Stormwater Program
Annual Report

Permit Cycle III: Permit Year 6

July 1, 2018 to June 30, 2019

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for

City of Westbrook
2 York Street
Westbrook, Maine 04092

207-854-0660

www.westbrookmaine.com

Regulated MS4 Information

Section 1.1 Location Maps

The location map for the City of Westbrook is included in Appendix A.

Section 1.2 Urbanized Area Map

The urbanized area map was developed from the U.S. Census Bureau Census 2010 Urbanized Area and Urban Cluster Data, and is included in Appendix A.

Section 1.3 Priority Watersheds

The City of Westbrook's two highest priority watersheds are Mill Brook and Long Creek.

Section 1.4 Watershed Maps

The watershed maps identify the two highest priority watersheds and are included in Appendix A.

Minimum Control Measures

MCM 1 - Public Education and Outreach

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

MCM 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 from the previous MS4 permit cycle

***Party Responsible for Completion**: City Engineer*
***Party Responsible for Development:** ISWG Education Coordinator*

Measurable Goal 1.1.1 – In Permit Year 6, the ISWG and the City of Westbrook will continue to implement awareness activities outlined in the revised Statewide Awareness Plan. Activities include:

- Maintain a link to www.thinkbluemaine.org on municipal website;
- 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; and
- Promote their approved public event

Measurable Goal 1.1.2 – In Permit Year 6, the ISWG and the City of Westbrook will conduct and provide documentation of an evaluation and assessment on both the progress of implementing the plan as well as the impact the efforts are having on the target audience.

Activities Completed During Permit Year 6: The activities implemented as part of the revised Statewide Awareness Plan are included in Appendix B. The City also maintains a Stormwater Compliance page (Permit Year 6) providing general information about the program and how to report a concern. The Think Blue Maine link is included on that page.

BMP 1.2 – Update and Implement a Public Stormwater Awareness Plan

***Party Responsible for Completion**: City Engineer*
***Party Responsible for Development:** ISWG Education Coordinator*
Measurable Goal 1.2.1 – In Permit Year 6, the ISWG and the City of Westbrook will continue to implement a Stormwater Awareness Plan to raise awareness of stormwater issues such as the path stormwater runoff takes, sources of stormwater pollution and the impact that polluted stormwater runoff has in the community(ies). The plan will identify:

a) Target audience
b) Outreach tool(s) to be used
c) Message
d) Distribution system
e) Time line and implementation schedule
f) Person(s) responsible for implementation
g) Impact evaluation protocol
h) Plan modification protocol (this must include DEP approval of significant plan modifications)
i) Goals (e.g., the targeted level of change sought as a result of the education and outreach effort; specific measurable goals for plan implementation)

Measurable Goal 1.2.2 – In Permit Year 6, the ISWG and the City of Westbrook will conduct and provide documentation of an evaluation and assessment on both the progress of implementing the Stormwater Awareness Plan as well as the impact the efforts are having on the target audience.

Activities Completed During Permit Year 6: The activities implemented as part of the revised Statewide Awareness Plan are included in Appendix B. The City also continued to provide Think Blue Maine links on its website and in municipal buildings. Additionally, the City regularly included stormwater related information on its Sustainable Westbrook and Westbrook Public Services Facebook pages which currently have 337 (up from 290) and 837 (up from 321) "Follows" respectively.

Additionally, staff participated in the following educational activities:

December 10, 2018 – Presentation to Westbrook City Council
The City Engineer, Eric Dudley, gave the annual educational presentation to the Westbrook City Council.

May 16-17, 2019 – Presumpscot River Field Trip for Westbrook High School Seniors
A City staff member participated in a two day field trip for Westbrook High School seniors. Students were transported to Standish to conduct an array of water quality tests including pH, conductivity, BOD and a macro invertebrate study on Presumpscot River water as it leaves Sebago Lake. Those

same students then repeated the tests on the river as it flows behind Riverbank Park in downtown Westbrook. Students compared the results and discussed what their findings represented in terms of water quality along the river.

February 2016 – Present – Weekly Environmental Education at the My Place Teen Center

A City staff member has been conducting regular 45 minutes to 1 hour environmental education activities at the My Place Teen Center. The original intent of the project was to focus on the issue of cigarette butt litter in the downtown area and its impact on water quality. Due to the nature of participation at the Teen Center (inconsistent attendance by individuals and the unexpectedly young age of participants) the activities have shifted to largely single day activities rather than a long range project. Activities have included, water quality testing on the Presumpscot River, cigarette butt litter mapping, watershed modeling, environmentally focused games and experiments, a nonpoint source pollution scavenger hunt, storm drain stenciling, etc. The City plans to continue this partnership as it provides education and connection to a population that is difficult to reach through other methods of outreach.

