

**Municipality/Organization:** Town of Watertown EPA NPDES

**Permit Number:** MAR041083 MaDEP

**Transmittal Number:** X277147

**Annual Report Number  
& Reporting Period:** No. 15: April 2017-March 2018

## NPDES PII Small MS4 General Permit Annual Report

### Part I. General Information

**Contact Person:** Gerald S. Mee, Jr. **Title:** Superintendent of Public Works

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#### 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 assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

**Signature:**  \_\_\_\_\_

**Printed Name:** Michael J. Driscoll

**Title:** Town Manager

**Date:** 4/30/18

## *Part II. Self-Assessment*

During Permit Year 15, the Town continued implementing the six minimum control measures necessary to comply with the permit and has determined that it is in substantial compliance with all requirements. Key aspects of this year's program are outlined below:

### Measure 1: Public Education and Outreach

During Permit Year 15, DPW, working with the SAC, has continued education and outreach efforts around several stormwater issues in Watertown.

- DPW maintained, and updated as necessary, its Stormwater Management, Illicit Discharge Detection Program, and DPW Permits web-pages at [www.watertowndpw.org](http://www.watertowndpw.org).
- Partnering with the Charles River Watershed Association, the Town held a Rain Garden Training event in May, 2017. The presentation discussed the basic elements of a rain garden, how to size one and what plants work well, and how they treat stormwater. After the presentation, a site walk was held at a local commercial property to look at several rain gardens/bioretention areas. The Town emphasized the work that private developers do to treat stormwater on-site. About 30 people attended.
- A signature element of the Town's public education and outreach program is participation in the annual Faire on the Square. The SAC volunteers and Town Engineer staffed a stormwater table at the Town's annual Faire on the Square, held on September 23, 2017. Residents were encouraged to pin their residence on a town map that showed outfall locations. Residents were then shown where their stormwater outfall was and it was noted that the Town has separate stormwater and sanitary sewer systems. There were several posters with other information available about the Town's stormwater programs and 604b/319 grant information. Over 100 residents participated.
- The SAC worked in partnership with Watertown Middle School 7th grade teachers to integrate stormwater learning into their "Building Cities of the Future" project. Spending 1 day focused on local stormwater issues, students were led by SAC members on a walk around town to identify stormwater BMPs, and then had an interactive presentation about larger stormwater concerns and solutions. By the end of the project, the students' had built to-scale dioramas that were required to use green infrastructure (at least 1 green roof) which had to demonstrate that it could absorb 1 cup of water without damage to the building or surroundings, which the teachers empirically tested.

### Measure 2: Public Involvement and Participation

A key part of the Town's Public Involvement and Participation program is the Watertown Stormwater Advisory Committee. Formed in 2009, the Committee is comprised of the Conservation Agent, the Planning Director, the Town Engineer and four individuals from the general public. During the permit term, the SAC held 8 public meetings. The meetings are posted and open to the public. During the permit term, the SAC continued developing a "stormwater tool box" that contains materials that can be used to give presentations to local groups. The SAC also participated in the Victory Field Ad-Hoc Committee discussion of stormwater needs and opportunities at Victory Field.

### Measure 3: Illicit Discharge Detection and Elimination

During Permit Year 15, work in drainage sub-areas 6, 8, 11, 12, 20, 99, 109, and BEL-1 continued, with additional investigations beginning in sub-areas 18 and CAMB. Progress is reported in detail in the Town's quarterly reports, submitted to EPA and also available on the Town's web-site at: <http://www.watertowndpw.org/pages/watertown-idde-plans/index>.

Investigations during 2017 included around 26,700 linear feet of various sewer and drain inspection, 170 building inspections, and 235 dye tests. Five sources of dry weather flow were identified in 2017 and 3 sources were removed.

There were no enforcement actions taken under the Town's IDDE Ordinance during the permit year.

### Measure 4: Construction Site Stormwater Runoff Control

During the permit year, the Town enforced the Stormwater Management and Erosion Control Ordinance. The Ordinance requires projects that reach certain thresholds to obtain a permit from DPW. The two major thresholds include creation of 500 square feet or more of impervious area, and disturbance of more than 5,000 square feet of land. The accompanying Rules and Regulations were promulgated on August 4, 2017.

