

September 16, 2019

Rhonda Poirier via email: Rhonda.Poirier@maine.gov  
MEPDES Stormwater Program Manager  
Bureau of Water Quality  
Maine Department of Environmental Protection

RE: Permit Year 6 Annual MS4 Report  
Permit # MER041021  
City of Biddeford

Dear Rhonda:

On behalf of the City of Biddeford (City), Integrated Environmental Engineering has prepared the City's permit year six (PY6) 2018-2019 Municipal Separate Storm Sewer System (MS4) annual report (MS4 General Permit # MER041021).

The City of Biddeford continues to make significant progress toward a comprehensive, dynamic, and city-wide stormwater program as the result of interdepartmental meetings, individual and group trainings, and development of several SOPs for MS4 related activities. City management and staff are dedicated to clean water and are pleased to provide this report of their activities undertaken to ensure the continued protection of our water resources.

If you have any questions regarding this report, please do not hesitate to contact me at (207) 415-5830 or Tom Milligan at (207) 284-9118.

Sincerely,

Integrated Environmental Engineering, Inc.



Kristie Rabasca, P.E.

Cc: Tom Milligan, City Engineer  
Jeff Demers, Director, Public Works

## Required Signature

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

Signature:



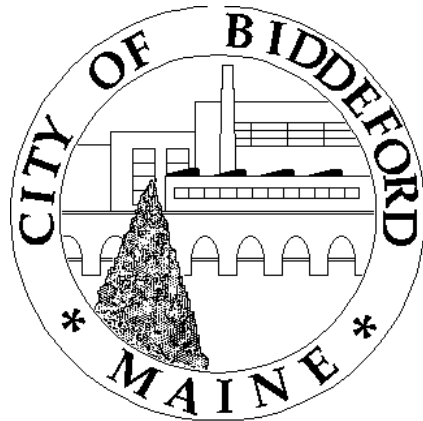
Date: September 16, 2019

Tom Milligan, P.E.  
City Engineer, City of Biddeford

**NPDES STORMWATER PHASE II PERMIT CYCLE III  
ANNUAL REPORT FOR PERMIT YEAR 6  
July 1, 2018 – June 30, 2019**

**FOR THE**

**CITY OF BIDDEFORD, MAINE**



**Date: September 16, 2019**

## Table of Contents

GENERAL REGULATED MS4 INFORMATION.....	1
MINIMUM CONTROL MEASURES .....	4
MCM 1 Public Education and Outreach .....	4
MCM 1 Goals .....	4
BMP 1.1 - Continue Awareness Outreach Efforts.....	4
BMP 1.2 - Update and implement Stormwater Awareness Plan.....	5
BMP 1.3 - Develop and implement Municipal Permit Awareness Plan.....	6
BMP 1.4 - Continue Targeted Best Management Practices Adoption efforts from previous MS4 permit cycle.....	7
BMP 1.5 - Update and implement BMP Adoption Plan .....	8
BMP 1.6 - Develop and implement Targeted Outreach in Priority Watershed Plan.....	9
VOLUNTARY BMP 1.7 - School Outreach .....	10
VOLUNTARY BMPs 1.8 - Additional Miscellaneous items.....	11
MCM 2 PUBLIC INVOLVEMENT AND PARTICIPATION .....	12
BMP 2.1 - Public Notice Requirement .....	12
BMP 2.2 - Host Public Events.....	13
BMP 2.3 - Additional Best Management Practices .....	15
MCM 3 Illicit Discharge Detection and Elimination.....	17
BMP 3.1 - Keep Current a watershed-based storm sewer system infrastructure map. ....	17
BMP 3.2 - Implement non-stormwater discharge ordinance.....	18
BMP 3.3 - Implement dry weather outfall inspection program.....	21
MCM 4 Construction Site Stormwater Runoff Control.....	25
BMP 4.1 - Notification to construction site developers and operators of the requirements for registration under the Maine Construction General Permit or Chapter 500, Stormwater Management for the discharge of stormwater associated with construction activities; .....	25
BMP 4.2 - Develop and implement a mechanism to annually document every construction activity that disturb one or more acres within the Urbanized Area.....	26
MCM 5 Post-Construction Stormwater Management in New Development and Redevelopment.....	29
BMP 5.1 - Implement ordinance or similar measure .....	29
BMP 5.2 - Continued implementation of the inspection program for post-construction BMPs for which the owner or operator has not hired a qualified third-party inspector, and which are located in the direct watershed of a lake most at risk from new development or in watersheds of an urban impaired stream.....	30
MCM 6 Pollution Prevention/Good Housekeeping for Municipal Operations.....	33
BMP 6.1 Operations at municipally owned grounds and facilities. ....	33
BMP 6.2 Municipal employee training.....	35
BMP 6.3 Street sweeping.....	38

BMP 6.4 Cleaning of stormwater structures including catch basins.....38  
BMP 6.5 Maintenance and upgrading of stormwater conveyances and outfalls.....39

Appendix A Public Education Backup Information  
Appendix B ISWG Attendance PY6  
Appendix C Hydrant Flushing Information  
Appendix D MCM 4 and 5 Information

**GENERAL REGULATED MS4 INFORMATION**  
**Excerpted from:**  
**SECTION 2**  
**of the**  
**City of Biddeford's Stormwater Management Plan 2013-2018**  
**(City's SWMP 2013-2018)**

**Section 2.1 Location Maps**

The location map for the permittee is included as Figure 2.2.

**Section 2.2 Urbanized Area Map**

The urbanized area map was developed from the combined U.S. Census Bureau 2000 and 2010 Urbanized Areas and is included as Figure 2.3.

**Section 2.3 Priority Watersheds**

The City's highest priority watershed is the Thatcher Brook Watershed. The City has chosen to focus on this watershed, including but not limited to the following reasons:

- 1) The coverage area of the Thatcher Brook Watershed being a large portion of the urbanized area.
- 2) Land use mixed density (single family, business & industry)
- 3) Complexity of the watershed's hydrography and underground sewer & storm systems.
- 4) The City is conducting a majority of its CSO abatement work within this watershed.
- 5) The DEP has conducted initial watershed work/monitoring in portions of this area and has indicated that additional focus should be placed on this watershed.
- 6) We have partnered with EPA & DEP on a Thatcher Brook Watershed Management Plan to better understand the watershed and how to improve and protect it, and more recently a 319 grant for implementation, as well.

The City's second highest priority watershed is the West Brook Watershed. If time and resources permit, the City hopes to implement additional measures within West Brook, once the City reaches its goals pertaining to the Thatcher Brook Watershed.

**Permit Contact information**

- A. PRIMARY CONTACT: City Engineer and MS4 Coordinator  
Tom Milligan | office: 207-284-9118; cell: 207-590-2963 [tmilligan@biddefordmaine.org](mailto:tmilligan@biddefordmaine.org)
- B. SECONDARY CONTACT: Public Works Director  
Jeff Demers | office: 207-282-1597; [jdemers@biddefordmaine.org](mailto:jdemers@biddefordmaine.org)

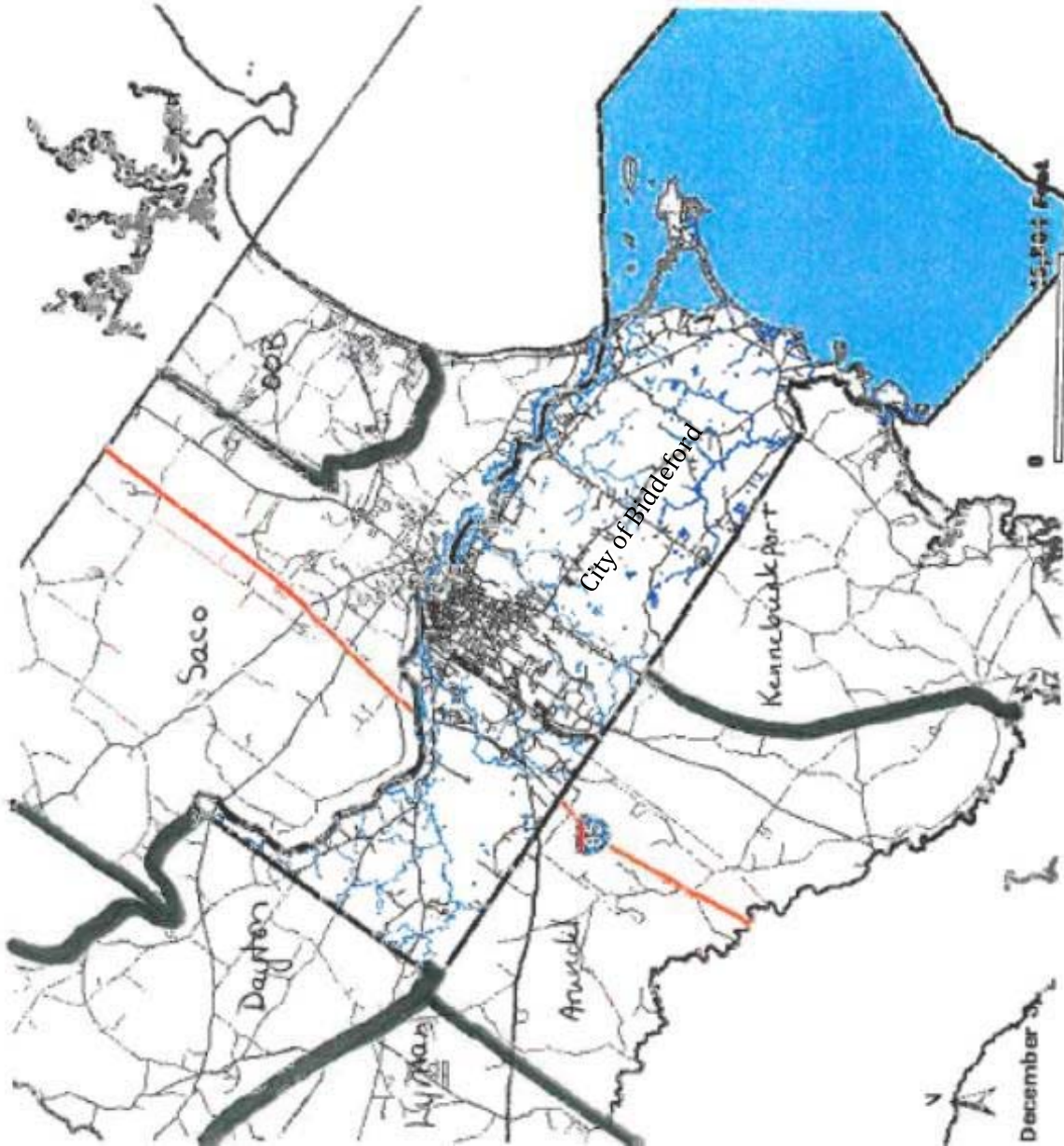
Address: City of Biddeford 205 Main Street Biddeford, ME 04005



