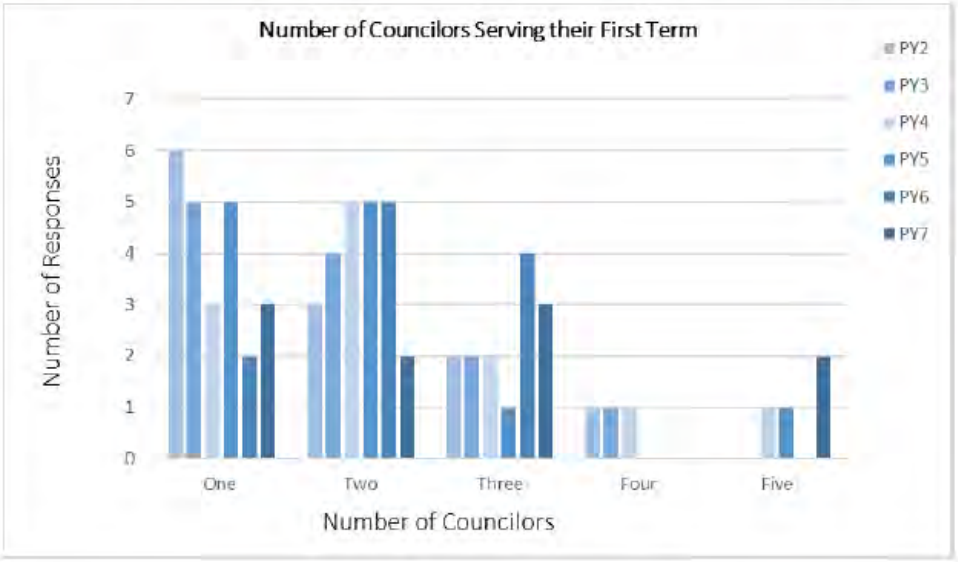
Plans are underway to host the tenth annual *Urban Runoff 5K* in 2021.

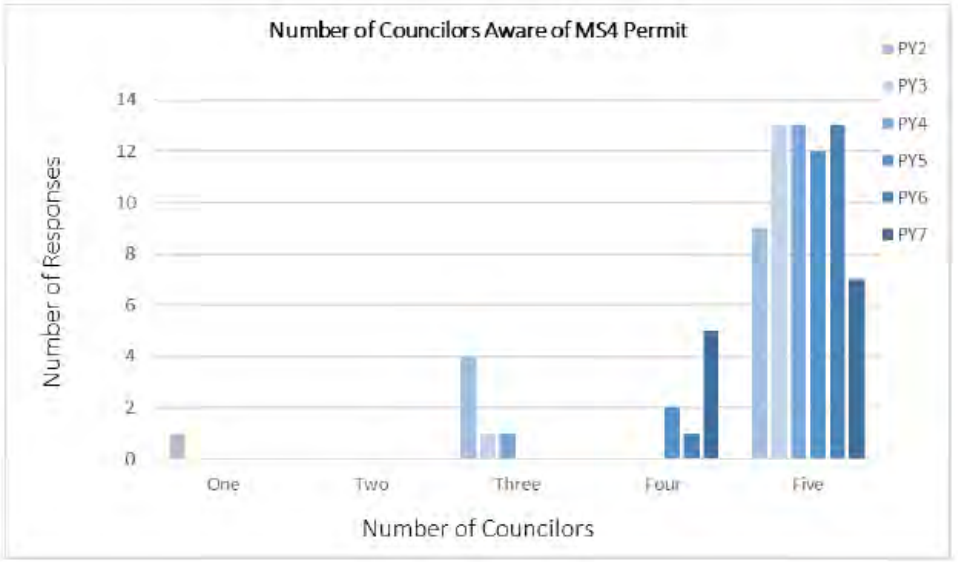
Summary of ISWG Involvement in the 2020 Urban Runoff

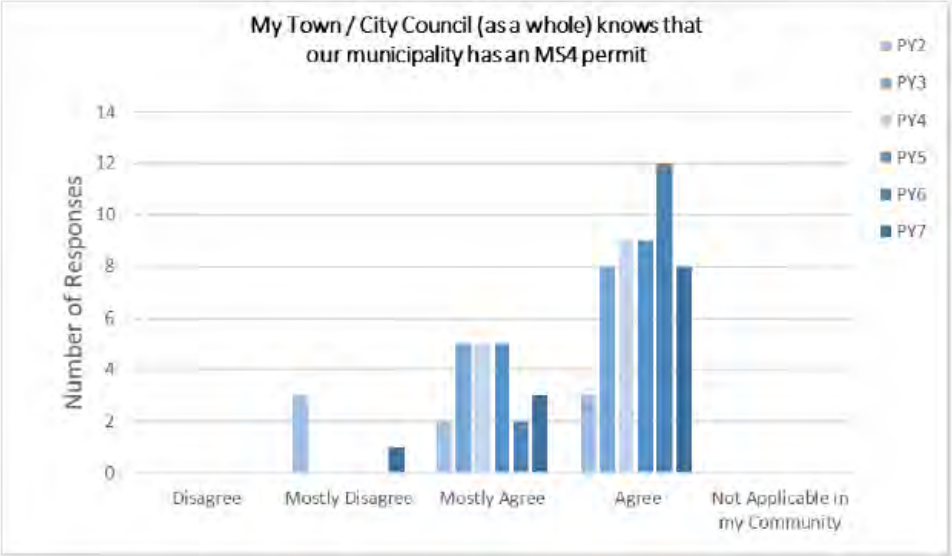
	Race Participants	Municipal Team Members	Additional Contribution
Biddeford	3	1	
Cape Elizabeth	8	1	
Cumberland	6	1	
Falmouth	9	1	
Freeport	3	1	
Gorham	17	1	
Old Orchard Beach	2	1	
Portland	61	2	Permit fees waived; provided additional funding for the organization of GNFF
Saco	14	6	
Scarborough	10	1	
South Portland	27	1	$500 Splash Sponsorship
SMCC		6	
USM		1	
Westbrook	23	1	
Windham	11	3	
Yarmouth	8	1	