BMP 1.3 – Develop and Implement Permit Awareness Plan

Party Responsible for Completion*: City Engineer*
Party Responsible for Development*: ISWG Education Coordinator*

Measurable Goal 1.3.1 – In Permit Year 6, the ISWG and the City of Westbrook will continue to implement Permit Awareness Plan to raise awareness of stormwater issues including MS4 permit requirements from municipal employees, elected officials and volunteers within municipal government. The plan will identify:

a) Target audience
b) Outreach tool(s) to be used
c) Message
d) Distribution system
e) Time line and implementation schedule
f) Person(s) responsible for implementation
g) Impact evaluation protocol
h) Plan modification protocol (this must include DEP approval of significant plan modifications)
i) Goals (e.g., the targeted level of change sought as a result of the education and outreach effort; specific measurable goals for plan implementation)

Measurable Goal 1.3.2 – As of March 1, 2014 the Permit Awareness Plan is considered approved and implementation of the Permit Awareness Plan will begin within one week of approval unless the DEP

responds in writing or verbally otherwise. The schedule for raising awareness of the permit will be included as part of the Permit Awareness Plan.

Activities Completed During Permit Year 6: The activities implemented as part of the revised Statewide Awareness Plan are included in Appendix B.

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

***Party Responsible for Completion**: City Engineer*
***Party Responsible for Development:** ISWG Education Coordinator*

Measurable Goal 1.4.1 – In Permit Year 6, the ISWG and the City of Westbrook will continue BMP adoption activities carried out in Permit Year 6 of the previous BMP Adoption Plan.

Measurable Goal 1.4.2 – By November 1, 2013, submit a plan to encourage targeted audience to adopt or practice specific BMPs that will reduce stormwater pollution. The Plan will include:

a) BMP
b) Target audience
c) Outreach tool(s) to be used
d) Message
e) Distribution system
f) Time line
g) Person(s) responsible for implementation
h) Impact evaluation protocol
i) Plan modification protocol
j) Targeted level of change as a result of the outreach effort (specific measurable goals for plan implementation)

Measurable Goal 1.4.3 – In Permit Year 6, the ISWG and the City of Westbrook will conduct and provide documentation of an evaluation and assessment on both the progress of implementing the Stormwater Awareness Plan as well as the impact the efforts are having on the target audience.

Activities Completed During Permit Year 6: A complete summary of the activities implemented as part of the BMP Adoption Plan are included in Appendix B.

BMP 1.5 – Enhance Education & Outreach Effort

***Party Responsible for Completion**: City Engineer*
***Party Responsible for Development:** ISWG Education Coordinator*

Measurable Goal 1.5.1 – By November 1, 2013, submit a plan to encourage targeted audience to adopt or practice specific BMPs that will reduce stormwater pollution. The Plan will include:

a) Specific stormwater activity or pollutant to be addressed
b) Target audience
c) Outreach tool(s) to be used
d) Message and the BMPs to be encouraged
e) Time line and implementation schedule
f) Person(s) responsible for implementation
g) Goal of the outreach effort
h) Impact evaluation protocol

Measurable Goal 1.5.2 – As of January 15, 2014 the BMP Adoption Plan is considered approved and implementation of the Plan will begin unless DEP responds in writing or verbally otherwise. An overall schedule for BMP adoption will be included in the BMP Adoption Plan.

Measurable Goal 1.4.3 – In Permit Year 6, the ISWG and the City of Westbrook will conduct and provide documentation of an evaluation and assessment on both the progress of implementing the Enhanced Education & Outreach Effort as well as the impact the efforts are having on the target audience.

Activities Completed During Permit Year 6: A complete summary of the activities implemented as part of the BMP Adoption Plan are included in Appendix B.

MCM 2 - Public Involvement and Participation

Westbrook will fulfill the requirements for Public Involvement and Participation through participation in the Interlocal Stormwater Working Group (ISWG) and the City's provision of funding to the ISWG for Public Involvement and Participation services, or through directly fulfilling the requirements, as described in this section of the plan. For specific permit requirements, refer to Part IV(H)(2) of the General Permit.

MCM Goal

To involve the public in both the planning and implementation process of improving stormwater quality and reducing quantity via the stormwater program.

BMP 2.1 – Public Notice Requirement

***Party Responsible for Completion**: City Engineer*
***Party Responsible for Development:** ISWG Stormwater Program Coordinator*

Measurable Goal 2.1.1 – ISWG and the City of Westbrook will follow state and local Public Notice requirements for both ISWG and individual Stormwater Management Plans. Copies of the plan will be made available on the Maine DEP and City of Westbrook websites.