City of Biddeford  
Location Map

Figure 2.2

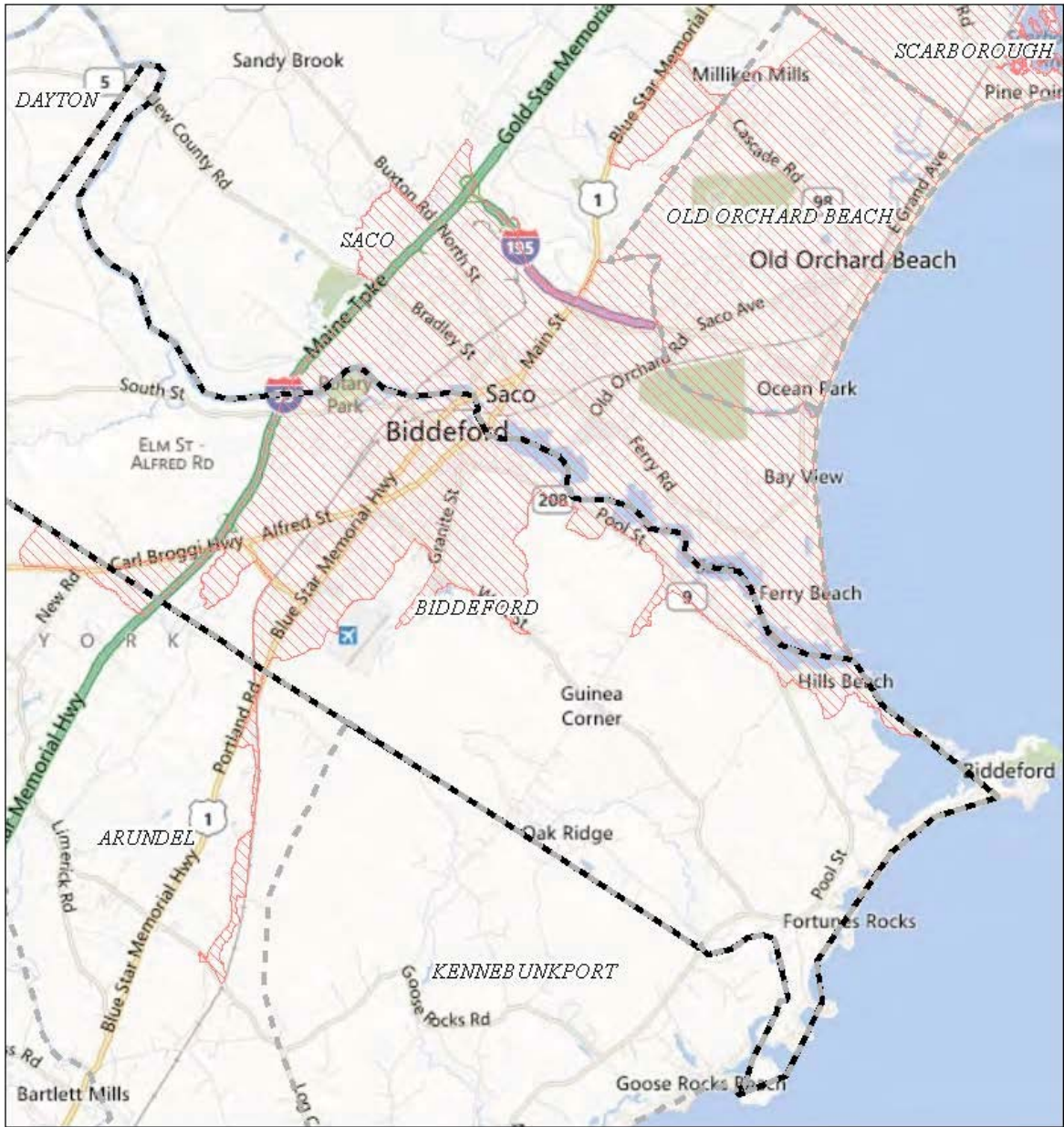
Locus Map



**Disclaimer**  
City of Biddeford, ME makes no warranty or representation as to the accuracy, timeliness or completeness of any of the data. The City of

file:///C:/DOCUME~1/FRANC~1/LOCALS~1/Temp/riGNJFI.htm

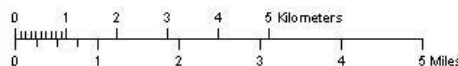
City of Biddeford Location Map – Figure 2.2 from City’s SWMP 2013-2018



**NPDES Phase II Stormwater Program  
Automatically Designated MS4 Areas**

**Biddeford ME**

 Regulated Area (2000 + 2010 Urbanized Area)



Town Population: **21057**  
Regulated Population: **17187**  
(Populations estimated from 2010 Census)



Urbanized Areas, Town Boundaries:  
US Census (2000, 2010)  
Base map © 2010 Microsoft Corporation  
and its data suppliers

US EPA Region 1 GIS Center Map #8824, 11/19/2012

Biddeford Urbanized Area - Figure 2.3 from City's SWMP 2013-2018



**MINIMUM CONTROL MEASURES**  
**Excerpted from:**  
**SECTION E**  
**of the**  
**City of Biddeford's Stormwater Management Plan 2013-2018**  
**(City's SWMP 2013-2018)**

**MCM 1      Public Education and Outreach**

The City of Biddeford continues to fulfill the requirements for Public Education and Outreach through participation in the Interlocal Stormwater Working Group (ISWG) and the permittee's funding to the ISWG for Public Education and Outreach services, as described in this section of the plan.

For a summary of public education and outreach activities achieved through ISWG, see **Appendix A: Summary of Minimum Control Measures 1 & 2 for Permit Year 6.**

**MCM 1 Goals**

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

**BMP 1.1 - Continue Awareness Outreach Efforts.**

Measurable Goal 1.1.1

In PY1, ISWG continued and revised the Statewide Awareness Plan implemented from 2008-2013 for implementation in the 2013-2018 Permit Cycle.

Implementation of awareness activities continued in PY2 through PY 6, including these listed on the SWMP:

- a) Maintain a link to [www.thinkbluemaine.org](http://www.thinkbluemaine.org) on municipal website;
- b) Participate in a statewide media campaign to include 12 months of television advertisements and 12 months of online advertisements that direct to [www.thinkbluemaine.org](http://www.thinkbluemaine.org); and
- c) Promote their approved public event.

In PY3 & PY4, these activities continued, including:

- a) A link on the City's website
- b) ISWG contributed to statewide awareness
- c) Volunteering and the promotion of approved public events

In PY5 and 6, the activities above continued.

## **BMP 1.2 – Update and implement Stormwater Awareness Plan.**

### Measurable Goal 1.2.1

In PY1, the Stormwater Awareness Plan was updated from the 2008 Plan, to continue raising awareness of stormwater issues, specifically the impact that polluted stormwater runoff has in the community(s).

The plan addressed the criteria and expectations listed in DEP's permit and the Plan itself, such as:

- a) **the target audience:** homeowners, aged 35 – 55, in the regulated MS4 municipalities
- b) **the outreach tool(s) to be used:** Television campaign, online campaign, public events with promotion
- c) **the message:** Water runs off their property, not all is absorbed, and carries with it pollutants, such as lawn chemicals, pet waste and oil drops. This polluted water enters the storm drain system and discharges, untreated, directly to water bodies used for drinking, fishing, and swimming.
- d) **the distribution system:** See Appendix A for details
- e) **the time line and implementation schedule:** See below and Appendix A
- f) **the person(s) responsible for implementation:** Cumberland County Soil & Water Conservation District (CCSWCD) as the staff for ISWG
- g) **an impact evaluation protocol:** completed each year with an in-depth assessment in PY5
- h) **a plan modification protocol:** completed in PY4 with DEP approval
- i) **the goals:** 50% of target audience will understand the message

The Plan submittal and approval for PY 1 through 5 was:

- a) Plan submittal 12/16/13 and 1/10/14
- b) Plan approval 1/15/14
- c) Revised plan approved 2/21/17

In PY6, The Maine DEP issued guidance to MS4s indicating they should follow their PY4 public education plans during PY6, and contact Maine DEP if they would be deviating from any PY4 activities.

On behalf of all MS4s, CCSWCD contacted the Maine DEP via email on 12/19/2018 and proposed the following adjusted activities for PY6:

Each MS4 cluster (AVSWG, ISWG, and SMSWG) will coordinate an online media campaign in their region through the placement of ads on Facebook. Each cluster (AVSWG, ISWG, and SMSWG) will provide DEP with at least one Facebook ad authorized contact (name and email). The ducky ads will run for six months, from January through June 2019. Ads will be targeted to the identified awareness audience (men and women, ages 25-65+, who live in Maine). These ads will direct viewers via click-throughs to the Think Blue Maine website. This will be done in lieu of television advertising.

On 12/21/2018 the DEP approved of the proposed activities for general public awareness. In addition, CCSWCD clarified and DEP agreed that no

survey/evaluation-related activities needed to be completed, but that one additional awareness activity needed to be completed as was required in PY 4.

#### Measurable Goal 1.2.2

Unless DEP responds in writing or verbally otherwise, then as of February 1, 2014 the Stormwater Awareness Plan is considered approved and implementation of the Stormwater Awareness Plan will begin within one week of approval.

PY6 RESULTS OF STATEWIDE AWARENESS PLAN: Appendix A contains the details of implementation of the online media campaign, and promotion and participation in local events.

### **BMP 1.3 – Develop and implement Municipal Permit Awareness Plan.**

#### Measurable Goal 1.3.1

PY1:

- A Permit Awareness Plan was developed to raise awareness of stormwater issues including MS4 permit requirements from municipal employees, elected officials and volunteers within municipal government. The plan fulfilled DEP's criteria:
  - a) **the target audience:** municipal employees and decision makers
  - b) **the outreach tool(s) to be used:** informational materials (fact sheets, PowerPoint presentations, posters), surveys, direct communication
  - c) **the message:** understand that the City has an MS4 permit and what the requirements are relative to their position
  - d) **the distribution system:** one-on-one meetings, Council presentations, conference(s), etc.
  - e) **the time line and implementation schedule:** PY1 materials development, PY2 delivery via meetings with CCSWCD, PY3-PY4, City Council presentations, PY5 meeting with City Manager
  - f) **the person(s) responsible for implementation:** CCSWCD through ISWG along with the City Engineer
  - g) **an impact evaluation protocol:** a survey of ISWG representative was conducted annually
  - h) **a plan modification protocol:** updated in PY5 to include City Managers
  - i) **the goals:** increased understanding of MS4 permit and requirements

PY2:

- Fact sheets on City's MS4 permit and requirements were distributed to City Councilors and Departments Heads by CCSWCD
- Permit-awareness presentation provided to City Council on 2/3/15 by CCSWCD
- Thatcher Brook Watershed presentation to City Council on 3/17/15 by consultant
- Several interdepartmental meetings were held in Spring 2015 with CCSWCD

PY3:

- Permit-awareness presentation provided to City Council on 6/7/16 by Tom Milligan, City Engineer/MS4 Coordinator
- Thatcher Brook presentation at the Conservation Commission by UNE students
- Attendance at 2015 Maine Stormwater Conference by 3 municipal employees

- Attendance at LID Lunch & Learn on 6/22/16 by 2 municipal employees
- PY4:
- Permit-awareness presentation provided to City's Finance Committee on 2/21/17
  - Attendance at Regional Clean Water Collaborative meetings and a Green SnowPro training workshop by City Engineer/MS4 Coordinator/ISWG rep
- PY5:
- Meeting with Assistant City Manager and Public Works Director to discuss existing and new/anticipated MS4 permit requirements on 3/29/18 (meeting led by CCSWCD and City Engineer/MS4 Coordinator/ISWG rep)
  - Attendance at 2017 Maine Stormwater Conference by 2 municipal employees
  - Steering Committee meeting of the Regional Clean Water Collaborative to discuss a possible regional approach to stormwater management on 9/25/17
- PY6:
- CCSWCD met with the Biddeford City Manager and City Engineer on 2/15/2019 and provided updated information on MS4 compliance. This meeting 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.
  - CCSWCD updated the MS4 Fact Sheet for Biddeford.
  - The City Engineer updated the City Council on the MS4 program on 6/18/2019.
  - The Biddeford City Engineer participated in two meetings with ISWG partner organizations (New England Environmental Finance Center on 1/17/2019 and 5/16/2019)

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

Measurable Goal 1.4.1

In PY1, ISWG continued BMP adoption activities carried out in the previous BMP Adoption Plan in the 2008 MS4 Permit. Activities include:

- Providing a minimum of six adult education classes throughout the ISWG region per year;
- Work with a minimum of 21 retail locations to provide healthy lawn care education to consumers;
- Maintain the YardScaping website hosted on CCSWCD's website; and
- Provide information to targeted neighborhoods via direct mail, neighborhood canvassing, socials or other means.