### Measure 5: Post-Construction Stormwater Management in New Development and Redevelopment

As noted above, the Stormwater Management and Erosion Control Ordinance was adopted during Permit Year 13. The accompanying Rules and Regulations were promulgated on August 4, 2017. During the permit year, 11 single/two family projects were issued stormwater permits and 4 commercial/industrial permits were issued.

- The Town finalized the Common Street road reconstruction project, which will include a bioretention basin and two stormwater tree trenches.
- The Town reviewed its planned 2018 road reconstruction program and identified two locations for stormwater tree trenches. Construction is anticipated for later in the year.

### Measure 6: Pollution Prevention and Good Housekeeping in Municipal Operations

Annual operation and maintenance programs, such as catch basin cleaning and street sweeping, continued during the permit year.

### Optional

- 604(b) Grant: Throughout the permit year, DPW and the SAC, working with our consultant Horsley Whitten (HW), finalized work on the 604(b) grant. Two designs were developed to 30% drawing level: a bioretention facility at the DPW and a rain garden at the Hosmer Elementary School. A second public meeting was held on September 14, 2017. The meeting focused on how sites were prioritized, designs for the two proposed projects, updates on green infrastructure initiatives in Town, and how stormwater is managed in Town as part of new development and

redevelopment.

A final report for the project was issued in March, 2018.

- Section 319 Grant: Construction on Edenfield Ave. began in 2017 and will be completed this year. To-date, the curbing, roadway binder, and drainage structures including the tree trench infrastructure have been installed. Grading of the swales and plantings, in addition to top course paving, will be completed in the spring.

### Part III. Summary of Minimum Control Measures

#### 1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
1A  Revised	Distribute public education brochures	DPW, Health Dept.	1 brochure each permit year  Develop, print and distribute brochures.	<ul style="list-style-type: none"> <li>• DPW continued to maintain brochures in display racks at Town facilities including DPW Office, Town Hall, Libraries, and Schools. Brochures were also handed out at the annual Faire on the Square.</li> <li>• The Stormwater Advisory Committee (SAC) continued to maintain its web page.</li> <li>• The Town is participating as a matching partner in the Mystic Stormwater Education Collaborative grant, administered by MyRWA. The goal of the grant is to develop targeted, multi-media outreach and education materials for communities in and around the Mystic River watershed.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue distribution and displaying of brochures and other educational materials.</li> <li>• Distribute stormwater education materials at the annual Faire on the Square.</li> <li>• Continue to update and enhance the Stormwater Advisory Committee website.</li> <li>• Continue participation in the Mystic Stormwater Education Collaborative and implement educational messages.</li> </ul>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
1B  Revised	<p>Participate in municipal services exhibit at local mall</p> <p><i>The Town's annual Faire on the Square is effectively a municipal services day.</i></p>	DPW	1 day per permit year	<ul style="list-style-type: none"> <li>• The Faire on the Square was held on Saturday, September 23, 2017. DPW staffed a table and included public education materials about stormwater management.</li> <li>• The DPW and SAC also staffed a stormwater table at the annual Faire on the Square. Residents were encouraged to pin their residence on a town map that showed outfall locations. Residents were then shown where their stormwater outfall was and it was noted that the Town has separate stormwater and sanitary sewer systems, with other information available. Over 100 residents participated. Information about several stormwater projects was also presented.</li> <li>• The SAC staffed a table at the annual Arbor Day of Service and Environmental Fair, held at the Commander's Mansion on April 27, 2017. About 10 to 15 people expressed interest in stormwater issues.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue staffing a table at the annual Faire on The Square event.</li> </ul>
1C	Send stormwater information and work with science depts.	DPW/public schools	Continue meetings and discussions with High School Science Dept. for enhancing curriculum for understanding of impacts to public waterways and measures for stormwater pollution prevention.	<ul style="list-style-type: none"> <li>• The SAC worked in partnership with Watertown Middle School 7th grade teachers to integrate stormwater learning into their "Building Cities of the Future" project. Spending 1 day focused on local stormwater issues, students were led by SAC members on a walk around town to identify stormwater BMPs, and then had an interactive presentation about larger stormwater concerns and solutions.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue seeking outreach and education opportunities in the schools.</li> </ul>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
1D	Outfall Signs	DPW/Community Groups	Label all outfalls with signs	<ul style="list-style-type: none"> <li>• All outfall signs were inspected during the permit year and replaced as needed. Some outfall signs were relabeled to use current outfall numbering system.</li> <li>• The Town received and replied to one inquiry related to discolored water at a numbered outfall.</li> <li>• The Town received and replied to one inquiry about water quality in the Charles River.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue inspection program and repair as needed.</li> </ul>
1E	Pet Waste Management	Health Dept., DPW and citizens	Enforcement of pet waste rules through issuance of fines by Bd. of Health or Police Verify enforcement by number of citations issued each permit year.	<ul style="list-style-type: none"> <li>• The pet waste brochure developed during Permit Year 12 continues to be available at the Health Department. The brochure is also distributed to residents that are observed to have violations and posted on the Health Department web page.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue program.</li> </ul>
1F	Education of restaurant owners and auto service garage owners	DPW/Board of Health	Visit and provide educational materials on preventing stormwater pollution at least once every 3 years.	<ul style="list-style-type: none"> <li>• In 2017, the Health Department inspected 238 grease traps at local food service establishments. Grease trap logs were reviewed and some were opened and inspected. The Health Department provided information to establishments who did not comply with the Health Department Grease Trap Regulation.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue program.</li> </ul>