Measurable Goal 2.1.2 – ISWG and the City of Westbrook will follow state and local requirements when involving stakeholders in the implementation of Small MS4 General Permit.

Activities Completed During Permit Year 6: Public notice requirements including documentation of meetings and attendance, where applicable, are included in Appendix B.

BMP 2.2 – Host Public Events

***Party Responsible for Completion**: City Engineer*
***Party Responsible for Development:** ISWG Stormwater Program Coordinator*

Measurable Goal 2.2.1 – ISWG and/or City of Westbrook 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 education events, conservation commission outreach program, Urban Impaired Stream outreach education or an Adopt-A-Storm-Drain or Adopt-A-Stream program. The target audience will be the adult residents living in the Urbanized Area of the City of Westbrook. The ISWG and/or City of Westbrook will consult with DEP to ensure the event will satisfy requirements. In particular, the City of Westbrook will continue hosting an annual household hazardous waste day to minimize the potential for illegal dumping in Mill Brook.

Activities Completed During Permit Year 6: A description of the events is included below. A more complete analysis of the Urban Runoff and Green Neighbor Family Fest, including estimated attendance/participation and an impact evaluation to assess effectiveness of the methods used to plan and host the event, is included in Appendix B.

September 29, 2018 – Household Hazardous Waste Day

The City continued to hold an annual Household Hazardous Waste Day for Westbrook residents. The event was held at the Pine Tree Waste facility at 594 County Road in Westbrook allowing residents to become familiar with the relatively waste disposal new facility and the services it provides in addition to the primary goal of collecting household hazardous and electronic waste. Materials collected included but were not limited to oil based paints and stains, petroleum products including fuels, fluorescent tubes, batteries and pesticides.

93 residents dropped off household hazardous waste items and 39 residents dropped off electronic waste. Westbrook has experienced a decline in the number of electronic waste items dropped off at this event likely due to the fact that the host organization accepts these items for free at all times.

Detailed records of participants and collected materials are available upon request.

April 20, 2019 – Urban Runoff and Green Neighbor Family Fest The City continued to support the ISWG in the annual Urban Runoff & Green Neighbor Family Fest. Two staff members volunteered at the event assisting with race and festival coordination. Free entry to the race was offered to all City and school staff members and family members and the City of Westbrook produced the largest municipal team for the second consecutive year with 100 members registered though, due to poor weather conditions, only approximately 50 team members attended the race.

MCM 3 - Illicit Discharge Detection and Elimination

The City of Westbrook will continue developing, implementing and enforcing a program to detect and eliminate illicit discharges and non-stormwater discharges within the MS4 area as defined in 06-096 CMR 521(9)(b)(2) except or excluding allowable non-stormwater discharges listed in Part IV(H)(3)(c) of the MS4 General Permit.

MCM Goals

1. Continue developing and maintaining current watershed-based storm sewer system infrastructure
2. Implement and enforce a non-stormwater discharge ordinance that includes coordination with the Portland Water District (PWD) to determine if water line and hydrant flushing are significant contributors of pollutants to the City's MS4 system
3. Develop and implement a prioritized dry weather outfall inspection plan
4. Develop and implement a prioritized dry weather ditch system inspection plan
5. Develop a list of septic systems that are 20 years old or older and may discharge to the City's MS4 system and implement a strategy to detect illicit discharges from any of these systems that may be failing.

For specific permit requirements and suggestions, refer to DEP's General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems Part IV(H)(3).

BMP 3.1 – Continue to develop and maintain an Updated Watershed Based Storm Sewer System Infrastructure Map

Responsible Party *– City Engineer*

Measurable Goal 3.1.1 – During Permit Years 1 – 5, update and maintain the storm sewer system map by collecting and/or updating data as additional or new information is available. Updates are made to the Westbrook map on a quarterly basis.

Activities Completed During Permit Year 6: During Permit Year 6, Westbrook continued to experience growth which is reflected in the aggregate number of stormwater structures.

Westbrook, Maine			
Public System	**Permit Year 4**	**Permit Year 5**	**Permit Year 6**
Catch Basin	2242	2337	2373
Drain Manholes	654	653	669
Outlet Controls	5	5	5
Private System	**Permit Year 4**	**Permit Year 5**	**Permit Year 6**
Catch Basin	1254	1252	1530
Drain Manholes	219	229	220
Outlet Controls	30	31	34
Total			
Catch Basin	3496	3589	3903
Drain Manholes	873	882	889
Outlet Controls	35	36	39

Below is the status of all stormwater pipes as of the end of Permit Year 5:

Pipe Type	Segments	Length (Ft)	Length (Miles)
CSO	13	1246	0.24
Culvert	763	39952	7.57
Force Main	1	234	0.04
Gravity	4892	406344	76.96
Roof Drain	137	5982	1.13
Underdrain	338	24826	4.7
Totals	**6144**	**478584**	**90.64**

BMP 3.2 – Continue to Enforce the Non-Stormwater Discharge Ordinance

Responsible Parties – City Engineer/Code Enforcement Officer

Measurable Goal 3.2.1 – During Permit year 1 – 5, continue to implement, to the extent allowable under State or local law, the Illicit Discharge Ordinance, adopted July 6, 2009.