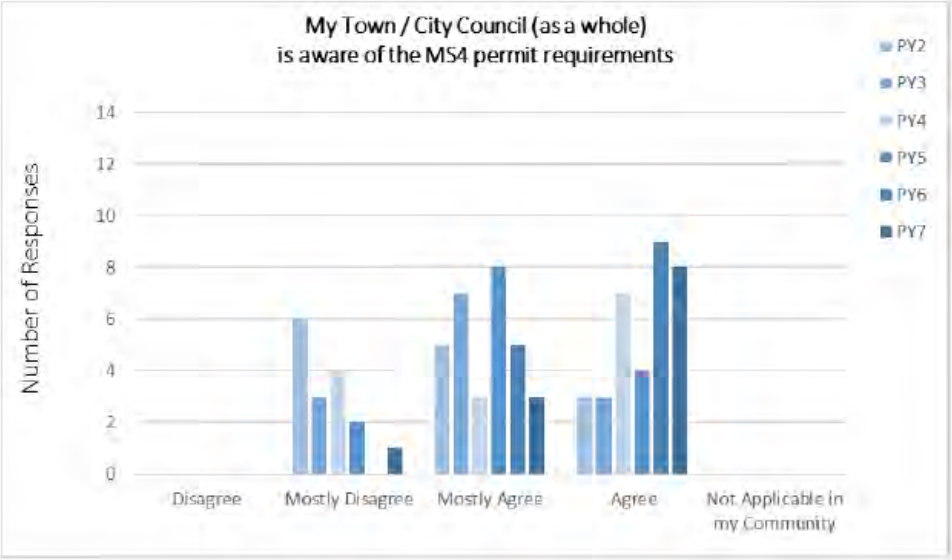
PY7 Summary Municipal Survey Responses

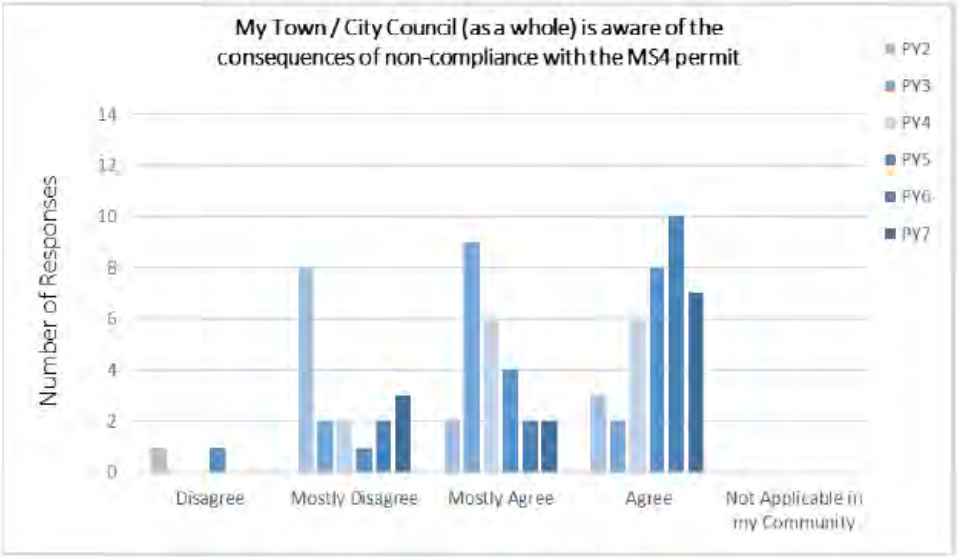
The following graphs summarize the responses to the annual municipal survey that was conducted in the fourth quarter of PY7. This survey is used to gauge municipal councilors' awareness of their municipal stormwater program.

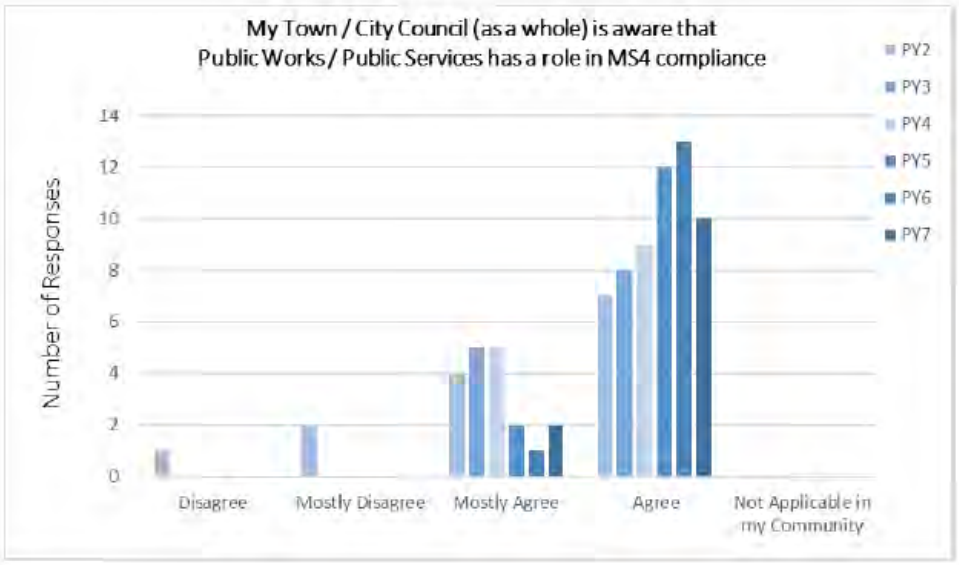


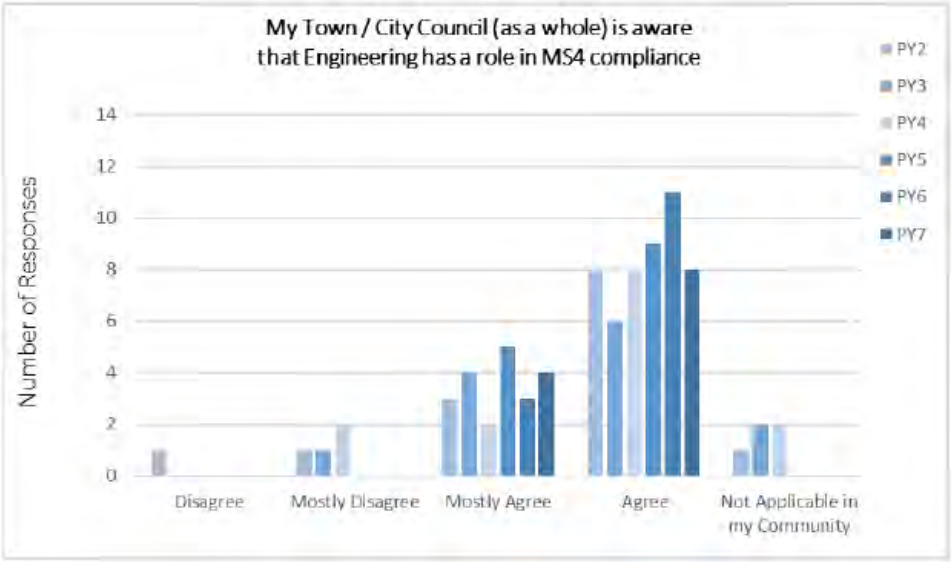


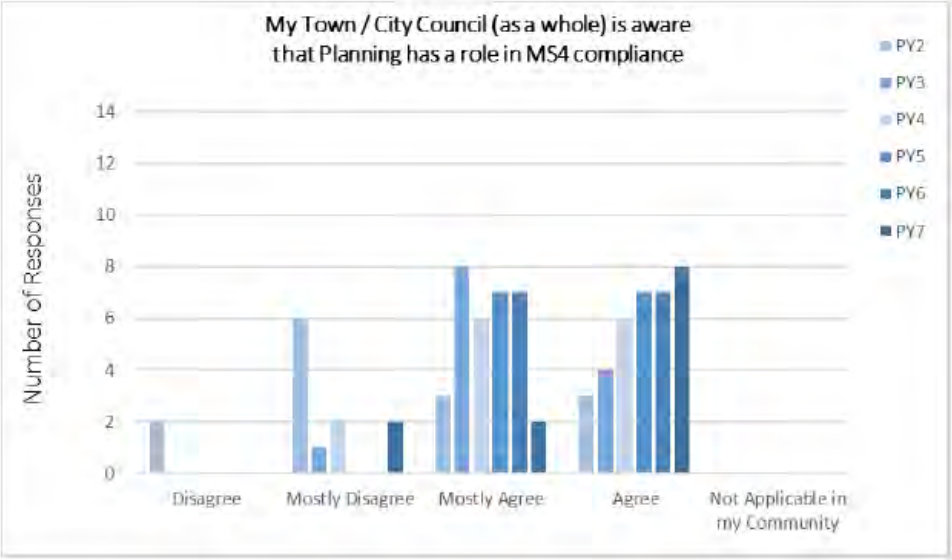

My Town / City Council (as a whole) knows that our municipality has an MS4 permit
Number of Responses
0
2
4
6
8
10
12
14
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
PY5
PY6
PY7