In PY3 & PY4, these activities continued, including:

- Home Depot in Biddeford participated in the Point of Sale Program
- YardScaping adult education, Home Depot staff training events, and Home Depot Community education events
- YardScaping information distributed within priority neighborhoods

In PY5, these activities continued, including:

- Home Depot in Biddeford continues participated in the Point of Sale Program
- Community Education events were held at:
  - Home Depot on 8/26/17 (18 interactions) and 6/1/18 (10 interactions)

- Elements Café on 8/29/17 (18 participants)

In PY6, these activities continued, including:

- a) Home Depot in Biddeford continues participated in the Point of Sale Program
- b) Community Education events were held at:
  - Home Depot on 9/29/18 (5 interactions)

## **BMP 1.5 – Update and implement BMP Adoption Plan**

### Measurable Goal 1.5.1

In PY1, a Plan was developed to encourage targeted audience to adopt or practice specific BMPs that will reduce stormwater pollution. The Plan fulfilled DEP’s criteria:

- a) **The BMP:** YardScaping practices
- b) **The target audience:** college-educated homeowners, aged 35-55, residing within UA within ISWG communities that currently apply fertilizers and pesticides
- c) **The outreach tool(s) to be used:** Informational brochures, fact sheets, websites, free media, etc.
- d) **The message:** reduce use of lawn chemicals
- e) **The distribution system:** Point-of-sale information where lawn chemicals are available, adult education and social/community events in stores and neighborhoods, etc.
- f) **The time line:** See Appendix A
- g) **The person(s) responsible for implementation:** CCSWCD as staff for ISWG
- h) **An impact evaluation protocol:** see Appendix A
- i) **A plan modification protocol:** none needed
- j) **The targeted level of change as a result of the outreach effort:** 15% of target audience will reduce lawn chemicals by adopting YardScaping practices instead

### Measurable Goal 1.5.2

Unless DEP responds in writing or verbally otherwise, then as of January 15, 2014 the BMP Adoption Plan is considered approved and implementation of the Plan will begin.

As mentioned above, see **Appendix A** for details which include:

- a) Plan submittal 12/16/13 and 1/10/14
- b) Plan approval 1/15/14

PY6: See Measurable 1.4.1

## **BMP 1.6 – Develop and implement Targeted Outreach in Priority Watershed Plan.**

### Measurable Goal 1.6.1

In PY1, a Plan was required to be developed on how to meet either permit requirement H.1.a.iv.1 (target a specific activity in a priority or impaired waterbody) or H.1.a.iv.2 (on a common stormwater pollutant issue). In collaboration with the Southern Maine Stormwater Working Group (SMSWG), a Plan to inform legislators, specifically the Environment and Natural Resource Committee, on the impacts of coal tar sealants, and the viability of potential alternative products. The plan fulfilled DEP's criteria:

- a) **Identify the specific stormwater activity or pollutant to be addressed:** application of coal tar sealants
- b) **the target audience:** legislators
- c) **the outreach tool(s) to be used:** fact sheets, studies, and other science-based information
- d) **the message and the BMPs to be encouraged:** coal tar sealants can have adverse impacts on watershed health, alternative products are suggested
- e) **the time line and implementation schedule:** see Appendix A
- f) **the person(s) responsible for implementation:** CCSWCD as staff for ISWG in collaboration with SMSWG members
- g) **the goal of the outreach effort:** provide information on coal tar sealant impacts and the viability of alternatives so legislators can make informed decisions about legislating the use of coal tar sealants
- h) **impact evaluation protocol:** legislation will be introduced to limit the use of coal tar sealants

PY6: On behalf of ISWG and SMSWG, the SMSWG consultant provided the DEP with two sets of proposed activities for PY6 via email on 12/18/2018. One proposed set of actions would be implemented if the DEP opposed the proposed Coal Tar Ban, the other would be implemented if the DEP supported the Coal Tar Ban. The DEP accepted the proposed activities on 12/21/2018 and asked that the MS4s provide a check-in mid-March in the event no decision had been made on whether DEP would support or oppose the Bill.

DEP did support the bill. The MS4s notified the DEP stormwater contacts of this on 2/22/2019.

### Measurable Goal 1.6.2

In PY1, a final plan will be developed and submitted. Unless DEP responds in writing or verbally otherwise, then as of January 5, 2015 the Targeted Outreach in Priority Watershed Plan is considered approved and implementation will begin.

As mentioned above, see Appendix A for details which include:

- a) Plan submittal 12/16/13 and 1/10/14
- b) Plan approval 1/15/14

In PY3 & PY4, efforts included:

- o Plan revision approval received 4/8/16
- o Outreach to DEP & Legislators on 3/3/16

- Outreach to Legislators on 11/29/16, 3/9/17, and 5/17/17

In PY5, because two previous legislative bills failed, an update to the Plan included outreach to local paving contractors to assess if they have access to, and offer, alternative products, like asphaltic or latex/acrylic sealants. On behalf of ISWG, CCSWCD attempted to reach 33 contractors in within the ISWG communities. Of the 33 contractors identified, 12 contractors provided the following information:

- 2 contractors do not apply seal coating
- 10 contractors do apply seal coating
  - 5 of these were not interested in receiving information on alternative products
  - 5 were interested in receiving (and received from CCSWCD) information on alternative products
    - 3 were already using alternative products exclusively
    - 1 only used coal tar sealant when requested by the customer
    - 1 was not sure if they were already using alternative products

PY6: Because the DEP supported the Bill, the following actions were taken:

1. The Municipalities offered to meet with the bill's sponsor Matthea Daughtry via email on 12/28/2018 and 3/4/2019. Ms. Daughtry could not meet, but did call on 3/5/2019 in preparation for testimony on 3/7/2019.
2. The USGS study of runoff in Augusta from coal tar-coated parking lots and non-coal-tar coated parking lots was not published due to a lack of funding. The Municipalities coordinated with the USGS on several occasions between 11/30/2018 and 3/6/2019 to ensure their data tables and figures from the 2017 testimony were accurate. The communications included emails to the Maine DEP to inform them of the USGS study in Augusta.
3. CCSWCD updated the Coal Tar Fact Sheet, and provided it to legislators at the MEWEA legislative breakfast 2/28/2019 along with a copy of the bill. The MS4s' consultant announced the bill to the attendees and referenced the handouts.
4. Both CCSWCD (on behalf of ISWG) and the MS4's consultant testified neither for nor against the bill, but provided the ENR Committee members information about the environmental and health effects of Coal Tar Sealants. The MS4s's consultant reviewed the USGS data tables and figures in detail for the committee.
5. The Coal Tar Bill passed the ENR Committee with a recommendation "Ought to Pass", and passed the House, but failed in the Senate.
6. The Coal Tar Bill passed in the legislature and was signed into Law by the Governor.

## **VOLUNTARY BMP 1.7 – School Outreach**

### Measurable Goal 1.7.1

In PY1, ISWG continued (as a voluntary BMP) the incorporation and

implementation of “It’s all CONNECTed” school curriculum in elementary and/or middle schools.

### Measurable Goal 1.7.2

#### **PY6 RESULTS OF SCHOOL OUTREACH:**

Total students: 18 (CCSWCD)

Total contact hours: 90 (CCSWCD)

Lesson topics: Watershed ecology: Students evaluated the health of Thatcher Brook during a field trip to two Maine DEP monitoring sites where they conducted the following research: water quality parameters and testing; bioassessment using macro-invertebrate sampling; river characteristic observations; and compared data from the two sites to develop their ideas about human impact on the river ecosystem.

School: Biddeford High School

### **VOLUNTARY BMPs 1.8 – Additional Miscellaneous items**

Though no specific measurable goals were identified as part of the original Stormwater Management Plan, this BMP tracks unanticipated Public Awareness and Education items that were completed beginning in Permit Year 6.

#### **PY6:**

On April 16, 2019, the City approved a ban on single-use plastic bas at all retailers. The ordinance takes effect July 15, 2019. Although the ban was passed primarily to prevent contamination of recycling loads, the ban has the added benefit of litter reduction. (Keep America Beautiful reports that plastic bags constitute 5% of all litter in America) .

The City also continued an education and water conservation program with area schools and organizations. The program includes information about wastewater collection, treatment and conservation as well as stormwater control Details regarding number of students trained are not maintained.

In PY6, an Eagle Scout worked with the City’s Public Works Department and other volunteers to stencil 27 storm drains in the Biddeford Industrial Park to remind local business about the presence of two endangered and threatened turtle species (Thatcher Brook).



## **MCM 2 PUBLIC INVOLVEMENT AND PARTICIPATION**

The City of Biddeford continues to fulfill the requirements for Public Involvement and Participation through participation in the Interlocal Stormwater Working Group (ISWG) and the permittee's funding to the ISWG for Public Involvement and Participation services, or through directly fulfilling the requirements, as described in this section of the plan.

### **MCM 2 Goals**

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

### **BMP 2.1 – Public Notice Requirement**

#### Measurable Goal 2.1.1

ISWG and/or its members will follow state and local Public Notice requirements for both ISWG and individual Stormwater Management Plans. Copies of the plans are made available on DEP's web site.

#### Measurable Goal 2.1.2

ISWG and/or its members will follow state and local Public Notice requirements when involving stakeholders in the implementation of the Small MS4 General Permit.