Activities Completed During Permit Year 6: The City continued to enforce the Non-Stormwater Discharge Ordinance adopted July 6, 2009. We have records of responding to 4 incidents in Permit Year 6. A table of these events is included in Appendix C.

The process of enacting the Non-Stormwater discharge ordinance varies somewhat depending on the situation but the general course of action is:

1.) City employee takes notice of a non-stormwater discharge
2.) Employee reports findings to Supervisor, Sustainability Coordinator, Wastewater Manager or Director of Public Services/Engineering.
3.) The situation is investigated by the proper staff member – often a street supervisor, wastewater staff or sustainability coordinator
    a. Our protocol is to use our extensive GIS mapping of our pipe system to trace the issue back to the likely source
4.) The situation is addressed with the person(s) causing the discharge and a plan is made to resolve the issue.
5.) If the issue is not resolved appropriately, Code Enforcement is alerted and may, if appropriate to the situation, issue a stop work order until the issue is resolved.

BMP 3.3 – Continue Dry Weather Outfall Inspection Program

Responsible Party *– City Engineer*

Measurable Goal 3.3.1 – During the previous permit cycle, Westbrook designated Nason's Brook as our priority watershed however we have reevaluated and reassigned that designation to Mill Brook. In Permit Years 1 – 5, dry weather outfall inspection of the priority watershed will be conducted.

Measurable Goal 3.3.2 – In Permit Year 1, the City will review the standard operating procedure (SOP) for the dry weather outfall inspection program and revise it as necessary. The City will have the reviewed SOP available no later than September 19, 2014.

Activities Completed During Permit Year 6: Westbrook maintains/inspects 300 stormwater outfalls, 51 of which are in the Mill Brook watershed, our designated priority watershed. The City maintains a thorough map and attribute database of stormwater outfalls. This database includes outfall type and watershed. We are gathering data on outfall size and material on an ongoing basis as well as taking photographs out outfalls during inspection. During Permit Year 6, dry weather outfall

inspections were conducted in the Mill Brook, Long Creek, Highland Lake and Capisic Brook watersheds. Inspections were conducted in June of 2019. The City Sustainability Coordinator conducted the dry weather outfall inspections and inspection results are recorded using a cell phone or iPad with the GIS Collector application. This application updates the City stormwater map almost immediately and allows staff to designate outfalls needing follow up. That designation is easily sorted from the remaining data by exporting a CSV file.

63 outfalls were inspected. Of those, 12 showed signs of steady flow with an additional 10 showing trickle flow. Flow was recorded as cloudy at three sites where the cloudiness was deemed to be pollen. 15 outfalls were marked for follow up generally for mapping updates, structure maintenance or possible yard waste dumping. Follow up is still being completed. Many outfalls were found to have flow despite the dry weather. The City believes this flow to be the result of high or perched water tables and an extraordinary amount of rain prior to the outfall inspections leading to some residual water draining from the system.

The dry weather outfall inspection SOP and data is included Appendix D.

BMP 3.4 – Continue Open Ditch Illicit Discharge Program

Responsible Party *– City Engineer*

Measurable goal 3.4.1 – In Permit Year 1, the City will finalize the standard operating procedure (SOP) for detecting illicit discharges within the ditch system of the highest priority watershed - Mill Brook. The City will have the SOP available no later than September 19, 2014.

Measurable goal 3.4.2 – In Permit Years 2 – 5, the City will continue implementing the standard operating procedure for the inspection program to detect and illicit discharges in the open ditch system of the highest priority watershed - Mill Brook.

Activities Completed During Permit Year 6*:* In Permit Year 3, 124 ditches were mapped in the Mill Brook watershed, the city's priority watershed. Opportunistic inspections of these ditches are completed by Public Services during normal operations. Staff has been advised to do these inspections during the annual stormwater pollution prevention training. Information regarding this training is included in the BMP 6.2 section of this report.

BMP 3.5 – Septic System Evaluation

Responsible Party *– City Engineer*

Measurable Goal 3.5.1 – By the end of Permit Year 6, June 30, 2016, the City will develop a list of septic systems in their highest priority watershed (Mill Brook) that are ≥ 20 years old and which may discharge into the MS4 if the system fails.