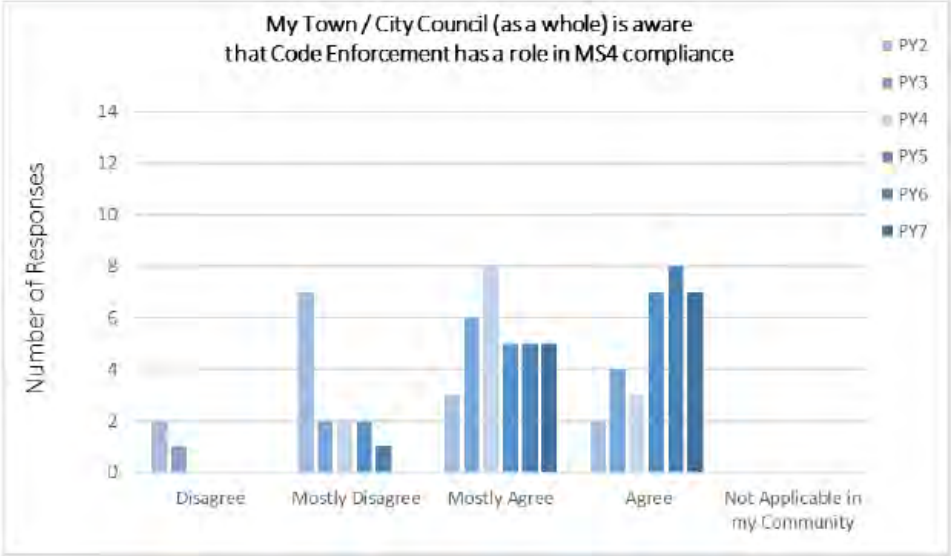

My Town / City Council (as a whole) is aware of the MS4 permit requirements
Number of Responses
0
2
4
6
8
10
12
14
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
PY5
PY6
PY7

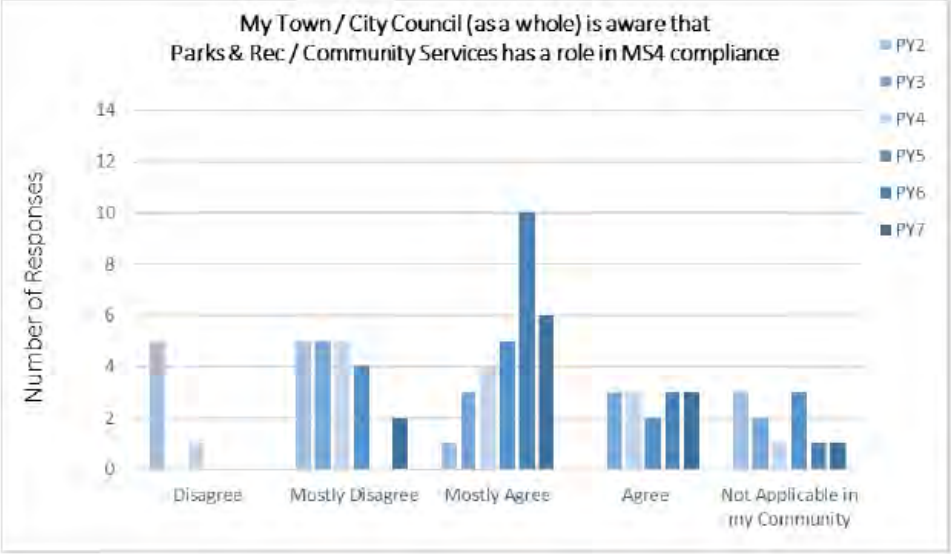

My Town / City Council (as a whole) is aware of the consequences of non-compliance with the MS4 permit
Number of Responses
0
2
4
6
8
10
12
14
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
PY5
PY6
PY7

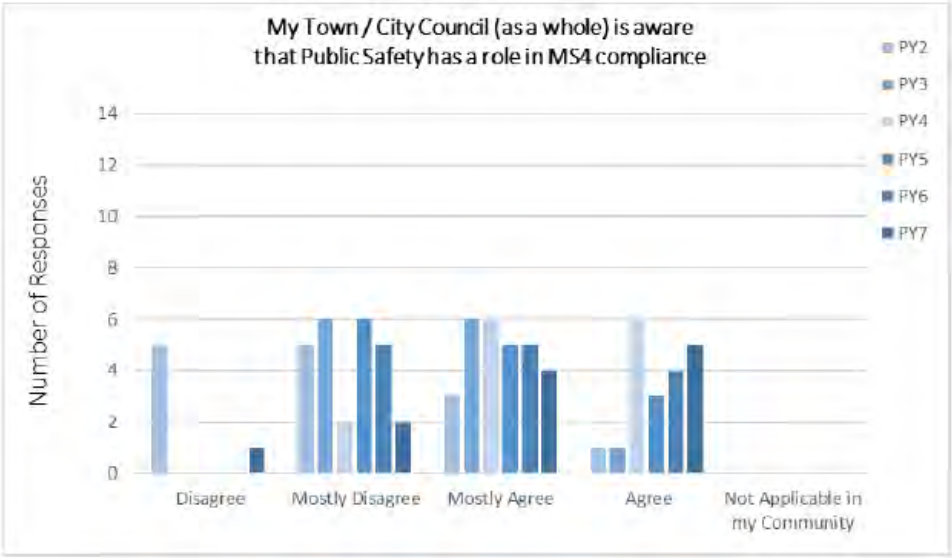

My Town / City Council (as a whole) is aware that Public Works / Public Services has a role in MS4 compliance
Number of Responses
0
2
4
6
8
10
12
14
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
PY5
PY6
PY7


My Town / City Council (as a whole) is aware that Engineering has a role in MS4 compliance
Number of Responses
0
2
4
6
8
10
12
14
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
PY5
PY6
PY7


My Town / City Council (as a whole) is aware that Planning has a role in MS4 compliance
Number of Responses
0
2
4
6
8
10
12
14
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
PY5
PY6
PY7


My Town / City Council (as a whole) is aware that Code Enforcement has a role in MS4 compliance
Number of Responses
14
12
10
8
6
4
2
0
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
PY5
PY6
PY7


My Town / City Council (as a whole) is aware that Parks & Rec / Community Services has a role in MS4 compliance
Number of Responses
14
12
10
8
6
4
2
0
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
PY5
PY6
PY7


My Town / City Council (as a whole) is aware that Public Safety has a role in MS4 compliance
Number of Responses
14
12
10
8
6
4
2
0
Disagree
Mostly Disagree
Mostly Agree
Agree
Not Applicable in my Community
PY2
PY3
PY4
PY5
PY6
PY7

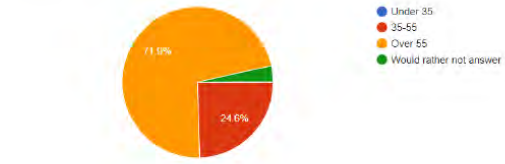
Appendix 2: Household Hazardous Waste Event Questionnaire Results

10/12/19 South Portland Household Hazardous Waste Collection Day

Participant Questionnaire Responses (58 respondents for 246 attendees*)

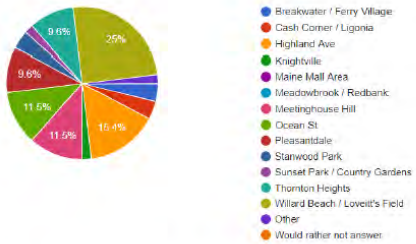
What is your age?

57 responses



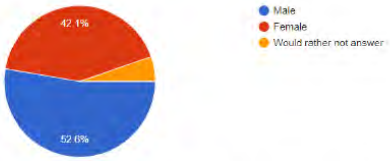
In which neighborhood do you live?