In PY1 & PY2, the activities to fulfill MG 2.1.1 & MG 2.1.2 included:

- Tom Milligan submitted the Notice of Intent (NOI) to DEP on July 26, 2013
- The City of Biddeford:
  - Provides public notices for all City activities and projects, including the NOI/MS4 permit
  - Follows all applicable public notice requirements
- Tom Milligan attended all ISWG meetings on behalf of the City to fulfill our participation obligation. (6 Meetings PY1, 8 Meetings PY2)

In PY3 & PY4, the activities included:

- Tom Milligan attended all six ISWG meetings in PY3 & PY4, and John Malloy (new Staff Engineer) attended one ISWG meeting
- The City continues to:
  - Maintain the SWMP available for public review, which also still posted on DEP website
  - Follow public notice requirements

In PY5, the activities to accomplish these MGs included:

- Tom Milligan attended all six ISWG meeting
- The City continues to maintain the SWMP and follow public notice requirements, as detailed above.

In PY6, the activities to accomplish these MGs included:

- Tom Milligan attended all seven ISWG meeting (see **Appendix B**)
- The City continues to maintain the SWMP and follow public notice requirements, as detailed above

## **BMP 2.2 - Host Public Events**

### Measurable Goal 2.2.1

ISWG and/or permittee will annually host/conduct or participate in at least one public event such as storm drain stenciling, stream clean-up, 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 adult residents living in the Urbanized Area of the City of Biddeford. The message will be tailored to best reach the target audience given the characteristics of the public event. The ISWG and/or permittee will consult with DEP to ensure the event will satisfy requirements.

#### **PY1:**

- Tom Milligan, City Engineer, volunteered at the Urban Runoff event and Jennie Franceschi, Planning Engineer, participated in the Urban Runoff event.
- Tom Milligan staffs the City's monthly Shellfish Committee and the Harbor Commission meetings. Both meetings provide the City with a venue to discuss stormwater related issues, and best management practices that pertain to coastal waters.

#### **PY2:**

- Tom Milligan, City Engineer, volunteered at the Urban Runoff event and Jennie Franceschi, Planning Engineer, participated in the Urban Runoff event. Three event flyers were posted in City Buildings.
- Tom Milligan staffs the City's monthly Shellfish Committee and the Harbor Commission meetings. Both meetings provide the City with a venue to discuss stormwater related issues, and best management practices that pertain to coastal waters
- School Art Awareness Program – The Middle School Art Teachers incorporated stormwater awareness into their curriculum by asking the students to create designs to raise public awareness which are proposed to be painted around stormwater catchbasins in the Biddeford Industrial Park on Morin St. The Art Teachers made it into a contest and they picked the best designs to be painted. The teachers are coordinating with volunteers to implement the paintings during PY3.

#### **PY3:**

- Tom Milligan, City Engineer, volunteered at the Urban Runoff event. Nine Biddeford employees participated in the Urban Runoff Event. Twenty- five flyers were provided to the City to advertise the event.
- Tom Milligan continues to staff the City's monthly Shellfish Committee and the Harbor Commission meetings. Both meetings provide the City with a venue to discuss stormwater related issues, and best management practices that pertain to coastal waters.
- The Downtown Develop Commission sponsors clean-up activities that benefit the river and streams.

#### **PY4:**

- Tom Milligan (City Engineer) and John Malloy (Staff Engineer) volunteered for the Urban Runoff event.
  - Four Biddeford employees participated in the Urban Runoff event.
  - Twenty-five posters were provided to the City to advertise the event, including within City buildings, the post office, two fitness clubs, a

tanning salon, and two health food/supplement stores.

- Tom Milligan continues to staff the City's monthly Shellfish Committee and the Harbor Commission meetings.

PY5:

- Three municipal volunteers assist the day of the Urban Runoff event and have become integral members of the team;
  - Tom Milligan has assisted at the runner food table for 5 years
  - John Malloy and his wife oversee the kid's bounce house, so CCSWCD staff can discuss YardScaping and other programs with parents attending the event
- Other Urban Runoff 5K assistance includes:
  - Four Biddeford employees participating in the Urban Runoff event.
  - Twenty-five posters posted throughout City buildings and facilities, as well as in other places throughout the City, similar to those areas detailed in PY4 above.
- Tom Milligan continues to staff the City's monthly Shellfish Committee and Harbor Commission meetings, where stormwater related issues are discussed as means to preserve coastal water quality.
- John Malloy monitors the Conservation Commission meetings by reviewing minutes and maintaining communications with the Chair to identify any projects of interest, such as Thatcher Brook Watershed projects and implementation of the Watershed Management Plan.
- The Downtown Development Commission participated in a variety of environmental activities including:
  - Earth Day Clean-up. A day where over a hundred volunteers over the course of Earth day weekend cleaned up the streets and parks of Biddeford by clearing litter, sweeping along the curb, and collecting cigarette butts.
  - Youth Day of Caring. A day where 70 Middle School students cleaned up the streets of the downtown.
  - Biddeford High School Day of Service. A day where 40 Athletes from Biddeford High School conduct an annual downtown litter clean-up.
- On Earth Day (4/21/18), an e-waste and prescription disposal drop off event was promoted, where residents were able drop off these regulated wastes at the transfer station.

PY6:

- One municipal volunteer assisted the day of the Urban Runoff event and has become an integral member of the team;
  - Tom Milligan has assisted at the runner food table for 5 years
- Other Urban Runoff 5K assistance includes:
  - Five Biddeford employees participating in the Urban Runoff event.
  - Approximately 10 posters were hung throughout City buildings and facilities, as well as in other places throughout the City, similar to those areas detailed in PY4 above.
- Tom Milligan continues to staff the City's monthly Shellfish Committee and Harbor Commission meetings, where stormwater related issues are discussed as means to preserve coastal water quality.
- Tom Milligan monitors the Conservation Commission meetings by reviewing minutes and maintaining communications with the Chair to identify any projects

of interest, such as Thatcher Brook Watershed projects and implementation of the Watershed Management Plan.

- The Heart of Biddeford Organization (a downtown revitalization organization) facilitated a variety of environmental activities including:
  - Earth Day Clean-up 4/27/2019. A day where volunteers over the course of Earth day weekend cleaned up the streets and parks of Biddeford by clearing litter, sweeping along the curb, and collecting cigarette butts.
  - Youth Day of Caring 5/24/2019. A day where three classes of Middle School students cleaned up the Mission Hill Community Garden.
  - .
- On Earth Day (4/27/18), an e-waste and prescription disposal drop off event was promoted, where residents were able drop off these regulated wastes at the transfer station.

### **BMP 2.3 – Additional Best Management Practices**

#### Measurable Goal 2.3.1: Household Hazardous Waste Collection

The City will continue to offer a minimum of 3 collection events a year for household hazardous wastes. Additionally, we accept Universal Waste seven days a week year-round at the City’s Transfer Station located adjacent to Public Works on Hill Street. This includes CRTS, TVs, fluorescent bulbs, electronics and batteries. Annual data for PY is listed below. Please note that “1 Household” is approximately equivalent to 10 gallons of liquids or 20 pounds of solids.

- PY1: 361 Households participated
- PY2: 265 Households participated
- PY3: 238 Households participated
- PY4: 498 Households participated
- PY5: 334 Households participated
- PY6: 171 Households participated

Measurable Goal 2.3.2: Leaf Collection

PY1 through PY6: The City continues to offer free curbside leaf collection to its residents in the fall annually. Residents may also drop off leaves and may dispose of yard waste and brush at the Public Work Facility at no charge.

Measurable Goal 2.3.3: Biddeford Conservation Commission Earth Day Outreach

PY2:

- The Biddeford Conservation Commission (BCC) set up a table on Earth Day 2015 at the Household Hazard Waste drop off to provide citizens handouts on landscaping practices to reduce pollution and offer soil testing kits to homeowners, which are then sent to UMaine Soils Testing Lab. A report is provided back to the homeowner, however if the homeowner has questions on the report they can contact the UMaine lab for an explanation of the results. Approximately 10-15 kits were distributed.

PY3 through PY6:

- BCC's effort was continued with additional promotion from the City's and BCC's websites. Additional information on healthy landscaping practices were added in PY4 & PY5 and continue to be promoted in PY6.

## **MCM 3 Illicit Discharge Detection and Elimination**

### **MCM 3 Goals**

1. Keep current watershed-based storm sewer system infrastructure map;
2. Enforce a non-stormwater discharge ordinance;
3. Implement a prioritized dry weather outfall inspection plan; and
4. Develop and implement a strategy to detect any illicit discharges to the open ditch system within each MS4's highest priority watershed.

Implementation of this BMP includes coordination with the Maine Water Company regarding water line and hydrant flushing to determine if either is a significant contributor of pollutants to the MS4.

### **BMP 3.1 – Keep Current a watershed-based storm sewer system infrastructure map.**

#### Measurable Goal 3.1

The City continues to keep map(s) current and ensure that maps are reviewed for any updates at least annually. Outfalls are numbered and added to our database and System Map.

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

#### PY3:

- As in PY1 & PY2, the City is continually updating these maps, as a matter of common practice. Outfalls, as they are numbered, are added to our database and System Map.
- The current map has the Sanitary and Storm System in the same layer to view, as directed by DEP during the 2015 MS4 audit.
- In response to PY2 DEP's review comment Question 3A: As new infrastructure is added to the system, the as-builts are incorporated into the mapping system
  - As-builts are from private development projects for either commercial or residential with new roads. The drawings are provided to the City upon completion of project, prior to release of the performance guarantee.

#### PY4:

- The City continues to update infrastructure maps annually in GIS to reflect changes infrastructure;
- Updates to GIS maps include, but are not limited to: stormwater infrastructure, sanitary sewer, water lines, hydrants, ditches, outfalls and private development
- 27 potential ditch outfalls were identified and are in the process of being verified and added to GIS mapping.

#### PY5:

- As in PY1 through PY4, updating the City's MS4 maps is a matter of common practice.
- In response to PY4 DEP's review question 3B: GIS staff incorporated changes as needed with a map revision date of 9/27/17.
- The date of the last map revision as of the date of this report is 7/31/18, which includes:
  - Adding the 27 potential ditch outfalls identified in PY4
    - Signs were ordered to post the unique identifier at each of the newly

- identified stormwater outfalls, which will be installed in PY6/PY7.
  - A ranking sheet to document the condition and severity of issues detected during inspections was developed and implemented in PY5. It was used to document 12 of the 27 ditch outfalls in PY5 that were subsequently maintained (e.g., remove excessive vegetation/cattails and sedimentation, rehabilitate velocity dissipation/riprap/check dams, etc.).
- Including other infrastructure (hydrants, pipes, etc.) and/or connections with private development based on as-builts

**PY6:**

- As in PY1 through PY5, updating the City’s MS4 maps is a matter of common practice.
- The City Engineer and Engineering Technician have access to the City’s GIS to review infrastructure and request changes as needed.
- Signs were installed at all outfalls except for 6 in Thatcher Brook, which are scheduled to be installed during PY7.
- The ranking sheet continues to be used to document maintenance needed based on inspections.

**BMP 3.2 – Implement non-stormwater discharge ordinance.**

Measurable Goal 3.2.1

Permittees subject to the 2008 MS4 General Permit shall to the extent allowable under State or local law, continue to implement, and provide annual reporting of the permittee’s non-stormwater discharge ordinance that effectively prohibits, unauthorized non-stormwater discharges into the permittee’s storm sewer system.