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1G	Public education through environmental speaker series	DPW, Environmental Committee, Stormwater Advisory Committee and other Town committees and citizen groups	Three to five annual speakers or movies on environmental topics	<ul style="list-style-type: none"> <li>• Public meetings and educational opportunities held during Permit Year 15 are listed in Section 2A.</li> <li>• A Rain Garden training was held on May 6, 2017. The Town worked with CRWA to give the presentation and basic information about designing and installing residential rain gardens was provided. At the end of the meeting, a site walk was held at a recently redeveloped commercial property that contained rain gardens. DPW staff walked the participants through the stormwater “treatment train” and highlighted how developments treat stormwater.</li> <li>• As part of advertising the training, DPW spoke with a local reporter about its stormwater program. An article, entitled “Town Looking for Ways to Reduce Amount of Water Going into Storm Drains” which was published at <a href="http://www.watertownmanews.com">www.watertownmanews.com</a></li> </ul>	<ul style="list-style-type: none"> <li>• Continue to evaluate resources and opportunities for environmental speakers/education.</li> </ul>
1F	DPW Web Page	DPW, Stormwater Advisory Committee		<ul style="list-style-type: none"> <li>• The DPW continued to maintain and update its web page.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to maintain and update the DPW web page as needed.</li> </ul>

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
2A	Public stormwater meetings	Stormwater Advisory Comm. DPW, Planning Bd., Con. Comm.	1 meeting per permit year with S.A.C., Con. Comm., Planning Bd., Bd. of Health & DPW	<ul style="list-style-type: none"> <li>• The Stormwater Advisory Committee (SAC) held 8 public meetings during Permit Year 15.</li> <li>• Fred Civian, MADEP Stormwater Coordinator, attended the October 2017 SAC meeting and discussed a variety of stormwater topics.</li> <li>• Members of the SAC and the Town Engineer participated in the discussion of stormwater improvements at the Victory Field Ad-Hoc Committee meeting held on September 19, 2107. Written comments were also provided. The group advocated for the inclusion of green infrastructure and other stormwater improvements as part of the planned upgrades at the facility.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to conduct formal and informal meetings on stormwater issues with the Stormwater Advisory Committee and other Town bodies.</li> </ul>
2B	Community Clean Up <i>Participate in/support of community clean up</i>	DPW/volunteers DPW supports community clean up	1 cleanup day per year. Participation by at least 100 volunteers Support 1 cleanup day per year. Aim for participation by at least 50 volunteers	<ul style="list-style-type: none"> <li>• A community clean-up event took place on April 29, 2017 as part of the River Clean-up event described below in BMP 2C.</li> <li>• The Town Tree Warden authorized the planting of 144 trees throughout the Town. At the Arbor Day Event held at the Lowell School on April 28, 2017, the Tree Warden spoke to students about issues of stormwater and the importance of a clean and healthy Charles River.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to support annual community clean up events through supply and pick-up of disposal bags</li> <li>• Tree planting is an annual program and will continue next year.</li> </ul>