52 responses



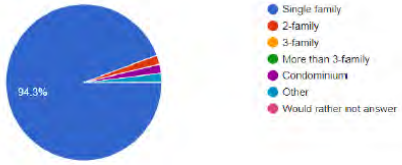
What is your gender?

57 responses



In which type of residence do you live?

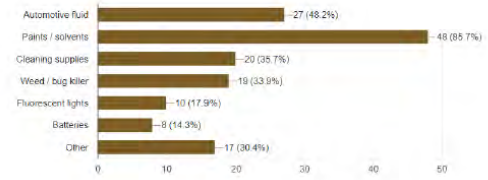
53 responses



**Only printed 200 post cards with questionnaire link*

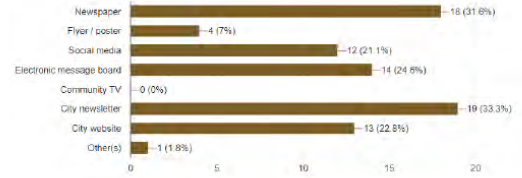
What types of Household Hazardous Wastes did you drop off for today's event?

56 responses



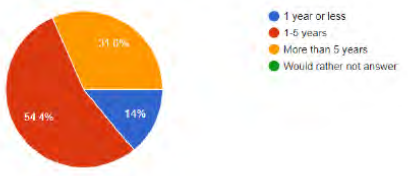
How did you learn about today's HHW event?

57 responses



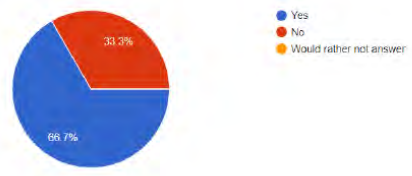
How long have you had these waste items?

57 responses



Have you participated in previous HHW events?

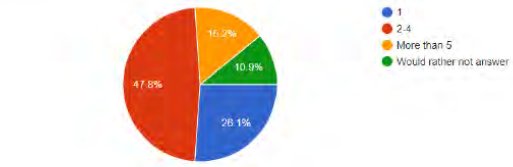
57 responses



10/12/19 South Portland HHW Collection Day Participant Questionnaire Responses

About how many previous HHW events have you attended?

46 responses

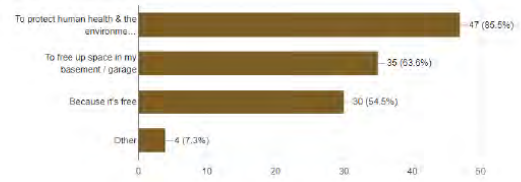


Will you participate in future events?

57 responses

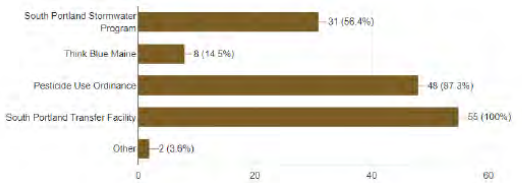
Why did you participate in today's HHW event?

55 responses



Are you aware of any of the following sustainability efforts?

55 responses



Other sustainability efforts of which you are aware

20 responses

Solar farm at the transfer station, electric car charging stations
Not sure
Electric vehicle day
food scrap pickup
Medical collection & electronics collection & street light changeover
STREAM REHAB
Composting, South Portland Land Trust
Solar panels at the transfer station LED street lights reduced street lights electric car charging stations
Electronic Turn-In
E waste + drug drop off
Curbside composting
Garbage to garden
Grow Healthy South Portland
Climate Action Plan, WindowDressers
Trash
Clean Skies; taking out of date food and scraps to composting bins ; recycling bins
One Climate Future
Solar array
Recycling
Garden waste p/u Recycling and the swap shop plus th Metal bin

How can we improve our Household Hazardous Waste Collection Program?

42 responses

Maybe 2 lines instead of one
Since moving to Highland Ave. facility, wait time has improved significantly.
No problems
I think it works great
Doing great, no improvement needed
The only issue I had was the 40 minute wait i2n line (I arrived at 7:55) and got through the line at 8:40. Even with that the process was smooth.
Wouldn't change a thing. You're doing a great job.
Keep having it, this is awesome. I just moved to S. Portland and this is a great asset to the community. (BTW, I attended the October 12, 2019 event, not April as it says above.) Thank you for helping to take care of our community!!!
Continue this NECESSARY program as presently administered.
community newspaper announcement
This survey has the wrong date on a couple of questions. I suggest that you substitute the date with "today's" event on those questions and only put the event date at the top.
Worked well
you are doing a fantastic program throughout the year and thank you
Thank you SoPo for providing these free disposal days to residents. Today's was exceptionally well run, no wait, folks were friendly and knowledgeable, and transfer site was well demarcated. I think more hazardous waste would be disposed of properly if the regular transfer facility ALWAYS had free bins/collection areas, rather than just once or twice a year. Until then, maybe you could provide an annual city wide flyer/refrigerator magnet that lists where (and when) ALL wastes should go (not just "what goes in recycling bin versus trash bin.") so people would know when and where they can safely dispose of things, instead of happening across the notices for special collection events. (And deliver these to households when they pick up or get sent their car registration every year?) At a minimum, how about a battery bin at the transfer station where people can drop off old appliance/toy batteries when they're dropping of their lawn clippings/overflow recycling. Should we all have a battery bin in our homes, just like we have a trash bin and a recycling bin and a compost bin? Could SoPo distribute such a container free to all residents to encourage mindful participation in safe disposal of batteries? A free, accessible, convenient, all-wastes-accepting destination would offer the best chance for environmental protection.
SIGN UP FOR EMAIL/TEXT REMINDERS

10/12/19 South Portland HHW Collection Day Participant Questionnaire Responses

How can we improve our Household Hazardous Waste Collection Program?

42 responses

Nothing. I went at 9:30 and there was no line. It was very easy.

Today was wonderful, in and out

I went to the 10/12/19 collection. It was set up in such a better way than when it had been in Millcreek. I went mid morning and there were no other cars there.

Your staff were helpful, organized and efficient. The line moved quickly enough for us! Thank you!

I thought it was great as is

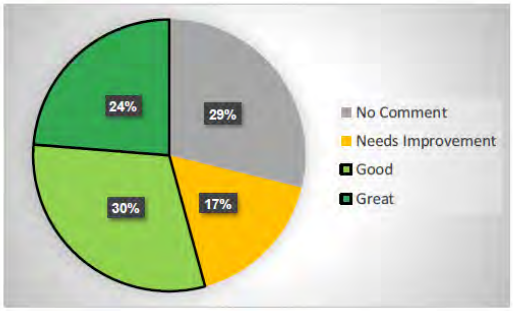
It is perfect already!

Hopefully this program will continue next year! If this isn't being done already: a combined list of dates for HHW, E waste, drug drop off, etc in the city newsletter, website etc. Also, I disposed of some e-waste at ecomaine on 9/28 and this date could be added too! Keep up the good work !!

Well run and great as is. Keep it up!

It's great! And the wait in line has been much better! Thank you so much!

Honestly it is very well run currently!



How can we improve our Household Hazardous Waste Collection Program?

42 responses

Pick-ups

More descriptions of items OK to bring - for instance, I did not know batteries and fluorescent lights were included until filling out this questionnaire.

Cannot think of anything

The program seems to be working well.

You did a fabulous job- very organized and quick!! Well done!! Kudos

Nothing, went smoothly

It was a well run program

Great as is

Maybe make it 3x a year

Hi - Just an FYI ..I went to the 10/12/19 HHW because I had received information from the City that said it included E-Waste. I was turned away. Just a suggestion to make sure you are advertising correctly in your postings.
Thank you for your work.

10/12/19 was very well run, and both organized and efficient.

It was just fine

No improvement needed

I sat with my engine running for 45 minutes. A quicker line would have been better for the environment.