**PY1:**

- Procedures for if illicit discharges were discovered and documented were developed.
  - To determine the source dye testing, smoke testing and/or closed-circuit TV are used to investigate the storm system.
  - Once determined, the property owner is notified and is required to address the issue.
  - Property owners have been cooperative and compliant in this process and have not required the City to use legal action to address illicit discharges.
- In dry weather inspection process, we use the parameters of sheen, odor, color, suds or turbidity to detect potential illicit discharges.
  - As per Chapter 70 of the Biddeford Code of Ordinances, the City regulates all discharges into its systems. If a prohibited discharge enters the City system, the City has the authority to notify the offender to cease discharging of the prohibited discharge into the City System.
    - If the discharge is from an industrial/commercial property, the Sewer Director will be the point of contact.
    - For discharges from residential properties, the Code Enforcement Officer is the point of contact.

- If the discharger does not voluntarily comply after receiving notice of the Prohibited Discharge, the City has the authority to bring legal action against the discharger.

PY2: Several illicit discharges were found in PY2, as detailed below:

- One Illicit Discharge for a sanitary sewer into the downtown Separate Storm Sewer System was discovered. It was removed and then connected into the Sanitary System.
- Two Illicit discharges were noted in this reporting period for erosion issues into the MS4 system and were addressed.

PY3: No illicit discharges were found in PY3.

PY4: No illicit discharges were found or reported by the public in PY4. However, the City identified interconnected MS4s and sent letters notifying the municipalities of the City's non-stormwater discharge ordinance.

PY5: Although no illicit discharge complaints were received, the City discovered (and is proactively working to abate) one potential illicit discharge located near the headwall of where SWO-16 discharges to a tributary of the Saco River within a business park.

- The City used CCTV to investigate a sewer line proximate to SWO-16;
- No cross-connection was observed, but exfiltration from a sagging sewer line may be causing infiltration into the stormwater pipe or trench; and
- The City plans to replace 300' of sewer and line the remaining portion in PY6/PY1.

PY6: No illicit discharges were identified during catch basin cleaning or outfall inspections. Related to the sewer line near SWO-16, The City lined 600 feet of the sagging sewer line and plans to line the remainder during PY7. The 300 feet of line will not be replaced (televising showed lining was a better corrective measure).

### Measurable Goal 3.2.2

In PY1, coordinate with the Water District via mail or in person to evaluate whether or not water line or hydrant flushing from potable water sources is a significant contributor of pollutants to the MS4. Evaluation will include the following action:

- Provide the Water District with a location map showing the extent of the municipal urbanized area, and the highest priority watershed(s).
- Gather information from the Water District, 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.

PY1: Accomplished

- The City, in conjunction with surrounding communities (Biddeford, Saco, OOB, Scarborough and Freeport) served by Maine Water Company, submitted a joint letter with a questionnaire to use as a starting point to determine if water



- line or hydrant flushing is a significant contributor of pollutants to the MS4.
- The City has the locations of all hydrants in our GIS system and they are shown on our sewer system maps. As part of a multi-community effort, we received the requested information from the questionnaire on hydrant flushing from Maine Water Co.

### Measurable 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 will work with the Water District 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 Water District's testing results of the total residual chlorine for any such discharges.

#### PY2: Accomplished

- The City has added the hydrants to the Stormwater/Sanitary Sewer Map. The City has on file all correspondence on these matters.
- Hydrant flushing was discussed in detail at the March 19, 2015 ISWG meeting.
  - A letter was sent to Maine Water Company asking for water quality data.
  - The City of Biddeford continues to be part of the conversation with Maine Water Co. and PWD to ensure that no violation of water quality standards occurs as a result of hydrant flushing activity.

### Measurable Goal 3.2.4

Permit Years 3 – 6, 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 Water District's testing results of the total residual chlorine for any such discharges.

#### PY3 through PY6: Accomplished

- The City continues working with Maine Water Co. to ensure Best Management Practices are followed in their hydrant flushing practices so that they do not cause or contribute to exceedances of water quality standards.
- In response to PY2 DEP review comment Question 3C: Hydrants flushed by Maine Water Company in each year are as follows:
  - 458 hydrants flushed in PY3
  - 594 hydrants flushed in PY4
  - 391 hydrants flushed in PY5
  - 234 hydrants flushed in PY6
- In response to PY2 DEP comments Question 3D: Maine Water Company continues to use and record BMPs for all hydrants identified within 200 ft. of an impaired water body, per the SOP discussed above.
- In PY3, the City received a letter from Steve Cox, Director of Engineering, Maine Water Co. that included their hydrant flushing SOP, and flushing log (included in PY3 Annual Report).
  - In PY4, the SOP was updated to include all flushings within 1,000 feet (up

- from 200 feet) from targeted water bodies (like an urban impaired stream) where a de-chlorination BMP is needed.
- In PY5 and PY6, the SOP was continued at hydrants within Thatcher Brook watershed, the City's highest priority watershed, where no residual chlorine was detected following dechlorination except at one hydrant in PY6. The operator at the hydrant stated they noted the dechlorination tablets were spent, and replaced them. The discharge was reported to be approximately 3,000 gallons across pavement and discharged into a private storm drain system, which in turn discharges to a private ½ acre detention pond. Because the discharge was to a private system and large detention pond, there was no impact to waters of the state or the MS4 system.
- The PY5 report from Maine Water Company was included in the PY5 Annual report to DEP
- The PY6 report from Maine Water Company is included as **Appendix C** of this Annual Report.

Measurable Goal 3.2.5

If it is determined by the end of PY3, that water line or hydrant flushing is a significant contributor of pollutants to the MS4, and the Water District 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 PY4, update their IDDE ordinance to allow enforcement of discharges that cause exceedances of water quality criteria.

PY3 through PY6: Accomplished

Because Maine Water Company has demonstrated their willingness to voluntarily implement flushing BMPs and document chlorine results accordingly, water line or hydrant flushing is not considered a significant contributor of pollutants to the City's MS4 at this time.

**BMP 3.3 – Implement dry weather outfall inspection program.**

Measurable Goal 3.3.1

The City continues to implement prioritized dry weather outfall inspection plan based on drainage areas within the highest priority watershed, Thatcher Brook.

PY1 through PY2: Accomplished

- PY1 & PY2:
  - 30 samples in Thatcher Brook watershed were collected each year.
  - The parameters of sheen, odor, color, suds and turbidity were used to determine if illicit discharges were detected.
  - All samples were clear with no evidence of illicit discharges detected.
- In response to PY2 DEP request 3A: The City participated in sampling of the Thatcher Brook for the State Department of Agriculture. The purpose of the sampling was to determine the presence and levels of pesticide run-off in the watershed. The State Department of Agriculture has the results.

Measurable Goal 3.3.2

The City revised the dry weather inspection plan to conduct dry weather inspections in different watersheds to evaluate discharges for illicit connections.

PY3 through PY6: Accomplished

- There are 72 outfalls within UA in Biddeford:
  - PY3:
    - 39 dry weather outfall inspections were conducted in the priority watersheds.
    - 12 outfalls had dry weather flow present. These dry weather flows have been identified as groundwater flow from underdrains and pipe infiltration.
    - No illicit discharges were found.
  - PY4:
    - 40 dry weather stormwater outfall (SWO) inspections were conducted;
      - 27 in Thatcher Brook
      - 6 in West Brook
      - 2 in Richardson Brook
      - 1 in Dungeon Brook
      - 4 in Saco River
    - 13 of the SWO had dry weather flow. Flow is likely ground water infiltration and flow from footing drains.
    - Based on visual and odor observations, no illicit discharges detected.
  - PY5 (corrected based on DEP annual report comments):
    - 20 dry weather stormwater outfall (SWO) inspections were conducted;
      - 11 in Thatcher Brook
      - 2 in West Brook
      - 1 in Richardson Brook
      - 2 in Dungeon Brook
      - 4 in Saco River
    - 5 of the SWOs had dry weather flow. Flow is likely ground water infiltration and flow from footing drains.
    - Based on visual and odor observations, no illicit discharges detected.
  - PY6: There are 96 outfalls within the UA in Biddeford
    - 55 dry weather stormwater outfall (SWO) inspections were conducted;
      - 37 in Thatcher Brook
      - 7 in West Brook
      - 2 in Richardson Brook
      - 3 in Dungeon Brook
      - 5 in Saco River
      - 1 that discharges to a wetland
    - 27 of the SWO had dry weather flow. Flow is likely ground water infiltration and flow from footing drains because of all the rain this spring. The outfall inspections were conducted in June 2019.
    - Based on visual and odor observations, no illicit discharges

detected.

- Protocols for illicit discharge detection and elimination are as follows:
  - Our inspectors are to report any illicit discharges to either the City Engineer or the Planning Engineer.
  - If flow is observed during a dry weather inspection, Dye Testing, Smoke testing, and/or Closed-Circuit TV are then used to investigate the storm system to determine the source of flow. Most instances find that the source is groundwater infiltrating the storm system through joints, pipe cracks, or underdrains from roads.
  - If the City is notified of a potential illicit discharge, the same protocol above applies for these “Reported Discharges.”
- Illicit discharges were identified as follows:
  - PY1: A cross-connection with Sanitary System was “reported” in the downtown Separated Storm Sewer System, which was rectified.
  - PY2: Two Illicit discharges were noted in this reporting period for erosion issues into the MS4 system and were addressed immediately.
- Additional milestones (extra credit) were accomplished:
  - PY1:
    - A CSO from Brook Street (stormwater drains to Thatcher Brook) was closed.
    - As part of the Thatcher Brook Watershed Management Plan, the City and DEP have been testing DO, temperature, phosphorus, bacteria and conductivity all throughout the Watershed.
  - PY2:
    - Surface water monitoring, as described above, continued as part of the Thatcher Brook Watershed Management Plan.
  - PY3:
    - A CSO on Elm Street (Rt. 1) was closed.
    - Two catch basins flowing to CSO were removed from Adams Street.
  - PY4:
    - CSO #11 was closed.
  - PY5: The City did not close any CSOs this year.
  - PY6: The City did not close any CSOs this year, but they did remove 28 catch basins from the combined system, which are now considered separated storm drain system basins.

### Measurable Goal 3.3.3

The City began to implement an open ditch illicit discharge/illicit connection detection program, which included field identification of ditch outfalls and inspecting for illicit discharges during routine mowing and maintenance.

PY1 through PY6: Accomplished

- In PY1, the City’s Public Works Department began conducting routine inspections of the City’s culverts as well as mowing of the ditch lines throughout the City.
  - If any unusual discharges are seen during the mowing or culvert inspections, the protocol is to notify the shift superintendent who then

forwards the information onto the appropriate department for further investigation.