Measurable Goal 3.5.2 – By the end of Permit Year 6, June 30, 2017, the City will implement a drive by evaluation and documentation program of the aging septic systems identified in Measurable Goal 3.5.1. The program will include mechanisms to address any discharges from failed septic systems.

Activities Completed During Permit Year 6: The municipality has assembled a City wide GIS map of our septic parcels, and we have an excel spreadsheet list of all septic parcels. The majority of the parcels are homes > 20 years old (approximately 1040) with varying degrees of systems that have been upgraded over time, but to be conservative we have included all the septic parcels on our "watch list". The City Inspectors are on the roads daily inspecting properties and if any issues should arise that they see, the City promptly engages with property owners to address their septic issues. Most issues are reported in by abutting property owners or passersby though we received no such reports in Permit Year 6. Septic is not the predominant sanitary system in our community, as this only represents approximately 13% of the sanitary system for the parcels of Westbrook. The majority of our parcels are on public sewer.

If a septic system was determined to be leaking the City would, through the Code Enforcement Department, follow the protocol set forth in Maine Revised Statutes, Title 30-A: Municipalities and Counties, Part 2: Municipalities, Subpart 5: Health, Welfare and Improvements, Chapter 161: Sewers and Drains, Subchapter 2: Private Drains.

On February 11, 2019, the City received an odor complaint regarding the 1171 Bridgton Road property. The odor was found to be caused by a failing septic system. Replacement of the failing system was delayed due to the property owner not having the funds to pay for the repair. The City sought out a grant to pay for the project. Funding was found and the repair was completed 9/12/19.

A D-Size map (24ix36i) showing the designated parcels is available upon request but is too large to attach.

BMP 3.6 – Coordinate with the Portland Water District to Determine if Water Line or Hydrant Practices Are a Significant Contributor of Pollutants to the MS4

Responsible Party – *City Engineer*

Measurable Goal 3.6.1 – In Permit Year 1, coordinate with the Portland Water District 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 Portland Water District with a location map showing the extent of the municipal urbanized area, and the highest priority watershed(s).

- Gather information from the Portland 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.

Measurable Goal 3.6.2 – 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 Westbrook will work with the water utility 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 Westbrook 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 Portland Water District's testing results of the total residual chlorine for any such discharges.

Measurable Goal 3.6.3 – Permit Years 3 – 5, the municipality 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 Portland Water District's testing results of the total residual chlorine for any such discharges.

Measurable Goal 3.6.4 – If it is determined by the end of Permit Year 4, June 31, 2016, that water line or hydrant flushing is a significant contributor of pollutants to the MS4, and the Portland Water District has demonstrated that it will not voluntarily implement BMPs in order to reach ambient water quality criteria for chlorine, the Westbrook will, as soon as practicable or by no later than the end of Permit Year 6,update their IDDE ordinance to allow enforcement of discharges that cause exceedances of water quality criteria.

Activities Completed During Permit Year 6: A location map showing the Urbanized Area and highest priority watersheds has been provided to the Portland Water District and representatives of the Westbrook Stormwater Program have participated in meetings with the Water District and other MS4 communities to develop an SOP for hydrant flushing to minimize the impact to water

quality. A memo describing the BMPs the Portland Water District has implemented to meet MS4 requirements in included in Appendix E.

MCM 4 - Construction Site Stormwater Runoff Control

MCM Goal

Continue to 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.

The City will rely on the Maine Construction General Permit (MCGP) or Chapter 500 to meet the requirements of the General Permit. For specific permit requirements and suggestions, refer to MDEP's General Permit for Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems Part IV(H)(4).

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

Responsible Party *– City Engineer*

Measurable goal 4.1.1 – Continue notifying developers and contractors through the modified building permit and Planning Board review process, and through meetings with Code Enforcement and Planning staff. The documents provide notification to applicants 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.

Activities Completed During Permit Year 6*:* The City Planning Board Application includes a box to be checked by the permitee if the proposed project will have 1 acre or more of site disturbance, require a Maine Construction General Permit and fall under Chapter 500 Stormwater Regulations. A copy of the application is included in Appendix F.

BMP 4.2 – Continue documenting every construction activity that disturbs one or more acres within the Urbanized Area.

Responsible Parties – City Engineer/City Planner

Measurable Goal 4.2.1 – During the previous permit cycle, the public works director developed a spreadsheet to document the construction activities that disturb more than one acre of land in the

Urbanized Area. By June 30 each year the spreadsheet will be updated to include the construction projects in the Urbanized Area that disturbed more than one acres of land.

Activities Completed During Permit Year 6: A copy of the spreadsheet tracking activities that disturb greater than one acre of land is included in Appendix G.

BMP 4.3 – Continue implementing the construction site inspection program.