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2C	River Clean Up  Community Clean Up	DPW  DPW, Police, local senator	1 cleanup day per year. Participation by general public and local community groups.	<ul style="list-style-type: none"> <li>Annual spring clean-up conducted on April 29, 2017. The DPW supplied barrels and a truck for collecting litter and debris and arranged for its removal and proper disposal.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to provide support for community and river clean-ups.</li> </ul>
2D	Citizen Watch Group	Citizens, DPW, Purchasing Agent	<p>2 meetings per year with WCES and participation by at least one volunteer from each neighborhood to perform weekly inspections of neighborhood areas and report to local authorities incidents of pollution.</p> <p>-----</p> <p>2 meetings per year with WCES, one with the Recycling committee and one with the Environment and Energy Efficiency Committee. Aim for 1 cleanup day per year.</p> <p>Participation by general public and local community groups.</p> <p>Monthly meetings of Environment and Energy Efficiency Committee, Recycling Committee, occasional meetings with informal groups on topics such as planting strips, snow removal practices, etc.</p>	<ul style="list-style-type: none"> <li>There were no meetings with neighborhood groups during the permit year.</li> <li>The SAC began developing a stormwater toolbox that can be used for presentation to local groups.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to work with various groups and committees.</li> </ul>
2E	Riverwatch Program	DPW	2 times per permit year	<ul style="list-style-type: none"> <li>The Riverwatch Program is no longer in practice.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

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2F	Household Hazardous Waste Day. The Town is a member of the Minuteman Household Hazardous Waste Collection Location	Health Dept.	8 events per year	<ul style="list-style-type: none"> <li>• Watertown residents disposed of various types of household hazardous waste, including oil based paints, pesticides, cleaning solvents and other materials, at the Minuteman Regional Household Products Facility (MRHPF) in Lexington. The facility operates one day per month from April through November, staffed on each day by one of the eight participating communities, and accepts a wide variety of household hazardous waste. In 2016, 171 Watertown residents visited the facility to dispose of household hazardous waste, resulting in the collection of 136 “full-car” loads.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue HHW Program in conjunction with Minuteman Household Hazardous Waste Collection Days.</li> </ul>
2G	CB Stenciling Program	DPW/SAC/Volunteers	Stencil 25% of key CBs in Town each year over 4 years	<ul style="list-style-type: none"> <li>• DPW summer staff stenciled approximately 100 catch basins during the permit year.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to seek opportunities to engage the public in catch basin stenciling or perform stenciling in-house.</li> </ul>
2H	Water Quality Monitoring Program	DPW/Environmental Community Groups/Volunteers	Conduct Water Quality Monitoring quarterly of waterways known to have high bacterial counts.	<ul style="list-style-type: none"> <li>• A total of 260 water quality samples were taken at the MS4 outfalls, non-municipal outfalls and in-system locations during Permit Year 15 including 18 samples under wet weather conditions.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue and further refine water quality monitoring program.</li> </ul>
2I	Adopt a Storm Drain Program	DPW/SAC/Environmental Community Groups/Volunteers	Participation by 15- 20 Adopt a Storm Drain volunteers each year.	<ul style="list-style-type: none"> <li>• Due a lack of general interest by the public, the Town was unable to draw up support for the proposed Adopt a Storm Drain Program and has decided to end the program due to a lack of public interest.</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

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2J	Rain Barrel Distribution	DPW	Distribute rain barrels for purchase by Watertown residents.	<ul style="list-style-type: none"> <li>The Town sold 21 rain barrels during CY 17.</li> </ul>	<ul style="list-style-type: none"> <li>Continue program.</li> </ul>
2K	Healthy Lawns and Landscapes Workshop	DPW/SAC	Conduct a workshop on lawn and landscape maintenance measures that reduce impacts to the Town's waterways.	<ul style="list-style-type: none"> <li>The DEP is no longer offering the Healthy Lawns Workshop. There are currently no plans for future workshops.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
2L	Mercury Collection	DPW	Collect and properly dispose of mercury containing household items	<ul style="list-style-type: none"> <li>Mercury devices may be dropped off at DPW or the Recycling Center. The local vendor no longer accepts them.</li> </ul>	<ul style="list-style-type: none"> <li>Continue program.</li> </ul>
2M	Curbside CRT Collection	DPW / Private Waste Hauling Company	Collect and properly dispose of Cathode Ray Tube TV's and computer monitors	<ul style="list-style-type: none"> <li>The Town provides curbside collection of CRTs in addition to allowing homeowners to bring them to the Recycling Center.</li> </ul>	<ul style="list-style-type: none"> <li>Continue program.</li> </ul>
2N	Tire Collection Drop Off	DPW/ Private Waste Hauling Company	Collect and properly dispose of tires	<ul style="list-style-type: none"> <li>The Town provides two annual drop off events, as part of larger recycling events.</li> </ul>	<ul style="list-style-type: none"> <li>Continue program.</li> </ul>

### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
3A	Work with private consultants	Coordinate with DPW	<p>Perform top down investigation of entire MS4 to detect illicit connections within 3 years</p> <p>Eliminate identified illicit connections within 3 months of detection.</p> <p>Most illicit discharge sources detected and eliminated within 5 years</p>	<ul style="list-style-type: none"> <li>• DPW has worked with private consultants to implement the Town's IDDE program. Additional information is provided in the quarterly reports submitted to the EPA and posted on the DPW web site.</li> <li>• Since 1997, a total of 169 out of 172 (98%) key junction manholes have been inspected and monitored, and tested for the presence of indicator parameters. Manholes with positive findings are traced upstream to locate the source of the illicit connection, and repairs made as necessary.</li> <li>• The Town estimates approximately 2,534 gpd of illicit discharges have been removed from the drainage system as part of the IDDE Program.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue implementing the Town's approved IDDE program.</li> <li>• Continue investigations in high priority outfalls drainage areas and re-evaluate upstream tributary areas to outfalls where high bacterial counts continue to be observed.</li> </ul>
3B	Work with various Town agencies	Building, FD, Con. Comm, DPW	Training of public employees on illicit discharges completed within one year	<ul style="list-style-type: none"> <li>• The DPW continues to coordinate with the Health Department about improper waste disposal issues and possible impacts to MS4 and water bodies.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue joint efforts of DPW, SAC, Building Department and other Town Depts. and Agencies regarding the serious nature of illicit connections and to be continually on the lookout while working around Town for incidents of illicit discharges so they can be promptly addressed.</li> </ul>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
3C	Update Stormwater Map	DPW/Consultants	Update map each year during permit period as new information becomes available. Complete supplemental info. Mapping by 2007.	<ul style="list-style-type: none"> <li>The sewer, drain, and drainage area mapping is updated, as needed, based on the results of field investigations and record plans.</li> </ul>	<ul style="list-style-type: none"> <li>Continue updating the base mapping as needed.</li> </ul>
3D	TV, smoke and dye testing	DPW/Consultants		<ul style="list-style-type: none"> <li>Approximately 26,700 linear feet of various sewer and drain pipe were inspected by CCTV during 2016.</li> <li>170 building inspections and 235 dye tests were performed during the permit year.</li> </ul>	<ul style="list-style-type: none"> <li>Continue investigations in accordance with Town's Illicit Discharge Detection and Elimination Program, approved by the EPA.</li> </ul>
3E	Remove dry weather overflows	DPW/Consultants	Eliminate dry weather overflows within 1 year	<ul style="list-style-type: none"> <li>5 sources of dry weather flow were identified in 2017. A total of 57 illicit discharges have been identified since program inception.</li> <li>3 sources of dry weather flow were removed from the system during 2017. To date, 48 illicit discharges have been removed from the system.</li> </ul>	<ul style="list-style-type: none"> <li>Continue IDDE program to remove dry weather sources of flow to the drainage system.</li> </ul>
3F	IDDE Educational Outreach	DPW/SAC/Health Dept./Con. Comm./Volunteers	Include IDDE Education with public education goals under BMP #1.	<ul style="list-style-type: none"> <li>The DPW Illicit Discharge Detection Program web-page is updated as needed.</li> </ul>	<ul style="list-style-type: none"> <li>Provide updates to the SAC and public as needed, maintain and update the IDDE web-page.</li> </ul>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
3G Revised	Prohibition of Illicit Discharges	DPW / SAC	Since 1990, town regulations “Sanitary Sewer and Storm Drain Regulations” have forbidden improper discharges to the storm drains. Supplant existing Storm Drain and Sanitary Sewer Regulations with more specific language regarding prohibition of Illicit Discharges to the MS4. Draft supplanting Illicit Discharge text for Town Council approval by the end of 2010.	<ul style="list-style-type: none"> <li>• There were no enforcement actions taken using the IDDE Ordinance during Year 15.</li> </ul>	<ul style="list-style-type: none"> <li>• Use the Ordinance for enforcement, as needed.</li> </ul>