- Opportunistic ditch inspections have not yielded an illegal discharge.
- In PY2, approximately 3.32 miles of ditches were cleaned out and maintained.
  - No pipe or discrete conveyance carrying anything other than stormwater or allowable non-stormwater discharges were identified.
  - Trash and debris were found within the City's ditch system, which was removed and properly disposed of, and not of any concentration to suggest someone had dumped trash.
- In PY3, the City's Public Works Department continued conducting routine inspections of culverts and ditch lines during mowing. No reports of illicit discharges in ditch lines were reported to the superintendent.
- In PY4:
  - 27 potential ditch outfalls were identified and were in the process of being verified for inclusion in the GIS MS4 mapping.
  - 61.5 miles of ditches were inspected during routine mowing and maintenance. No reports of illicit discharges were reported to the supervisor.
- In PY5:
  - The City continues to inspect ditches opportunistically during mowing and ditching operations. No reports of illicit discharges were reported to the supervisor.
  - Of the 27 potential ditch outfalls identified in PY4:
    - Several outfalls are located outside of the City's right-of-way (i.e., discharge on private property). As a proactive/voluntary BMP, the City is maintaining these outfalls on maps and records.
    - 12 of the ditch outfalls were rebuilt to reduce sedimentation and velocity/energy to prevent erosion.
    - As mentioned above in Measurable Goal 3.1:
      - Signs were ordered to post the unique identifier at each of the newly identified stormwater outfalls, which will be installed on public property in PY6/PY7.
      - A ranking sheet to document the condition and severity of issues detected during inspections was developed and implemented in PY5. It was used to document 12 of the 27 ditch outfalls in PY5 that were subsequently maintained/rebuilt.
- In PY6:
  - The City continues to inspect ditches opportunistically during mowing and ditching operations. No potential illicit discharges were reported to the supervisor.
  - As reported in Measurable Goal 3.1, the signs were all installed except for the 6 that are being installed in PY7.
  - The maintenance items on the ranking sheet from PY5 inspections were addressed during PY6.

#### Measurable Goal 3.3.4

The City developed a list of septic systems in its highest priority watershed that are Permit Cycle III Permit Year 6 Sept 2019

20 years old or greater and which may discharge to the MS4 if the system fails.

**PY3: Accomplished**

- The City has begun mapping the locations of all these septic systems in the City and will refine the map by age and priority watershed.

Measurable Goal 3.3.5

The City implemented a drive-by evaluation and documentation program of septic systems in its highest priority watershed that are 20 years old or greater and which have the potential to discharge into the MS4. This septic system inspection and documentation program included a mechanism for addressing any discharges to the MS4 from malfunctioning septic systems.

**PY4: Accomplished**

- The City has identified 38 properties in the priority watershed with septic systems 20+ years old.
- Drive by inspections are conducted during commercial and residential site work.
- The assessing department conducts general property overview and assessment.
  - Based on visual and odor observation no illicit discharges were identified;
  - No complaints from public or abutters were received; and
  - Each property is rated on a scale from poor, fair, average and above average. Three of the 38 were graded as fair. The remaining 35 were graded average and higher.
- Septic systems suspected of failing, or if complaints were received, would be turned over to Code Enforcement for follow up and resolution.

PY5: No complaints were received on the aging septic systems. No additional aging septic systems were added to the system. One septic system (likely 20+ years old) was replaced.

PY6: No work required this permit year.

**MCM 4 Construction Site Stormwater Runoff Control**

**MCM 4 Goals**

1. Develop, implement, and enforce a program, to reduce pollutants in any stormwater runoff to the regulated small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. For specific permit requirements and suggestions, refer to MDEP's General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems Part IV(H)(4).

Per General Permit Part IV(H)(4a.), the permittee will rely on the Maine Construction General Permit or Chapter 500, Stormwater Management.

**BMP 4.1 – Notification to construction site developers and operators of the requirements for registration under the Maine Construction General Permit or Chapter 500, Stormwater Management for the discharge of stormwater associated with construction activities;**

Measurable Goal 4.1.1

The City continues the notification procedures currently in place using the Code

Enforcement/Planning Board Permit process to notify of the MCGP/Ch500 requirements for projects disturbing one acre or more.

**PY1 through PY6: Accomplished**

- See **Appendix D** for the list of inspections with the specific watershed noted
- See PY1 through PY6 accomplishments on the next page

**BMP 4.2 – Develop and implement a mechanism to annually document every construction activity that disturb one or more acres within the Urbanized Area.**

Measurable Goal 4.2.1

The City continues updating the tracking system to record every project or construction activity that disturbs one or more acres. This system also tracks and differentiates the construction activities within Thatcher Brook watershed, the City's highest priority watershed, as well as other watersheds. The system is used to summarize data to be included in annual reports submitted to the DEP. See **Appendix D** for the tracking summary.

**PY1 through PY6 Accomplished**

- See **Appendix D** for the list of inspections with the specific watershed noted
- See PY1 through PY6 accomplishments on the next page

**BMP 4.3 – Develop and implement a construction site inspection program.**

Measurable Goal 4.3.1

In Thatcher Brook watershed (the City's highest priority watershed), inspection of construction activity occurs at least three times with one inspection at project completion to ensure that all post construction BMPs were properly installed, and that final stabilization of the site has been completed. All construction inspections are properly documented.

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

**PY1 through PY6: Accomplished**

- See **Appendix D** for the list of inspections with the specific watershed noted.
- For MG 4.1.1: The current notification system is operating well and the City's informing the construction developers and operators of the required regulations. A checkbox for MCGP notification is included on the Building Permit Checklist, which is distributed by Code Enforcement to all building permit applicants. There is a check box on our Planning Board applications to make applicants aware of the MCGP and Ch. 500. Additionally, as part of a sewer permit, erosion and sediment control details are provided to the permit holder for their information to educate the public in BMPs.
- For MG 4.2.1: As a requirement of all of our Planning Board approvals, a pre-construction meeting is held at City Hall with the applicant and their site contractor to go over the City's inspection process in which we heavily emphasize

the need for installation and maintenance of BMPs. We require a call prior to grubbing to inspect all BMPs and then we periodically inspect the sites to make sure that the BMPs are maintained or are operating properly.

- For MG 4.2.1 (updated based on DEP annual reports, and based on review of PY5 spreadsheet): The City Planning/Engineering Offices have two data bases that they maintain on projects within the City. There is a spreadsheet for all projects that require any level of permitting through the Planning Board which tracks projects that have been approved and are under construction, since 2003. The second list tracks the completed projects that may require post construction maintenance under MCM 5. Maintenance logs are to be submitted to the City on an annual basis and they are checked off on a yearly basis.
- The following is a summary of sites that triggered inspections required by the MS4 General Permit:
  - PY1 - 3 Projects were more than 1 acre, but not in a watershed of a UIS.
  - PY2 – 1 Project was active that was more than 1 acre, but not in a watershed of a UIS.
  - PY3 – 6 Projects were active that were more than 1 acre, but not in a watershed of a UIS. One project was in the city’s highest priority watershed.
  - PY4 – 9 Projects were active that were more than 1 acre. Two of the nine were completed in PY4. Five were in the priority watershed.
  - PY5 – 12 Projects were active that were more than 1 acre, although only 4 of these were located in the Urbanized Area. 3 of the 4 UA sites were completed in PY5 and these 3 were located in the watershed of an UIS (Thatcher Brook, the City’s priority watershed).
  - PY6 – 8 Projects were active that disturbed one or more acres of land, although only 1 of these was located in the Urbanized Area. This one project is ongoing in PY 7 (and is not in Thatcher Brook).
- For MG 4.3.1: Multiple inspections occur for each construction project. The City conducts at least 3 inspections per projects but on road project many more inspections are conducted. As a proactive/voluntary BMP, the City’s staff engineer conducts a cursory visual inspection of each regulated site on a monthly basis, which often includes a site walk. Often times this voluntary BMP is also extended to active construction sites that are either: (1) outside the priority watershed and/or UA; or (2) less than 1 acre of disturbed area. The following is a summary of inspections that were completed – including the voluntary inspections and the sites in the UA that had one or more acres of disturbance.
  - In PY1, approximately 10 projects were in various stages of development. We conducted at approximately 30 inspections over the course of the reporting year.
  - In PY2, approximately 10 projects were in various stages of development. Approximately 20 inspections were conducted.
  - In PY3, approximately 6 projects were in various stages of development, in which 24 inspections were conducted.
  - In PY4, approximately 9 projects were in various stages of development



We conducted 35 inspections total.

- In PY5, in addition to the 12 sites reported under MG 4.2.1 there were 8 sites that disturbed less than one acre of land, making a total of 20 sites that were under construction in all of Biddeford (inside and outside the UA). The City conducted 46 inspections in total for all of these sites (See Appendix D).
  - In PY6, in addition to the 8 sites reported under MG 4.2.1, there were three (3) sites that disturbed less than one acre of land, making a total of 11 sites that were under construction in all of Biddeford (inside and outside the UA). The City conducted 21 inspections in total for all of these sites (See Appendix D).
- 
- For MG 4.3.1: We have a form that we use in conducting our inspections which are filed in a binder in the Engineering/Planning Office for our records. In PY4 we started maintaining electronic copies of inspection reports, with records retained in the Engineering office, which continued in PY5 and PY6.
  - For MG 4.3.1: Any issues that are discovered on our inspections are immediately reported to the contractor on the site and recommended solutions are provided and follow up inspections are conducted to verify that the solutions are implemented. If a construction site solution should not be implemented as requested, after both a verbal request and then a follow up letter, the construction site would have a stop work order placed upon the building construction by the Code Enforcement office until the site issue was addressed.
    - No stop work orders or letters were issued in PY4, although inspectors identified a need for sweeping at construction entrances at one project. Photos were taken and forwarded to the contractor with the request, which was resolved without further consequences.
    - No stop work orders or letters were issued in PY5.
    - No stop work orders or letters were issued in PY6.

## **MCM 5 Post-Construction Stormwater Management in New Development and Redevelopment**

### **MCM 5 Goals** (within the Urbanized Area)

1. Continue implementing and enforcing our program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the permittee's MS4;
2. Enforce the ordinance to ensure adequate long-term operation and maintenance of post construction BMPs;
3. Ensure post construction BMPs are functioning as intended; and
4. Document and report annually to the DEP all applicable post-construction related information.

For specific permit requirements and suggestions, refer to DEP's General Permit for the Discharge of Stormwater from Small Municipal or State or Federally Owned Municipal Separate Storm Sewer Systems Part IV(H)(5).

### **BMP 5.1 – Implement ordinance or similar measure**

#### Measurable Goal 5.1.1

The City has effectively implemented our post construction ordinance since 2009.

#### **PY1 through PY6: Accomplished**

- o The ordinance was approved in the summer of 2009.
- o As stated in other goals, the City has a list of projects it tracks for annual post construction reporting on the status of their stormwater devices. For instance, UNE, SMMC & Biddeford Crossing retail complex provide the City with these types of reports (See **Appendix D**). It is important to note that as a proactive/voluntary BMP, the City's staff engineer tracks post-construction inspection and maintenance of BMPs for most projects within the City, including those that are outside the priority watershed and/or UA, as well as some that are less than 1 acre of disturbed area.
  - PY1 - Eight sites were reported upon. As deficiencies are identified, maintenance is conducted. No notices of violation were issued.
  - PY2 – 11 sites were reported upon. As deficiencies are identified, maintenance is conducted. One site was determined to have illicit discharge leaving the site and it was reported to the owner. The owner promptly addressed the issue. Two other sites were noted to need maintenance which was reported to the owners' representatives and were addressed in a timely manner. No notices of violation were issued.
  - PY3 – 6 sites were reported upon. One deficiency was identified, and maintenance was conducted. No violations were issued.
  - PY4 – 19 sites were reported on. No violations were issued.
  - PY5 (corrected to address Comments from Maine DEP) – 22 of 23 sites were reported on. No violations were issued. Note that these sites include those Post construction sites that are outside the urbanized area as well as some that disturbed less than one acre of land.