You do an excellent job. Continue tto o educate everyone about the value of your efforts and how it benefits the Portland area.

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

Portland Water District

FROM SEBAGO LAKE TO CASCO BAY

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

From: James Wallace – Director of Water Services

Date: July 8, 2020

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

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Introduction

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

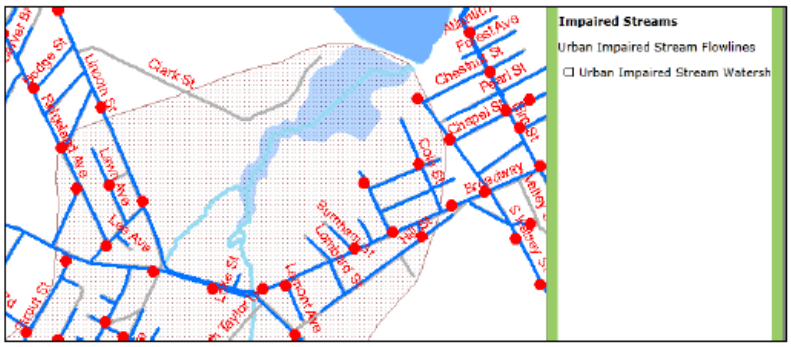
During the months of July through October of 2019, the District performed hydrant flushing in Gorham, Portland, and Scarborough. In addition, in the months of April through June of 2020, the District performed hydrant flushing in Falmouth, Windham, and a small area in Westbrook. The District did not perform this maintenance program in South Portland during the past 12 months.

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 statewide BMP's during the summer of 2017.

Appendix 4: Dry Weather Outfall Inspection Summaries

PY2019-20 City of South Portland Stormwater Outfall Inspections

Feature ID	Watershed	Inspection Date	Inspector	Precip past 3 days?	Approx Temp (F)	Pipe Sub-merged	Pipe Size (in)	Foam	Green Scum	Oil / Film	Veg. Mat	Sewage	Odor	Water Clarity	Pipe Flow	Seepage Flow	Flow Color	Sediment Con-dition	Structure Con-dition	Trash / Litter	Yard Waste	Total Score	Comments	Follow-Up Needed
BC_14	Barberry Creek	1/30/2020, 1:01 PM	Randy Rafuse	No	32	No	12"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0		no
BC_2	Barberry Creek	1/30/2020, 1:08 PM	Jarrod Erskine	No	25	Partially	18"	No	No	No	No	No		Cloudy	Steady	None	Other	Open	Fair	No	No	5		no
BC_10	Barberry Creek	1/30/2020, 1:26 PM	Jarrod Erskine	No	25	No	15"	No	No	No	No	No	None		Steady	None	Clear	Open	Good	No	No	0		no
BC_9	Barberry Creek	1/30/2020, 1:26 PM	Randy Rafuse	No	32	No	24"	No	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	0		no
BC_16	Barberry Creek	1/30/2020, 1:32 PM	Randy Rafuse	No	32	No	18"	No	No	No	No	No	None		None	None	No Flow	Open		No	No	0		no
BC_13	Barberry Creek	1/30/2020, 1:36 PM	Randy Rafuse	No	32	No	24"	No	No	No	No	No	Musty	Clear	None	None	No Flow	Open		No	No	5		no
BC_11	Barberry Creek	1/30/2020, 1:38 PM	Randy Rafuse	No	32	No		No	No	No	No	No	Musty	Clear	None	None	No Flow	Open	Good	No	No	5		no
BC_15	Barberry Creek	1/30/2020, 1:56 PM	Jarrod Erskine	No	32	No		No	No	No	No	No	None	Clear	None	None	No Flow	Open		No	No	0		no
BC_1	Barberry Creek	1/30/2020, 10:58 AM	Jarrod Erskine	No	20	Partially	12"	No	No	No	No	No	None	Clear	None	None	No Flow	Open	Fair	No	No	0		no
BC_3	Barberry Creek	1/30/2020, 11:03 AM	Randy Rafuse	No	25	No	24"	No	No	No	No	No	None		None	None	No Flow	Open	Fair	No	No	0		no
BC_4	Barberry Creek	1/30/2020, 11:09 AM	Randy Rafuse	No	25	No		No	No	No	No	No		Clear	None	None	No Flow	Open		No	No	0	Couldn't find outfall	yes
BC_5	Barberry Creek	1/30/2020, 12:55 PM	Randy Rafuse	No		No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
BC_8	Barberry Creek	1/30/2020, 2:00 PM	Jarrod Erskine	No	30	No	24"	Yes	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	3		no
BC_6	Barberry Creek	1/30/2020, 2:11 PM	Randy Rafuse	No	32	No		No	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	0		no
BC_12	Barberry Creek	1/30/2020, 2:29 PM	Jarrod Erskine	No	30	No	15"	No	No	No	No	No	None	Clear	Steady	None	Clear	Open	Good	No	No	0		no

Follow up needed = yes: 1
Follow up needed = no: 14

LC_90	Long Creek	1/13/2020, 10:15 AM	Mike Adriance	No	25	Partially	15"	No	No	No	Yes	No			None	None	No Flow	1/4 Full	Poor	No	No	9		no
LC_91A	Long Creek	1/13/2020, 10:23 AM	Mike Adriance	No	25	No	24"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Good	No	No	0		no
LC_37	Long Creek	1/13/2020, 8:54 AM	Mike Adriance	No	25	No	18"	No	No	No	No	No			None	None	No Flow	1/4 Full	Fair	No	No	0		no
LC_46	Long Creek	1/13/2020, 8:59 AM	Mike Adriance	No	25	Partially	36"	No	No	No	No	No		Clear	Trickle	None	Clear	1/4 Full	Fair	No	No	0		no
LC_42	Long Creek	1/13/2020, 9:02 AM	Mike Adriance	No	25	Partially	12"	No	No	No	Yes	No		Clear	Steady	None	Clear	1/4 Full	Poor	No	No	9		no
LC_34	Long Creek	1/13/2020, 9:10 AM	Mike Adriance	No	25	No	36"	No	No	No	Yes	No		Clear	Steady	None	Clear	Open	Fair	Yes	No	9	Not sure if this is the right outfall looking back @ last years record	yes
LC_20	Long Creek	1/13/2020, 9:14 AM	Mike Adriance	No	25	No	12"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_21	Long Creek	1/13/2020, 9:16 AM	Mike Adriance	No	25	No	12"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_116	Long Creek	1/13/2020, 9:25 AM	Mike Adriance	No	25	No	12"	No	No	No	No	No			None	None	No Flow	Open	Good	No	No	0		no
LC_105	Long Creek	1/13/2020, 9:28 AM	Mike Adriance	No	25	No	8"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_100	Long Creek	1/13/2020, 9:34 AM	Mike Adriance	No	25	No	24"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_105	Long Creek	1/13/2020, 9:35 AM	Mike Adriance	No	25	No	8"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
LC_22	Long Creek	1/13/2020, 9:42 AM	Mike Adriance	No	25	No	30"	No	No	No	No	No		Clear	Trickle	None	Clear	Open	Fair	Yes	Yes	0	Lots of trees cut and thrown on banks of stream	yes
LC_71	Long Creek	1/31/2020, 8:11 AM	Jarrod Erskine	No	25	No	24"	No	No	No	No	No	None	Clear	Trickle	None	Clear	Open		No	No	0		no
LC_14	Long Creek	1/31/2020, 8:41 AM	Jarrod Erskine	No	25	No	12"	No	No	Yes	No	No	None	Clear	None	None	No Flow	Open	Fair	No	No	9		no
LC_101	Long Creek	1/31/2020, 8:49 AM	Jarrod Erskine	No	25	No	6"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0		no