Responsible Party – *City Engineer*

Measurable Goal 4.3.1 – During the previous permit cycle, the City developed a procedure for construction site inspections by either a municipal official of a contracted third party to meet the terms and conditions of the MS4 General Permit. The program includes three construction inspections for sediment and erosion control issues in those sites that are in the highest priority watershed (Mill Brook) and two inspections in all other portions of the Urbanized Area. One of the inspections occurs at the end of construction to document that final stabilization of the site has been completed. The City will continue to implement this program and by June 30 each year will document this information in the Construction Inspection Tracking spreadsheet that is also used to document BMP 4.2.

Activities Completed During Permit Year 6: The City has established a spreadsheet tracking activities that disturb greater than one acre of land is included in Appendix G. The dates of inspections during Permit Year 6 are included in this spreadsheet. Additionally, the City filled a Wastewater Division Manager position in Permit Year 3. This additional resource has enabled the City to perform more opportunistic inspections of both greater and less than 1 acre projects. Third party inspection reports are submitted to the City Planner, forwarded to the Stormwater Coordinator and stored in binders.

Due to the large amount of documentation these reports are not included but are available upon request.

BMP 4.4 – Enhanced Certification in Mill Brook

Responsible Party – *City Engineer*

Measurable Goal 4.4.1 – Whenever the City hires a contractor to do work in Mill Brook, they will hire a contractor certified by the State in sediment and erosion control.

Activities Completed During Permit Year 6: The City hired no contractors to do work in Mill Brook during Permit Year 6.

MCM 5 - Post-Construction Stormwater Management

MCM Goal

1. Continue to implement 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 City's MS4
2. Continue to implement an ordinance or similar measure to ensure adequate long-term operation and maintenance of post construction BMPs
3. Ensure post construction BMPs are functioning as intended
4. Document and report annually to the MDEP all applicable post-construction information

For specific permit requirements and suggestions, refer to Part IV(H)(5) of the General Permit **BMP**

5.1 – Continue to Enforce the Post-Construction Stormwater Management Ordinance

Responsible Parties – City Engineer/Code Enforcement Officer

Measurable Goal 5.1.1 – In Permit Years 1 – 5, continue to implement the Post Construction Discharge Ordinance (effective April 5, 2010) which requires that any site which disturbs more than one acre certify to the City annually, by March 1, that they have inspected and maintained their stormwater BMPs. This ordinance is Article III of Chapter 37 Post-Construction Stormwater Management. The City will continue to enforce this ordinance.

Activities Completed During Permit Year 6: The City continues to implement the Post-Construction Stormwater Management ordinance (Chapter 37-1 through 37-29) in an effort to ensure that all post-construction stormwater BMPs are being installed and maintained. No NOVs were issued.

BMP 5.2 – Track Post Construction Sites to Ensure Proper Reporting and Compliance with the Ordinance.

Responsible Parties – City Engineer/Code Enforcement Officer

Measurable Goal 5.2.1 – In Permit Years 1 – 5, continue to track sites that trigger the Post Construction Ordinance and to document the following elements which are required to be reported to the Maine DEP:

- The cumulative number of sites that have post construction BMPs discharging into the City

of Westbrook's MS4

- A summary of the number of sites that have post construction BMPs discharging into the City of Westbrook's MS4 that were reported to the municipality
- The number of sites with documented functioning post construction BMPs
- The number of sites that required routine maintenance or remedial action to ensure that the post construction BMP is functioning as intended

Activities Completed During Permit Year 6: In Permit Year 6 the City had 13 post construction sites disturbing one acre or more. The Westbrook Post Construction Ordinance requires property owners of sites that disturb more than one acre of land to submit annual reports prepared by a qualified post-construction stormwater inspector to the City Engineer ensuring that all stormwater BMPs have been properly inspected and maintained and noting any deficiencies. We are currently in the process of acquiring delinquent reports for PY 6 and anticipate being in possession of those reports by the end of October.

Activity at these sites, including report submission and inspections, is tracked in the spreadsheet included in Appendix H.

BMP 5.3 – Develop and implement a procedure for notifying site developers to consider incorporating low impact development (LID) techniques.

Responsible Parties – City Engineer/City Planner

Measurable Goal 5.3.1 – By the end of Permit Year 1, the City will establish a standard operating procedure (SOP) for notifying developers to consider LID techniques. The City will have the SOP available no later than September 19, 2014.

Measurable Goal 5.3.2 – During Permit Years 2 – 5, implement the SOP for notifying developers to consider LID techniques.

Measurable Goal 5.3.3 – During Permit Years 2 – 5, evaluate the methods used to encourage developers to use LID techniques.