#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
4A Revised	Update Town Ordinances	DPW, SAC, Planning, Con. Comm.	Update ordinance by the Jan 2015 and adopt by end of 2015.	<ul style="list-style-type: none"> <li>The Stormwater Management and Erosion Control Ordinance was adopted by the Town Council on February 23, 2016.</li> <li>The Rules and Regulations were promulgated on August 4, 2017.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
4B Revised	Coordinate construction reviews and site inspections	DPW, Planning, Con. Comm.	Internal review and 1 site inspection per project with 100% compliance with sediment and erosion controls by site operators.	<ul style="list-style-type: none"> <li>Projects that disturb 5,000 square feet or increase impervious area by 500 square feet require full plan review and implementation of an erosion and sediment control plan.</li> <li>Projects are inspected at least once and then as needed, for compliance with the approved erosion and sediment control plan.</li> </ul>	<ul style="list-style-type: none"> <li>Continue erosion and sediment control reviews and site inspections, in accordance with the Town Ordinance and Rules and Regulations.</li> </ul>
4C Revised	Standard Construction Details Construction Standards	DPW, Planning, Con. Comm.	Update details 1 time during permit period. Require 100% of the projects with areas of 1 acre or more to include in their plans the necessary measures to adequately control erosion and sedimentation in stormwater runoff that meet or exceed those in the Town's standards and the MA DEP Stormwater Management Policy performance standards, whichever is more stringent.	<ul style="list-style-type: none"> <li>Standard erosion and sediment control details are available on the DPW web site and distributed as-need.</li> </ul>	<ul style="list-style-type: none"> <li>Review standards and update as needed. Provide developers with standards and review plans and site conditions for compliance.</li> </ul>

4D	Standard Erosion Control Details	DPW, Planning, Con. Comm.	Update details 1 time during permit period. Require 100% of the projects with areas of 1 acre or more to include in their plans the necessary measures to adequately control erosion and sedimentation in stormwater runoff that meet or exceed those in the Town's standards and the MA DEP Stormwater Management Policy performance standards, whichever is more stringent.	<ul style="list-style-type: none"> <li>• See Item 4C above.</li> </ul>	<ul style="list-style-type: none"> <li>• Review standards and update as needed. Provide developers with standards and review plans and site conditions for compliance.</li> </ul>
4E	Oil/gas separators for areas greater than 4 parking spaces.	DPW	100% of all new construction sites that connect to the Town system with plans for 4 or more parking spaces to include oil/gas separators.	<ul style="list-style-type: none"> <li>• Based on the new Ordinance, water quality improvements are required on parking lots with an area of 5,000 square feet or greater that will be excavated or overlain. There were 3 parking lots meeting this threshold during Year 15.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue requiring drainage retrofits at parking lot repaving sites meeting the parking space criteria.</li> </ul>
4F	DPW Construction Standards	DPW	Enacted in 2002, project proponents appearing before DPW must comply with provisions. Require 100% of projects to include in their plans the necessary measures to adequately control erosion and sedimentation in stormwater runoff that meet or exceed those in the Town's standards and the MA DEP Stormwater Management Policy performance standards, whichever is more stringent.	<ul style="list-style-type: none"> <li>• DPW enforced the Town's <i>Stormwater Management and Erosion Control Ordinance</i> as noted in 4A.</li> <li>• DPW continued to require Applicants complete a checklist entitled <i>Site Plan Review Checklist for Single and Two-Family Construction</i>.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue use of these requirements.</li> </ul>
4G	Public observation and reporting	DPW/Board of Health	Implement procedures for receipt and follow-up of public comments on construction site violations of the Town's standards for erosion and sediment control by the end of 2007.	<ul style="list-style-type: none"> <li>• DPW has a link on its website that allows the public to report any problems or concerns they may have with activities or conditions at construction sites.</li> <li>• During Permit Year 15, one comment was received from the public about construction issues various locations in Town. Each comment was addressed by the DPW/DCDP/BOH, working with the applicant.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue monitoring any public comments, concerns or questions regarding construction activities and impacts to stormwater quality.</li> </ul>