PY2019-20 City of South Portland Stormwater Outfall Inspections

Feature ID	Watershed	Inspection Date	Inspector	Precip past 3 days?	Approx Temp (F)	Pipe Sub-merged	Pipe Size (in)	Foam	Green Scum	Oil / Film	Veg. Mat	Sewage	Odor	Water Clarity	Pipe Flow	Seepage Flow	Flow Color	Sediment Con-dition	Structure Con-dition	Trash / Litter	Yard Waste	Total Score	Comments	Follow-Up Needed
LC_13	Long Creek	1/31/2020, 8:54 AM	Jarrod Erskine	No	25	No	12"	No	No	No	No	No	None	Clear	Trickle	None	Clear	Open	Good	No	No	0		no
LC_19	Long Creek	1/31/2020, 9:04 AM	Jarrod Erskine	No	25	No		No	No	No	No	No	None		None	None	No Flow	Open		No	No	0	Buried in snow and brush	yes
LC_87	Long Creek	1/7/2020, 1:54 PM	Mike Adriance	No	32	No	15"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_12	Long Creek	1/7/2020, 10:01 AM	Mike Adriance	No	26	No	18"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
LC_92	Long Creek	1/7/2020, 10:04 AM	Mike Adriance	No	26	No	18"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_39	Long Creek	1/7/2020, 10:20 AM	Mike Adriance	No	27	No	18"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_104	Long Creek	1/7/2020, 10:23 AM	Mike Adriance	No	27	Partially	12"	No	No	No	Yes	No			None	None	No Flow	Open	eds Attent	No	No	9	Should be ditched @ some point	yes
LC_49	Long Creek	1/7/2020, 10:29 AM	Mike Adriance	No	27	No	48"	No	No	No	Yes	No		Clear	Steady	None	Clear	Open	Fair	No	No	9		no
LC_41	Long Creek	1/7/2020, 10:32 AM	Mike Adriance	No	27	No	12"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
LC_36	Long Creek	1/7/2020, 10:42 AM	Mike Adriance	No	27	No	12"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_72	Long Creek	1/7/2020, 10:47 AM	Mike Adriance	No	27	Partially	24"	No	No	No	No	No		Clear	Trickle	None	Clear	Open	Poor	No	No	0		no
LC_74	Long Creek	1/7/2020, 10:51 AM	Mike Adriance	No	27	Partially		No	No	No	No	No			None	None	No Flow	Open	Poor	No	No	0		no
LC_16	Long Creek	1/7/2020, 2:01 PM	Mike Adriance	No	32	No	12"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_4	Long Creek	1/7/2020, 2:05 PM	Mike Adriance	No	32	No	12"	No	No	No	No	No		Clear	Trickle	None	Clear	Open	Fair	No	No	0		no
LC_15	Long Creek	1/7/2020, 2:07 PM	Mike Adriance	No	32	No	12"	No	No	No	No	No		Clear	Trickle	None	Clear	Open	Fair	No	No	0		no
LC_63	Long Creek	1/7/2020, 2:16 PM	Mike Adriance	No	32	No	18"	No	No	No	Yes	No		Clear	Steady	None	Clear	Open	Fair	No	No	9		no
LC_6	Long Creek	1/7/2020, 7:45 AM	Mike Adriance	No	26	No	24"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
LC_5	Long Creek	1/7/2020, 7:49 AM	Mike Adriance	No	26	No	18"	No	No	No	No	No			Steady	None	Clear	Open	Fair	No	No	0		no
LC_64	Long Creek	1/7/2020, 7:54 AM	Mike Adriance	No		No	3"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_65	Long Creek	1/7/2020, 7:58 AM	Mike Adriance	No	26	No	12"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
LC_7	Long Creek	1/7/2020, 8:01 AM	Mike Adriance	No	26	No	18"	No	No	No	No	No		Clear	Steady	None	No Flow	Open	Fair	No	No	0		no
LC_8	Long Creek	1/7/2020, 8:05 AM	Mike Adriance	No	26	No	12"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
LC_51	Long Creek	1/7/2020, 8:09 AM	Mike Adriance	No	26	Partially	18"	No	No	No	No	No			None	None	No Flow	Open		No	No	0	Steep hill and icy	no
LC_88	Long Creek	1/7/2020, 8:20 AM	Mike Adriance	No	26	No	12"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
LC_89	Long Creek	1/7/2020, 8:28 AM	Mike Adriance	No	26	No	12"	No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_43	Long Creek	1/7/2020, 8:31 AM	Mike Adriance	No	26	No	24"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_44	Long Creek	1/7/2020, 8:36 AM	Mike Adriance	No	26	No	14"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_45	Long Creek	1/7/2020, 8:38 AM	Mike Adriance		26	No	24"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
CP_2	Long Creek	1/9/2020, 7:52 AM	Mike Adriance	No	20	No	3"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
CP_15	Long Creek	1/9/2020, 7:57 AM	Mike Adriance	No	20	No	3"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
LC_23	Long Creek	1/9/2020, 8:09 AM	Mike Adriance	No	16	No	15"	No	No	Yes	No	No		Opaque	Steady	None	Brown	Open	Fair	No	No	19		no
LC_18	Long Creek	1/9/2020, 8:52 AM	Mike Adriance	No	16	No	12"	No	No	No	No	No		Clear	Trickle	None	Clear	Open	Fair	No	No	0		no