Activities Completed During Permit Year 6: The City does not have a written SOP for notification of developers to consider LID techniques. Instead, the City has taken a more proactive approach by having the implementation of LID techniques a key part of an ongoing conversation with the City Engineer and Planner during the project review process. An SOP describing this approach can be developed upon request; however, the City plans to continue with this method of encouraging LID

techniques.

MCM 6 - Pollution Prevention/Good Housekeeping for Municipal Operations

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

MCM GOALS

1. Maintain an updated inventory of all municipal operations conducted in, on, or associated with facilities, buildings, 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 the facilities in the inventory to ensure long term operation of structural and non-structural controls that reduce stormwater pollution of the maximum extent practicable.
3. Train employees on ways to prevent and reduce stormwater pollution from municipal operations and facilities.
4. Continue to implement a program to sweep all publically accepted

For specific permit requirements and suggestions, refer to Part IV(h)(6) of the General Permit.

BMP 6.1 – Operations at Municipally Owned Grounds and Facilities

Responsible Parties – City Engineer/Public Services Director

Measurable Goal 6.1.1 – During Permit Year 1, review the inventory the City created of all municipal operations conducted in, on, or associated with facilities, buildings, cemeteries, parks and open space that have the potential to cause or contribute to stormwater or surface water pollution.

Measurable Goal 6.1.2 – During Permit Year 6, compare the inventory of City operations to the existing standard operating procedures (SOPs) to ensure that all municipal operations have an appropriate SOP in place. Develop any additional SOPs necessary to encompass municipal operations.

Measurable Goal 6.1.3 – During Permit Years 1 -5, continue to implement the Standard Operating Procedures (SOPs) listed at http://www.thinkbluemaine.org/docs/municipal/sopv2.pdf. The City will continue to implement these SOPs at the inventoried facilities in City. Where the Public Services Director is not responsible for implementing the SOPs (I.E., at the police and fire

departments), those facilities will maintain copies of their SOPs onsite.

Activities Completed During Permit Year 6: The City previously developed an inventory of procedures that have the potential to cause or contribute to stormwater or surface water pollution and has implemented the appropriate Think Blue Maine SOPs to reduce the potential for stormwater and surface water pollution. The inventory is reviewed approximately every 6 months as the City shifts from summer to winter operations and vice versa. During Permit Year 6, the inventory of City operations was reviewed to ensure that it encompasses all municipal activities. This inventory was compared to the current City SOPs ensuring that all activities are managed by an appropriate SOP. The site Public Services sites and receives monthly and quarterly inspections as required.

BMP 6.2 – Municipal Employee Training

Responsible Parties – City Engineer/Public Services Director

Measurable Goal 6.2.1 – By the end of Permit Year 6, identify the training needs and materials.

Measurable Goal 6.2.2 – In Permit Years 3-5, implement a municipal employee training program to reduce stormwater pollution potential from municipal operations. For suggesting topics to be covered by the training program, refer to Part IV(H)(6.a.ii) of the General Permit.

Activities Completed During Permit Year 6: Staff training has continued to be a focus during Permit Year 6. Training this year included the following:

6/21/19: Annual Good Housekeeping/Pollution Prevention Training. This in-house training, which lasts between 45 minutes and one hour depending on discussion, reviews department SOPs and the requirements and procedures for reporting potential illicit discharges. Training slides are available in Appendix I.

Attendants: 20 members of the Public Services staff. In Permit Year 6, the Public Services department provided this training “in house” for the majority of staff rather than attending the CCSWCD led training allowing us to customize the event to the needs of our specific department. 5 additional staff members familiar with the “in house” training attended the CCSWCD and Windham Public Works department training offered on June 12, 2019.

Goal: To review the role of the Public Services staff in meeting the requirements of the MS4 program.

Outcome: The majority of the Public Services staff has attended this training several times. We have found that it serves as an excellent refresher for the staff and typically leads to an increase of reporting of illicit discharges to the Stormwater Coordinator. This was the first year that we gave a

pre-training and post-training quiz to measure training effectiveness. The average pre-training score was 8.5/10. The average post-training score was 9.5/10.

Additionally, all new Public Service employees receive a Good Housekeeping/Pollution Prevention training as part of their new hire orientation process.

BMP 6.3 – Street Sweeping

Responsible Party *– Public Works Director*

Measurable Goat 6.3.1 – In Permit Years 1 – 5, continue to sweep all publically accepted paved streets and publically owned paved parking lots at least once as soon as possible after snowmelt. Additional street sweeping will be conducted in the Long Creek.