- PY6 – This year due to a staffing shortage, only three sites were reported on. Note that the City has historically reported on sites that are outside the UA as well as below the 1 acre threshold. The City reviewed its sites in detail and determined they have 7 sites that in the UA which disturbed one or more acres of land. Of these sites, only 1 reported this year. The City Engineer is contacting the sites that have not yet reported in order to obtain Post Construction reports on maintenance.

**BMP 5.2 – Continued implementation of the inspection program for post-construction BMPs for which the owner or operator has not hired a qualified third-party inspector, and which are located in the direct watershed of a lake most at risk from new development or in watersheds of an urban impaired stream.**

Measurable Goal 5.2.1

The City has continued implementation of the inspection program.

Measurable Goal 5.2.2

The City would be required to annually inspect a percentage of post construction BMPs located in the lake watershed most at risk or within urban impaired streams in accordance with the requirements listed below (whichever is greater):

- o 1-10 post construction sites: inspect at least one site, or 40%
- o 11-30 post construction sites: inspect at least four sites, or 30%
- o 31-60 post construction sites: inspect at least nine sites, or 25%
- o 61-100 post construction sites: inspect at least fifteen sites, or 20%
- o 101-160 post construction sites: inspect at least twenty sites, or 17%
- o Over 160 post construction sites: inspect at least twenty-seven sites, or 11%

Measurable Goal 5.2.3

The City has also developed and implemented a procedure for notifying site developers to consider incorporating low impact development techniques.

Reporting – Documentation of all inspections is entered into a spreadsheet (see **Appendix D**) for tracking and annual reporting to DEP. Information collected includes:

- The cumulative number of sites that have post construction BMPs discharging into the permittee’s MS4;
- A summary of the number of sites that have post construction BMPs discharging into the permittee’s MS4 that were reported to the municipality;
- The number of sites with documented functioning post construction BMPs; and
- The number of sites that required routine maintenance or remedial action to ensure that the post construction BMP is functioning as intended.

**PY 1 through PY6: Accomplished**

- o In PY1 through PY4, the City did not have a project in a watershed of an Urban Impaired Stream, as there are no UIS watersheds in Biddeford.
- o In PY5, the City’s highest priority watershed, Thatcher Brook, was reclassified as an urban impaired stream circa May 2018.
- o 2 City Staffers attended post-construction training seminar and passed the online exam, so the City is prepared in the future for conducting the necessary inspections if a project is located near or in the watershed of an urban impaired stream.

- The City has a spreadsheet of Post Construction BMPs that are inspected annually, and maintenance reports are provided to the City.
  - For example, UNE, SMMC & Biddeford Crossing retail complex provide the City with annual reports. Not all of these projects are within the priority watershed and/or UA, or disturb one acre or more of land; but because they have a permanent BMP, the City tracks these sites with requests annual reports, as a proactive/voluntary BMP.
  - PY1: 8 sites provided annual reports. As/if deficiencies are identified, maintenance is conducted. No notices of violation were issued.
  - PY2: 11 sites provided annual reports. As/if deficiencies are identified, maintenance is conducted.
    - One site was determined to have illicit discharge leaving the site and it was reported to the owner. The owner promptly addressed the issue.
    - Two other sites were noted to need maintenance which was reported to the owners' representatives and was addressed in a timely manner.
    - No notices of violation were issued.
  - PY3: See Table 1 for PY3 Post-Construction reporting and stats. One site required maintenance and corrective actions were completed. No violations were issued.

Table 1. PY3 Post-Construction	
Total Sites in UA	11
Total Sites Reporting	6
# of Sites w/Functioning BMPs	6
# of Sites Requiring Maintenance	1

- PY4: See Table 2 for PY4 Post-Construction reporting and stats for 19 sites. No sites needed structural repairs or additional BMPs. No violations were issued.

Table 2. PY4 Post-Construction	
Total Sites in UA	31
Total Sites Reporting	19
# Of Sites w/Functioning BMPs	31
# Of Sites Requiring Maintenance	0

- PY5: See Table 3 for PY5 Post-Construction reporting and stats for 23 sites. No sites needed structural repairs or additional BMPs. No violations were issued.

Table 3. PY5 Post-Construction	
Total Sites in Town	23
Total Sites Reporting	22
# Of Sites w/Functioning BMPs	22
# Of Sites Requiring Maintenance	3

- PY6: See Table 4 for PY6 Post-Construction reporting. Note that previous years reported on all sites in the City of Biddeford (regardless of size and location), but this year's table shows both the MS4 reportable sites and all sites in the City that owed Post Construction reports. This year, because of a staffing shortage, not all reports were received (follow-up reminder emails and phone calls were not made). The City Engineer is following up with sites in the UA first, then the other sites. No sites needed structural repairs or additional BMPs. No violations were issued.

Table 4. PY6 Post-Construction Reporting	Total Sites	Sites In UA, > or = 1 acre disturbance
Total Sites	34	7
Total Sites Reporting	3 + 1 DEP inspection	1
# Of Sites w/Functioning BMPs	3	1
# Of Sites Requiring Maintenance	1	0

- o The City, through the Planning and Engineering Departments' review of development projects, encourages the use of LID BMPs. As proactive/voluntary BMP, the City has held developers to a standard more stringent than DEP requires for small scale development by requesting treatment of stormwater on sites that fall below the DEP thresholds, especially within the priority watershed of Thatcher Brook.

## **MCM 6      Pollution Prevention/Good Housekeeping for Municipal Operations**

### **MCM 6 Goals**

This program has the goal of preventing or reducing pollutant runoff from municipal operations.

1. Maintain an inventory of all municipal operations conducted in, on, or associated with facilities, buildings, golf courses, cemeteries, parks and open space owned or operated by regulated MS4s that have the potential to cause or contribute to stormwater or surface water pollution.
2. Continue to implement written operation and maintenance procedures for its highest priority watershed that includes maintenance schedules and inspection procedures to ensure long term operation of structural and non-structural controls that reduce stormwater pollution to the maximum extent practicable.
3. Continue to implement operation and maintenance procedures for the remaining watersheds within the Urbanized Area.
4. Prevent the accumulation of sediment by developing a program to sweep all publicly accepted paved streets and publicly owned paved parking lots as well as cleaning catch basins and other stormwater structures.
5. Implement the SWPPP which outlines sources of potential stormwater pollutants and the methods by which these pollutants will be reduced or prevented from entering Waters of the State.

For specific permit requirements and suggestions, refer to DEP's General Permit for the Discharge of Stormwater from Small Municipal or State or Federally Owned Municipal Separate Storm Sewer Systems Part IV(H)(6).

### **BMP 6.1 Operations at municipally owned grounds and facilities.**

#### Measurable Goal 6.1.1

The City continues to maintain an inventory of municipal properties, facilities and activities, and continues to implement operation and maintenance (O&M) plans, which are kept at municipal facilities. The procedures in the O&M Plans 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, cutting vegetation within 100 feet of a stormwater conveyance or surface water;
- Erosion and sedimentation control;
- Feeding gulls, waterfowl or other wildlife.

Reporting - Annual reports to DEP each year of the permit will include a status report on the implementation.

PY1:

Permit Cycle III Permit Year 6 Sept 2019

- All O&M plans are kept at the Public Works Department. Chemical applications are performed by licensed contractors. The City has an Integrated Contingency Plan which incorporates its environmental permitting requirements.
- With the procedures we have in place, we feel we have met the goals of MCM 6 by implementing:
  - Regular street sweeping
  - Annual catch basin cleaning
  - Proper handling of spoils and accumulated sediments
  - Snow disposal in a contained area which does not drain off the premise.
  - Sheltered salt/sand storage

PY2 & PY3:

In addition to continuing the efforts mentioned in PY1:

- City has established appropriate procedures for dealing with spoil material from our separated systems.
  - All spoils from the separated catchbasins are brought to the public works department and placed in a settling tank.
  - The liquids are pumped out and brought to the WWTP.
  - The solids are dried and then tested to determine if they are below the thresholds of the beneficial use program. If test results are below the thresholds, they are used as fill material, as appropriate. If test results are above standards, the solids are hauled and then received by Commercial Paving and Recycling Corporation in Scarborough, a DEP licensed solid waste facility.
- O&M plans were updated for all departments in the City. Location of O&M Plans are kept in the specific buildings in which they apply.
- The City building inventory list was updated in January 2015 and provided to DEP as part of the DEP's May inspection process.
- The Public Works facility has 1,320 gallons of oil or oil-like material in 55-gallon containers or larger in aggregate and does have a SPCC Plan. The City does implement an IPM Plan on its municipal properties.

PY4 & PY5:

In addition to the continuing efforts mentioned in PY 1 through P3, a thorough review of MCM 6 documentation was conducted.

PY6: The inventory of facilities was reviewed during PY6 and did not need any updating. Because the O&M Plans were updated in PY5, they did not need any update in PY6.

## **BMP 6.2 Municipal employee training.**

### Measurable Goal 6.2.1

The City continues municipal employee training programs focused on reducing stormwater pollution potential from municipal operations. Topics covered by the training program may include, but not be limited to:

- a. 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.
- b. 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. Additionally, reduce/eliminate non-stormwater discharges associated with vehicle washing.
- c. 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).
- d. Review SPCC requirements for facilities that have 1320 gallons of oil or oil like material in 55 gallons or larger.

Reporting - Annual reports to DEP will include a status report on the development of the training program, number of employees trained, length of training and the training effectiveness.