PY2019-20 City of South Portland Stormwater Outfall Inspections

Feature ID	Watershed	Inspection Date	Inspector	Precip past 3 days?	Approx Temp (F)	Pipe Sub-merged	Pipe Size (in)	Foam	Green Scum	Oil / Film	Veg. Mat	Sewage	Odor	Water Clarity	Pipe Flow	Seepage Flow	Flow Color	Sediment Con-dition	Structure Con-dition	Trash / Litter	Yard Waste	Total Score	Comments	Follow-Up Needed
LC_119	Long Creek	1/9/2020, 8:53 AM	Mike Adriance	No	16	No	14"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_118	Long Creek	1/9/2020, 8:56 AM	Mike Adriance	No	16	No	10"	No	No	No	No	No			None	None	No Flow	Open	Poor	No	No	0		no
LC_117	Long Creek	1/9/2020, 8:59 AM	Mike Adriance	No	16	No	12"	No	No	No	No	No			None	None	No Flow	Open	Good	No	No	0		no
LC_38	Long Creek	1/9/2020, 9:05 AM	Mike Adriance	No	16	No	48"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_57	Long Creek	1/9/2020, 9:15 AM	Mike Adriance	No	16	Partially	12"	No	No	No	No	No		Clear	Steady	None	No Flow	1/4 Full	Poor	No	No	0		no
LC_58	Long Creek	1/9/2020, 9:20 AM	Mike Adriance	No	16	No	15"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_60	Long Creek	1/9/2020, 9:30 AM	Mike Adriance	No	16	No	18"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
LC_61	Long Creek	1/9/2020, 9:37 AM	Mike Adriance	No	16	No	12"	No	No	No	No	No		Clear	Steady	None	Clear	Open	Fair	No	No	0		no
LC_62	Long Creek	1/9/2020, 9:42 AM	Mike Adriance	No	16	No	12"	No	No	No	No	No			None	None	No Flow	Open	Fair	No	No	0		no
LC_26	Long Creek	12/24/2019, 10:01 AM	Jarrod Erskine	No	31	No	24"	No	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	0		no
LC_24	Long Creek	12/24/2019, 10:07 AM	Randy Keenan		31	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_2	Long Creek	12/24/2019, 10:08 AM	Jarrod Erskine	No	31	No	12"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0	Leaves	no
LC_3	Long Creek	12/24/2019, 10:12 AM	Randy Keenan		31	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_55	Long Creek	12/24/2019, 10:12 AM	Jarrod Erskine	No	31	No	12"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0		no
LC_54	Long Creek	12/24/2019, 9:07 AM	Jarrod Erskine	No	31	No	18"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0		no
LC_28	Long Creek	12/24/2019, 9:09 AM	Randy Keenan		31	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_29	Long Creek	12/24/2019, 9:19 AM	Randy Keenan		31	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_30	Long Creek	12/24/2019, 9:29 AM	Jarrod Erskine	No	31	No	12"	No	No	No	No	No	None		None	None	No Flow	Open	Fair	No	No	0		no
LC_86	Long Creek	12/24/2019, 9:30 AM	Randy Keenan		31	No		No	No	No	No	No		Clear	None	None	No Flow	Open		No	No	0		no
LC_25	Long Creek	12/24/2019, 9:36 AM	Randy Keenan		31	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_85	Long Creek	12/24/2019, 9:36 AM	Jarrod Erskine	No	31	No		No	No	Yes	No	No	None	Clear	None	None	No Flow	Open		No	No	9		no
LC_83	Long Creek	12/24/2019, 9:38 AM	Randy Keenan		31	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_84	Long Creek	12/24/2019, 9:42 AM	Jarrod Erskine	No	31	No	24"	No	No	No	No	No	None	Clear	Steady	None	Clear	Open	Good	No	No	0		no
LC_27	Long Creek	12/24/2019, 9:52 AM	Jarrod Erskine	No	31	No	36"	No	No	No	No	No	None		None	None	No Flow	Open		No	No	0	Pipe is bricked off	no
LC_108	Long Creek	12/26/2019, 10:01 AM	Jarrod Erskine	No	24	No	6"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0		no
LC_111	Long Creek	12/26/2019, 10:02 AM	Randy Keenan		24	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_110	Long Creek	12/26/2019, 10:04 AM	Randy Keenan		24	No	3"	No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_66	Long Creek	12/26/2019, 10:12 AM	Jarrod Erskine	No	24	Partially		No	No	No	No	No	None		None	None	No Flow	Open		No	No	0		no
LC_70	Long Creek	12/26/2019, 10:18 AM	Randy Keenan			Partially	15"	No	No	No	No	No			None	None	No Flow	1/2 Full	Good	No	No	0		no
LC_69	Long Creek	12/26/2019, 10:19 AM	Jarrod Erskine	No	24	No	12"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0		no
LC_112	Long Creek	12/26/2019, 10:23 AM	Jarrod Erskine	No	24	No	6"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0		no
LC_98	Long Creek	12/26/2019, 10:38 AM	Jarrod Erskine	No	24	Partially	15"	No	No	No	No	No	None	Clear	Steady	None	Clear	Open	Fair	No	No	0		no

PY2019-20 City of South Portland Stormwater Outfall Inspections

Feature ID	Watershed	Inspection Date	Inspector	Precip past 3 days?	Approx Temp (F)	Pipe Sub-merged	Pipe Size (in)	Foam	Green Scum	Oil / Film	Veg. Mat	Sewage	Odor	Water Clarity	Pipe Flow	Seepage Flow	Flow Color	Sediment Con-dition	Structure Con-dition	Trash / Litter	Yard Waste	Total Score	Comments	Follow-Up Needed
LC_120	Long Creek	12/26/2019, 8:31 AM	Randy Keenan		24	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_10	Long Creek	12/26/2019, 8:31 AM	Jarrod Erskine	No	24	No	36"	Yes	No	No	No	No	None	Clear	Steady	None	Clear	Open	Good	No	No	3		no
LC_9	Long Creek	12/26/2019, 8:32 AM	Randy Keenan		24	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_11	Long Creek	12/26/2019, 8:39 AM	Jarrod Erskine	No	24	Partially	60"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0		no
LC_68	Long Creek	12/26/2019, 8:45 AM	Randy Keenan		24	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_99	Long Creek	12/26/2019, 8:47 AM	Jarrod Erskine	No	24	No		No	No	No	No	No	None		None	None	No Flow	Open		No	No	0	Covered in vegetation	yes
LC_113	Long Creek	12/26/2019, 8:52 AM	Jarrod Erskine	No	24	No	12"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0		no
LC_121	Long Creek	12/26/2019, 9:03 AM	Jarrod Erskine	No	24	No		No	No	No	No	No			None	None	No Flow	1/2 Full		No	No	0		no
LC_59	Long Creek	12/26/2019, 9:15 AM	Randy Keenan		24	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_56	Long Creek	12/26/2019, 9:20 AM	Jarrod Erskine	No	24	No		No	No	No	Yes	No	None	Clear	Steady	None	Clear	Open		No	No	9		no
LC_35	Long Creek	12/26/2019, 9:23 AM	Jarrod Erskine	No	24	No	12"	No	No	No	No	No	None		None	None	No Flow	Open	Good	No	No	0		no
LC_115	Long Creek	12/26/2019, 9:31 AM	Randy Keenan		24	Fully		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_32	Long Creek	12/26/2019, 9:34 AM	Randy Keenan		24	Partially		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_33	Long Creek	12/26/2019, 9:39 AM	Jarrod Erskine	No	24	No		No	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	0		no
LC_67	Long Creek	12/26/2019, 9:49 AM	Jarrod Erskine	No	24	Fully		No	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	0		no
LC_107	Long Creek	12/26/2019, 9:54 AM	Randy Keenan		24	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
LC_106	Long Creek	12/26/2019, 9:56 AM	Randy Keenan		24			No	No	No	No	No			None	None	No Flow	Open		No	No	0	Under vegetation	yes
LC_109	Long Creek	12/26/2019, 9:59 AM	Randy Keenan		24	No		No	No	No	No	No			None	None	No Flow	Open		No	No	0		no
																							Follow up needed = yes:	6
																							Follow up needed = no:	92

TB_8	Trout Brook	1/30/2020, 10:13 AM	Jarrod Erskine	No	17	No	12"	No	No	No	No	No	None		None	None	No Flow	Open	Excellent	No	No	0		no
TB_5	Trout Brook	1/30/2020, 10:24 AM	Jarrod Erskine	No	20	Fully	12"	No	No	No	No	No	None	Clear	None	None	No Flow	Open	Fair	No	No	0		no
TB_6	Trout Brook	1/30/2020, 10:31 AM	Jarrod Erskine	No	20	No		No	No	No	No	No	None	Clear	None	None	No Flow	1/4 Full		No	No	0	Lots of sand	yes
TB_3	Trout Brook	1/30/2020, 8:09 AM	Jarrod Erskine	No	17	No		No	No	No	No	No		Clear	Steady	None	No Flow	Open		No	No	0		no
TB_2	Trout Brook	1/30/2020, 8:20 AM	Randy Rafuse	No	17	No	8"	No	No	No	No	No			Steady	None	No Flow	Open	Good	No	No	0		no
TB_9	Trout Brook	1/30/2020, 8:32 AM	Randy Rafuse	No	17	No	12"	No	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	0		no
TB_7	Trout Brook	1/30/2020, 8:33 AM	Jarrod Erskine	No	17	No	10"	No	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	0		no
TB_9	Trout Brook	1/30/2020, 8:36 AM	Randy Rafuse	No	17	No	12"	No	No	No	No	No	None	Clear	None	None	No Flow	Open	Good	No	No	0		no
TB_1	Trout Brook	1/30/2020, 8:51 AM	Jarrod Erskine	No	17	No		No	No	No	No	No	None		Steady	None	Clear	Open	Fair	No	No	0		no
TB_4	Trout Brook	1/30/2020, 9:57 AM	Jarrod Erskine	No	17	No		No	No	No	No	No	None	Clear	None	None	No Flow	Open	Fair	No	No	0		no
																							Follow up needed = yes:	1
																							Follow up needed = no:	9