Activities Completed During Permit Year 6: The City continues its ongoing and aggressive sweeping program for municipally owned or operated streets, parking areas and sidewalks. We do not have an annual "start date" for the sweeping program because it is a year round ongoing activity. In addition to sweeping in the fall to remove leaves from streets, the City sweeps routinely during the winter to prevent sand accumulation on roads as well as in the spring after snow melt and as needed during the summer. In Permit Year 6, the Westbrook sweeping program collected 980.95 tons of material, all of which was hauled to CPRC for disposal. This was a 6% decrease in the amount of material collected compared to Permit Year 5. In Permit Year 6, the Public Services department applied 1,168 tons of salted sand, 2,500 gallons of calcium chloride and 2,174 tons of salt.

BMP 6.4 – Cleaning of stormwater structures including catch basins

Responsible Party *– Public Works Director*

Measurable Goal 6.4.1 – In Permit years 1 – 5, the City will continue to inspect all catch basins and clean catch basins and other stormwater structures that accumulate more than 3 inches of sediment and dispose of the removed sediment according to state law. The City will clean catch basins more frequently if inspections indicate excessive accumulation of sediment. Excessive accumulation is greater than or equal to 50 percent filled.

Activities Completed During Permit Year 6: The City continued its catch basin program established in previous permit cycles and attempted to increase the rate of catch basins cleaned per year to meet the 2 year cleaning cycle requirement. Record keeping was accomplished using an iPad and cloud based ArcGIS program. Information collected includes structure size and condition, debris found and accessibility. In Permit Year 6, staff collected a total of 62.67 tons of material from 147 catch basins. We determined that 2 of the 147 catch basins contained excess sediment. Those 2 will be cleaned

again next spring to determine if an annual rather than every other year cleaning schedule is needed. We did not clean any privately owned catch basins.

Catch basin cleaning in Permit Year 6 was hindered because the Stetco truck used to preform cleanings was out of service for much of the year. It is part of the City's Capital Improvement program to replace this truck during the current fiscal year.

Due to the amount of data, the csv file showing all catch basin cleanings is not included in this report. The file is available upon request.

BMP 6.5 – Maintenance and upgrading of stormwater conveyances and outfalls

Responsible Party *– Public Works Director*

Measurable Goal 6.5.1 – During Permit Years 1 – 5, the City will continue to maintain and upgrade the stormwater conveyance systems based on the results of catch basin, outfall and ditch inspections in accordance with the urgency of the repair.

Activities Completed During Permit Year 6: Catch basins are inspected as part of the City catch basin cleaning program and notes are made regarding maintenance and upgrades that need to be conducted. When the data from the catch basin cleaning is input into the GIS program, a staff member is able to mark any catch basins requiring follow up and describe the follow up needed.

Outfalls are typically inspected as part of the annual program conducted in Mill Brook, Long Creek and additional watersheds. Any maintenance that is required is recorded and reported to a supervisor who can schedule repair work.

Besides structural integrity, which is assessed during cleaning and inspection, we look at the level of service a stormwater structure provides to determine the need for maintenance and upgrades. For example, more focus is given to areas where we use a lot of sand in the winter because we know those structures are providing more treatment.

BMP 6.6 – Stormwater Pollution Prevention Plans (SWPPPs)

Responsible Parties – City Engineer/Public Works Director

Measurable Goal 6.6.1 – During Permit Year 1, the City will review and update the SWPPP for the Public Services Facility to conform to the conditions and requirements of the Maine Multi-Sector

General Permit for Stormwater Discharge Associated with Industrial Activity published April 26, 2011. During subsequent permit years, the City will implement the SWPPP, including conducting quarterly visual monitoring and quarterly housekeeping inspections.

Measurable Goal 6.6.2 – Although the Public Services garage does not exceed the 1,320 gallon threshold requiring and Oil Spill Prevention Control and Countermeasure Plan, the garage holds a Site Location of Development requiring a Spill Plan. The City will update the Spill Plan during Permit Year 1.

Activities Completed During Permit Year 6: As part of an April 8, 2015 DEP audit of the City stormwater program, the City conducted a thorough review and update of municipal SOPs, SWPPPs, SPCC plans and O&M documents. The DEP was able to offer guidance on changes and improvements for these documents. In Permit Year 6, as in all Permit Years, the Public Services and School Transportation facility SWPPPs, SPCC Plans, and O&M documents underwent a review. Public Services, Sewer department and Public Safety fleet maintenance staff receive SWPPP training annually and SWPPP training is included in the introductory training for new employees.

Due to the number and size of these documents, individual SWPPPs, SPCC plans and O&M plans are not attached but are available upon request.

Section 3: General Requirements

3.1 Certification

The General Permit requires that this report be certified by either a principal executive officer or ranking elected official. This section provides the necessary certification.

> "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 assume 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: 9/14/19

Eric Dudley
Director of Engineering & Public Services