#### **PY1 & PY2:**

- o Employees are trained as they come onto the job. Locations of O&M plans are provided to the employee or are posted in common areas for the employees to follow.
- o A SWPPP & SPCC training session was held on April 4, 2015 by Cumberland County Soils and Water Conservation District and approximately 76 employees attended from Public Works, Fire, Police, Parks, Schools, Codes, Wastewater, Planning, Engineering and Facilities Maintenance.
- o Our City construction inspectors Bob Sanchioni and John Perry are DEP Certified for Erosion & Sediment Control.
- o Tom Milligan attends training seminars over the permit year which are as follows:
  - Erosion and Sediment Control Practices for Engineers and Consultants - March 19, 2014
  - Construction Site Sediment Control: Best Practices & Low Impact Solutions - April 2, 2014
  - Inspection of Stormwater and Erosion Control BMPs - April 9, 2014
  - MDEP Cert for Erosion & Sediment Control to Dec 2015
- o Jennie Franceschi, Planning Engineer, attended:
  - O&M and Green: Best Practices for Green Infrastructure Operations & Maintenance- January 7, 2014
  - Erosion and Sediment Control Practices for Engineers and Consultants - March 19, 2014



- Construction Site Sediment Control: Best Practices & Low Impact Solutions - April 2, 2014
- Inspection of Stormwater and Erosion Control BMPs - April 9, 2014
- MDEP Cert for Erosion & Sediment Control to Dec 2015
- CPESC Certified thru Dec 31, 2013 - #3891

PY3:

In response to PY2 DEP comment Question 6C:

- o City construction inspectors were trained and certified by the DEP previously and re-certify as required.
- o Select City staff continue to be trained in PY3 including John Mallory, Staff Engineer, who replaced Jenni Franceschi
- o SWPPP training for Public Works employees continues on an annual basis. CCSWCD will be conducting training in the Fall of 2016.
- o Standard operating procedures for salt and sand management and applications are reviewed during meetings and trainings held at public works facility.
- o Deicing and vehicle cleaning related to winter operations are reviewed prior to the winter season and are strictly enforced during all storms and clean-up operations.
- o Tom Milligan attended:
  - Soils and Natural Resource Workshop- September 9, 2015
  - Designing Erosion Control Solutions for Extreme Storm Events- August 18, 2015
  - Green Alternatives to Hard Armor Webinar- March 5, 2016
  - Stormwater Management for Engineers and Consultants- March 15, 2016

PY4:

- o CCSWCD conducted O&M and SWPPP training on March 28, & 29 for 72 city staff including schools, public works, and public safety
- o Staff Engineer Johnathan Malloy attended Maine DEP Erosion Control training 3/30/17 in Saco
- o City Engineer Tom Milligan attended ISWG IDDE training on January 19, 2017
- o City Engineer Tom Milligan and Staff Engineer John Malloy attended ISWG training session “Stopping Pollution in Your Community on March 21, 2017.

PY5:

- o CCSWCD conducted O&M/SWPPP training on March 28 & 29 for 86 city staff including schools, public works, and public safety departments
  - o Four 1-hour sessions were attended by a total 86 people
  - o 52 evaluations were received indicating that comprehension improved from 294 correct answers BEFORE the training to 299 correct answers AFTER the training
  - o 33 out of 52 respondents found the training to be “helpful” and “clear”
- o CCSWCD conducted IDDE training for CEOs on June 14, 2018; 4 people in the Code Enforcement Department attended the 2-hour training.
- o Staff Engineer Johnathan Malloy attended mock audits of municipal facilities held throughout the City as follows:
  - 2/15/18 at Public Works Garage with Public Works staff, Jeff Demers, Ray Parent and Carl Marcotte
  - 6/11/18 at St. Louis Field with Parks and Rec staff, Jerry Lapierre and Carl

- Walsh
- 6/11/18 at JR Martin Community Center with Parks and Rec staff, Jerry Lapierre and Carl Walsh
- 6/12/18 at Biddeford High School with Facilities Manager, Phil Radding
- 6/12/18 at Central Fire Station with Assistant Chief, Paul Labrecque
- o City Engineer Tom Milligan attended the 2017 Beaches Conference, held on 7/14/17.

PY6:

Two Stormwater and Oil Spill training sessions (1.5 hours each) were provided to City employees on June 25, 2019. The training was conducted by Integrated Environmental Engineering, Inc, and consisted of an introductory review of the MS4 program and spill response and prevention program. A summary handout was provided to attendees. After the introduction, a Jeopardy game was played, which consisted of questions related to stormwater pollution prevention with the following topics: O&M plans, spill prevention, erosion control, stormwater treatment infrastructure, illicit discharge identification (opportunistic). The game generated good discussion and question and anecdotal feedback indicated it was an effective way to provide information. The following is a general summary of attendance:

- 42 Public Work Employees
- 5 School Department employees (maintenance and facilities)
- 1 Airport Manager
- 4 Wastewater Department employees
- 1 City Hall employee
- 2 Parks/Rec employees
- 5 Code Enforcement Officers
- 3 Police Department employees
- 2 Fire Department employees

Other training completed in PY6 includes:

The Engineering Technician attended the CCSWCD training on 6/12/2018. The Training lasted 3 hours and was very informative and effective.

### **BMP 6.3 Street sweeping.**

#### Measurable Goal 6.3.1

Each permit year, the City continues a program to sweep all publicly-accepted paved streets and publicly-owned paved parking lots maintained by the City at least once a year as soon as possible after snowmelt.

Reporting - Annual reports to DEP will include a status report on street sweeping.

Each year, street sweeping material is re-used as fill and/or stockpiled at Biddeford Public Works.

PY1:

- Estimated tonnage of sand applied: 800 tons
- Estimated tonnage of sand collected: 550 tons

PY2:

- Estimated tonnage of sand applied: 1100 tons
- Estimated tonnage of sand collected: 660 tons

PY3:

- Estimated tonnage of sand applied: 1200 tons
- Estimated tonnage of sand collected: 720 tons

PY4:

- Sweeping started on April 1, 2017
- Estimated tonnage of sand applied: 1100
- Estimated tonnage of sand collected: 450

PY5:

- Sweeping started on March 29, 2018
- Estimated tonnage of sand applied: 1270
- Estimated tonnage of sand collected: 760

PY6:

- Sweeping started in March 28, 2019
- Estimated tonnage of sand applied: 1270 (same as PY5)
- Estimated tonnage of sand collected: 760 (same as PY5)
- Grit from street sweepings is managed in the same way as catch basin cleaning grit (see BMP 6.4)

### **BMP 6.4 Cleaning of stormwater structures including catch basins.**

#### Measurable Goal 6.4.1

Each permit year, the City continues a program to evaluate and, if necessary, clean catch basins and other stormwater structures that accumulate sediment at least once every other year and dispose of the removed sediments in accordance with current state law. The City cleans catch basins more frequently if inspections indicate excessive accumulation (e.g.,  $\geq 50$  percent filled) of sediment.

Reporting - Annual reports to DEP will include a status report on cleaning of stormwater structures.

PY1:

- 1087 catch basins were cleaned, which represents 100% of all catch basins in the urbanized area.
- Tonnage of debris removed: Approximately 50 Tons

- The City also cleans out a portion of the combined sewer system each year. This year 40 tons of debris was removed from the combined sewer system.

PY2:

- 1087 catch basins were cleaned, which represents 100% of all catch basins in the urbanized area.
- Tonnage of debris removed: Approximately 53 Tons
- The City also cleans out a portion of the combined sewer system each year. This year 45 tons of debris was removed from the combined sewer system.

PY3:

- 950 catch basins were cleaned, representing 87% of all catch basins in the urbanized area.
- Tonnage of grit sand removed: approximately 35 tons.
- The City also cleans out a portion of the combined sewer system each year. This year 40 tons of debris was removed from the combined sewer system.

PY4:

- The City identified 450 priority catch basins based on historic sediment depths and proximity to resources
- Other catch basins were placed on a 2-3-year cleaning rotation
- 450 catch basins were cleaned representing 41% of the catch basins in the urbanized area.
- 20 tons of grit sand was removed.
- A portion of the combined sewer system was cleaned and 49.5 tons of debris was removed.

PY5: (Corrected based on Response to DEP comments)

- The City cleaned 450 of the 450 priority catch basins
  - Priority catch basins are based on historic sediment depths and proximity to resources (Note that Cathedral Drive and Route 1 typically only need cleaning once every two years)
  - Remaining catch basins are cleaned annually as time allows.
  - The City does not track the amount of material in each catch basin, but does note whenever a basin has more than 50% of material in it, so it's frequency of inspection is more than every 2 years.
- 450 catch basins were cleaned representing 41% of the catch basins in the urbanized area.
- 20 tons of grit sand were removed.
- Collected Grit is brought to the Public Works Facility for decanting and drying. Fluids are decanted into a collection tank and treated at the wastewater treatment plant. Solids are placed in a containment pile for drying and routine sampling is conducted even though this is no longer required by beneficial reuse practices. If samples are below thresholds (500 mg/l TPH), the grit is used in accordance with beneficial reuse practices. If samples are above the threshold, the grit is taken to a licensed facility.

PY6:

- Same as Permit Year 5 except that 25 tons of grit sand were removed.

**BMP 6.5 Maintenance and upgrading of stormwater conveyances and outfalls.**

Measurable Goal 6.5.1

As necessary, the City maintains a prioritized schedule for repairing or upgrading

the conveyances, structures and outfalls within the MS4.

Reporting - Annual reports to DEP include a status report on the maintenance and upgrading of stormwater conveyances and outfalls.

**PY1 through PY6: Accomplished**

- The City continues to employ a prioritized approach in implementing this BMP. During sewer separation projects, new piping is installed for the storm drain lines as well as replacements of catch basins as needed.
  - In PY1 & PY2, sewer separation work was conducted in the Rt. 1 downtown area.
  - In PY3, projects included sewer separation of Elm Street; Rt. 1 was completed and 2 catch basins were removed on Adams St.
  - In PY4, CSO #11 was closed.
- Additionally, as the system is inspected and cleaned during the year, deficiencies are noted in the field logs by the Sewer Dept. and then scheduled for maintenance, as needed.
- As we are cleaning the stormwater system, structures are evaluated and deficiencies are noted and priorities are assigned for upgrading. As CSO projects and other City drainage project are implemented, the maintenance items are incorporated into the project to address the deficiencies.
- The City has implemented an outfall maintenance program.
  - PY4: SWO 21 & 22 conveyance were cleaned and outfall(s) stabilized.
  - PY5:
    - SWO 16 was investigated and proximate sewer lines will be rehabilitated in PY6/PY7.
    - Ditch maintenance was added to the outfall maintenance program in PY5.
    - 12 of the 27 newly identified ditch outfalls were rehabilitated in PY5.
    - Additional maintenance and repairs were conducted in early PY5 and will continue in PY6/PY7.
  - PY6
    - Sanitary sewer was lined near SWO-16 to address a potential illicit discharge.
    - Ditch maintenance was continued.
    - Additional minor maintenance and repairs were completed as part of normal public works duties.

## **BMP 6.6 – Stormwater Pollution Prevention Plans (SWPPPs)**

### Measurable Goal 6.6.1

The City continues to implement (and annually update, if/when needed) the SWPPP at the Biddeford Public Works Garage/Transfer Station to ensure it meets Maine's April 26, 2011 MSGP requirements including visual monitoring.

Reporting - Annual reports to DEP include a status report on the development of SWPPPs.

#### **PY1 & PY2:**

- The City's Public Works Department updates its Integrated Contingency Plan (ICP) annually; the SWPPP is updated as needed as part of that process.
  - The Public Works Garage, which includes a small transfer station, has a SWPPP in its current ICP and is operating in compliance with those requirements.
  - The O&M manuals, updated annually when/if needed, also contain the appropriate policies and procedures to avoid stormwater contamination.

#### **PY3:**

- The public works department updated the SWPPP to incorporate DEP comments from the 2015 audit.

#### **PY4 & PY5: Accomplished**

- The public works department continues to evaluate and update the SWPPP as part of the annual ICP update.

**PY6:** The public Works Department continues to implement the SWPPP. No changes were necessary during PY 6.