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
5A Revised	Update Town Ordinances	DPW, SAC, Planning, Con. Comm.	Draft an ordinance by the January 2015 requiring the implementation of post construction runoff controls and long-term operation and maintenance of such controls. The goal for the approval of this ordinance by the Town and its adoption is by the end of 2015.	<ul style="list-style-type: none"> <li>• The Stormwater Management and Erosion Control Ordinance was adopted by the Town Council on February 23, 2016.</li> <li>• The Rules and Regulations were promulgated on August 4, 2017.</li> </ul>	
5B Revised	Update BMP's and details  <i>Post construction runoff controls strategies.</i>	DPW, Planning, Con. Comm.	<p>Reduce the percentage of impervious surfaces associated with new developments and redevelopment projects of one acre and above to 25% of the site or less.</p> <p>Reduce sedimentation in stormwater runoff and local water bodies downstream of the development as determined from routine observations.</p> <p>Experience has shown reducing impervious areas by 25% or more is unrealistic. The new goal is to reduce impervious areas as much as practicable provide additional stormwater management controls to the maximum extent practicable.</p>	<ul style="list-style-type: none"> <li>• Projects that disturb 5,000 square feet or increase impervious area by 500 square feet require full plan review and implementation of post-construction stormwater controls.</li> <li>• Stormwater permits were issued for 11 single/two-family residential projects during the permit year.</li> <li>• Stormwater permits were issued for four commercial/industrial projects.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to work with developers throughout the permitting process to reduce impervious areas practicable and provide additional stormwater management controls to the maximum extent practicable.</li> <li>• Continue enforcement of the Stormwater Management and Erosion Control Ordinance</li> </ul>

## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
6A	Clean and inspect outfalls	DPW	Clean and inspect at least 1 time per year	<ul style="list-style-type: none"> <li>Outfalls are inspected routinely as part of the Town's IDDE program and in response to public comment. Maintenance is performed as-needed.</li> </ul>	<ul style="list-style-type: none"> <li>Continue program</li> </ul>
6B	Clean catch basins	DPW	Clean every catch basin at least once every 2 years	<ul style="list-style-type: none"> <li>2,966 catch basins, representing over 95% of the system, were cleaned during calendar year 2017, and 252.31 tons of catch basin debris were disposed of.</li> </ul>	<ul style="list-style-type: none"> <li>Annual cleaning of catch basins to continue.</li> </ul>
6C	Street Sweeping	DPW	2 street sweepers employed year round, weather permitting to clean all town streets at least once per year.	<ul style="list-style-type: none"> <li>All main streets and major arterials received more than 2 street sweepings during calendar year 2017. All other streets received sweeping twice (or more) during the year.</li> <li>A total of approximately 274.83 tons of street sweeping debris was collected and properly disposed during 2017.</li> </ul>	<ul style="list-style-type: none"> <li>Continue program</li> </ul>
6D	Inspection and maintenance of stormwater system	DPW	Inspect problematic system locations of the MS4 at least once per year and more frequently as conditions dictate.	<ul style="list-style-type: none"> <li>Problem locations were reviewed as often as possible/needed, but minimally once per year.</li> </ul>	<ul style="list-style-type: none"> <li>Continue program</li> </ul>
6E	Update Emergency Management Plan	DPW / Emergency Services	Update Plan 1 time per permit period	<ul style="list-style-type: none"> <li>DPW met with the BOH as well as the Police and Fire Departments on a routine basis to discuss emergency management issues.</li> </ul>	<ul style="list-style-type: none"> <li>Review and update Emergency Management Plan as appropriate, continue departmental coordination meetings.</li> </ul>
6F	EPA/DPW Spill Truck	DPW	Respond to spill emergencies.	<ul style="list-style-type: none"> <li>The truck is available as needed. During the permit year, there were no major spills and the spill truck was not deployed. A replacement truck is being purchased as the current one has reached its useful life.</li> </ul>	<ul style="list-style-type: none"> <li>Available as needed.</li> </ul>