Appendix 5: Dry Weather Ditch Inspection Summary

PY2019-20 City of South Portland Stormwater Ditch Inspections

Ditch ID	Date	Inspector	Wind Present (Y/N)	Temp (F)	Precip past 2 days	Yard Waste (Y/N)	Trash / Litter	Debris / Pollution Types	Odor	Standing Water	Water Clarity	Water Color	Inlet	Outlet	Sediment Accumu-lation	Ditch	Veg. Cover	Veg. Height	Veg. Type	Erosion / Scouring	Comments	Follow Up Needed
LCD-26	6/26/20	Fred Dillon	Yes	75	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass >90%	<3"	Normal Grass	No	Grass clippings at 55 Foden Rd. immediately above steep embankment leading to Long Creek tributary	Yes
LCD_999	6/26/20	Fred Dillon	Yes	75	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass >90%	<3"	Normal Grass	No	Newly established ditch discovered during inspection of ditch on Darling Avenue.	No
LCD-25	6/26/20	Fred Dillon	Yes	75	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Natural	Too Tall	Natural	Yes		Yes
LCD-24	6/26/20	Fred Dillon	Yes	75	No	Yes	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass >90%	<3"	Normal Grass	No		No
LCD-31	6/26/20	Fred Dillon	Yes	75	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass >90%	<3"	Normal Grass	Yes	Slight erosion at inlet end of ditch Does not require follow-up	No
LCD-23	6/26/20	Fred Dillon	Yes	75	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass >90%	<3"	Normal Grass	No		No
LCD-22	6/26/20	Fred Dillon	Yes	75	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	>2"	Stable	Natural	Too Tall	Natural	No	Maybe consider cat tail removal which are filling most of the bottom of the ditch	Yes
LCD-21	6/26/20	Fred Dillon	Yes	75	No	No	Yes	None	None / Natural	Yes	Clear Water	Clear	Stable	Stable	<2"	Stable	Natural	Too Tall	Natural	No	Bottom of ditch nearly filled with cat tails. Also MH oozing a little bit of rusty looking water (see photo)	Yes
LCD-20	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass >90%	<3"	Normal Grass	No		No
LCD-30	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Natural	Too Tall	Weeds	No	Significant vegetation growth. Phragmites	Yes
LCD-30	8/10/20	Fred Dillon	Yes	81	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Natural	Too Tall	Weeds	No	Located on Cummings Road so maybe MDOT project	Yes
LCD-04	8/10/20	Fred Dillon	Yes	81	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Natural	Too Tall	Woody	No	Located on Cummings Road therefore may be MDOT project	Yes
LCD-03	8/10/20	Fred Dillon	Yes	81	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Natural	Too Tall	Weeds	No	Located on Cummings Road so maybe MDOT project	Yes
LCD-02	8/10/20	Fred Dillon	Yes	81	No		No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass >90%	<3"	Normal Grass	No		Yes
LCD-06	8/10/20	Fred Dillon	Yes	81	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Natural	Too Tall	Weeds	No	Located on Cummings Road so project maybe MDOT	Yes
LCD-07	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass >90%	<3"	Normal Grass	No		No
LCD-08	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass >90%	6-12"	Normal Grass	No		No
LCD-09	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	Yes	Cloudy Water	Brown	Stable	Stable	Natural	Stable	Grass >90%	<3"	Normal Grass	No		No
LCD-10	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Grass >90%	3-6"	Normal Grass	No		No
LCD-11	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Grass >90%	<3"	Normal Grass	No		No
LCD-13	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable			Natural	No		No
LCD-14	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Grass >90%	<3"	Normal Grass	No	Small stand of cattails at inlet	No
LCD-15	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Natural	Too Tall	Natural	No		Yes
LCD-16	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Natural	6-12"	Natural	No	May need vegetation removal in the next year or so	No
LCD-17	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable				No		No
LCD-18	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass	3-6"	Normal Grass	No		No
LCD-19	8/10/20	Fred Dillon	Yes	81	No	No	No	None	None / Natural	Yes	Clear Water	Clear	Stable	Stable	<2"	Stable	Natural	Too Tall	Natural	No	May need to remove vegetation within a year	No

Follow-up = yes: 11
Follow-up = no: 16

PY2019-20 City of South Portland Stormwater Ditch Inspections

Ditch ID	Date	Inspector	Wind Present (Y/N)	Temp (F)	Precip past 2 days	Yard Waste (Y/N)	Trash / Litter	Debris / Pollution Types	Odor	Standing Water	Water Clarity	Water Color	Inlet	Outlet	Sediment Accumu-lation	Ditch	Veg. Cover	Veg. Height	Veg. Type	Erosion / Scouring	Comments	Follow Up Needed
BCD-13	8/3/20	Fred Dillon	Yes	88	No	No	Yes	None		No	NA	NA	Stable	Stable	<2"	Stable	Natural	Too Tall	Natural	No		Yes
BCD-14	8/3/20	Fred Dillon	Yes	88	No						NA	NA									Ditch appears to have been eliminated. Compare photo from today to photos taken for previous inspections.	
BCD-17	8/3/20	Fred Dillon	Yes	88	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Natural	Too Tall	Natural	No		Yes
BCD-16	8/3/20	Fred Dillon	Yes	88	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable		Too Tall	Woody	No		Yes
BCD-4	8/3/20	Fred Dillon	Yes	88	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable				No		No
BCD-5	8/3/20	Fred Dillon	Yes	88	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Natural	Too Tall	Natural	No		Yes
BCD-6	8/3/20	Fred Dillon	Yes	88	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Natural	6-12"	Weeds	No		No
BCD-7	8/3/20	Fred Dillon	Yes	88	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Natural	6-12"	Weeds	No		No
BCD-8	8/3/20	Fred Dillon	Yes	88	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Natural	6-12"	Weeds	No		No
BCD-9	8/3/20	Fred Dillon	Yes	88	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Natural	Too Tall	Woody	No		Yes
BCD-12	8/3/20	Fred Dillon	Yes	88	No	No	Yes	None	None / Natural		NA	NA	Stable	Stable	<2"	Stable	Grass >90%	3-6"	Normal Grass	No		No
BCD-11	8/3/20	Fred Dillon	Yes	88	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable				No		No
BCD-10	8/3/20	Fred Dillon	Yes	88	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable				No		No
BCD-1	8/11/20	Fred Dillon	Yes	73	No	No	No	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Grass >90%	<3"	Normal Grass	No	Not in public ROW? Privately maintained and on the outside of the telephone pole.	No
BCD-2	8/11/20	Fred Dillon	No	73	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Stable	Natural	Too Tall	Woody	No	Ditch is clogged with woody and weedy vegetation. If located in public right away we will need to maintain	Yes
BCD-3	8/11/20	Fred Dillon	No	73	No	No	No	None	None / Natural	No	NA	NA	Stable	Obstructed	>2"	Vegetation	Natural	Too Tall	Woody	No		Yes
BCD-15	8/11/20	Fred Dillon	No	73	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	<2"	Stable	Grass >90%	3-6"	Normal Grass	Yes		Yes
BCD_18	8/11/20	Fred Dillon	No	73	No	No	Yes	None	None / Natural	No	NA	NA	Stable	Stable	Natural	Vegetation	Natural	Too Tall	Woody	No	Ditch geometry needs to be updated. New access road built recently with culvert Crossing so ditch is now two separate conveyances	Yes

Follow-up = yes: 0
Follow-up = no: 8