6G	Integrated Pest Management Program	DPW	Use IPM methods to exclude pesticides on Town properties.	<ul style="list-style-type: none"> <li>DPW did not apply pesticides to public parks, open spaces or other greenways during the reporting period.</li> </ul>	<ul style="list-style-type: none"> <li>Continue IPM program for open spaces, parks and greenways under Town jurisdiction.</li> </ul>
6H	Wet weather testing.	DPW and consultants	DPW will supplement existing testing program with wet weather testing 5-6 times per year.	<ul style="list-style-type: none"> <li>Wet weather testing of the MS4 was performed on 2 occasions during Permit Year 15. A total of 64 water quality samples were collected from outfalls and surface water locations under wet weather conditions and sent to a lab for analysis.</li> </ul>	<ul style="list-style-type: none"> <li>Continue wet weather testing in accordance with the approved IDDE plan.</li> </ul>
6I	Reduce Salt/Sand Usage	DPW	Reduce salt and sand use by 5% normalized for # and severity of storms.	<ul style="list-style-type: none"> <li>The DPW evaluates weather and road conditions during each winter event to balance the use of road salt with the needs of public safety.</li> <li>The Town is implementing a computerized control system for its salting equipment to improve salt distribution and application efficiency. The system adjusts the salt application rate with vehicle speed. This is anticipated to provide a significant reduction in salt usage.</li> </ul>	<ul style="list-style-type: none"> <li>Continue best practices for salt application.</li> <li>Continue implementation of Cirrus control system.</li> </ul>
6J	Train public works employees on pollution prevention and good housekeeping techniques.	DPW	Gather training materials and implement training to public employees by July 31, 2006.	<ul style="list-style-type: none"> <li>Pollution prevention and good housekeeping practices are implemented and expanded whenever possible.</li> </ul>	<ul style="list-style-type: none"> <li>Continue to encourage public works employees to follow pollution prevention and good housekeeping practices.</li> </ul>

### 6a. Additions

6K New	Charles River Watershed Collaborative	DPW	Number of meetings attended	<ul style="list-style-type: none"> <li>Staff attended three meetings, where topics such as stormwater utilities, upcoming permit requirements, and phosphorus controls were discussed.</li> <li>The Collaborative is participating in the MA Statewide Collaborative to develop statewide outreach and education programs.</li> </ul>	<ul style="list-style-type: none"> <li>Continue participation.</li> </ul>
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**7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<not applicable>>**

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16
Revised					
Revised					
Revised					
Revised					
Revised					

**7a. Additions**


**7b. WLA Assessment**

**Part IV. Summary of Information Collected and Analyzed**

See IDDE Quarterly reports submitted to EPA

**Part V. Program Outputs & Accomplishments (OPTIONAL) Programmatic**

Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures	(\$)	

**Education, Involvement, and Training**

Estimated number of residents reached by education program(s)	(# or %)	2,000
Stormwater management committee established (Stormwater Advisory Committee)	(y/n)	Y
Stream teams established or supported	(# or y/n)	N
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	y (entire length of Charles River)
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	8
▪ community participation	(%)	171 cars
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	Y

**Legal/Regulatory**

	In Place Prior to Phase II	Under Review	Drafted	Adopted
Regulatory Mechanism Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				X
▪ Erosion & Sediment Control				X
▪ Post-Development Stormwater Management				X
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination	X			X
▪ Erosion & Sediment Control	X			X
▪ Post-Development Stormwater Management	X			X

**Mapping and Illicit Discharges**

Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	27
System-Wide mapping complete	(%)	99%
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened	(# or %)	100%
Illicit discharges identified	(#)	57
Illicit connections removed	(#)	48
	(est. gpd)	2,534 gpd
% of population on sewer	(%)	99.99 %
% of population on septic systems	(%)	<0.01%

### Construction

Number of construction starts (>1-acre)	(#)	2
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100%
Site inspections completed	(# or %)	100%
Tickets/Stop work orders issued	(# or %)	0
Fines collected	(# and \$)	0
Complaints/concerns received from public	(#)	1

### Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100%
Site inspections completed	(# or %)	100%
Estimated volume of stormwater recharged	(gpy)	n/a

### Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	Annually
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	Annually
Total number of structures cleaned	(#)	2,966
Storm drain cleaned	(LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		
Cost of screenings disposal	(\$)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	1-2x
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	2+
Qty. of sand/debris collected by sweeping	(lbs. or tons)	274.83 tons

Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	LoRusso Landfill – Plainville, MA
Cost of sweepings disposal	(\$)	
Vacuum street sweepers purchased/leased (We own 2 mechanical sweepers)	(#)	0
Vacuum street sweepers specified in contracts	(y/n)	N

Reduction in application on public land of: (“N/A” = never used; “100%” = elimination)		
▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	
Integrated Pest Management program mitigating against use of chemicals in place since 2001.		

Anti-/De-Icing products and ratios	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	95% 5%
Pre-wetting techniques utilized	(y/n)	Y
Manual control spreaders used	(y/n)	Y
Automatic or Zero-velocity spreaders used	(y/n)	Y
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	N