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Municipality/Organization: Town of Watertown

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Annual Report Number
& Reporting Period: No. 12: April 2014-March 2015

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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 Michael J. Driscoll

Title: Town Manager Town Manager

Date: APRIL 30, 2015

Part II. Self-Assessment

Watertown continued making good progress over the past year toward meeting its goals pursuant to the Phase II NPDES Permit BMPs as outlined below:

Public Education and Outreach

Watertown has developed and implemented public education and outreach on environmental issues in general and stormwater in particular through a number of programs and awareness campaigns. Watertown continued promoting and supporting the initiatives for educating the public on the impacts of activities on stormwater quality and mitigative measures to protect water quality. The premier forum for public education and outreach each year is the annual Faire on the Square that attracts up to 15,000 people where the Town's color brochures "Protecting our Waterways" and "Reducing I&I" are widely distributed, large displays of the drainage and sanitary sewer systems are presented for people to review and ask questions, and special events focusing on the environment are held with local community groups, environmental advocates and vendors promoting awareness of products and methods for reducing impacts to the environment and water quality.

DPW staffed a table and included public education materials about stormwater management. The SAC set up an additional table, and with assistance from DPW and MWRA, had an interactive display that demonstrated the water cycle, including a simulation of how pollutants enter stormwater runoff during rain storms. An additional display included a map of the Town showing the various drainage sub-watersheds. Participants were invited to place a pushpin in their neighborhood and identify their sub-watershed. Members of the SAC and DPW were available to answer questions and provide assistance.

The Stormwater Advisory Committee (SAC) has created a web page, www.watertownstormwater.org to promote its activities and provide additional outreach and education to the community. A general discussion of the water resources in Watertown, in addition to a clean water pledge a flyer about the committee, and a map showing the Town's drainage areas (this was referenced in 2A last year). The DPW created a 1-page flyer entitled *Summer Storm Preparedness* that was posted on the DPW web page. The flyer included reminders to not blow mowed grass unto the street as it blocks drain grates, to avoid using bark mulch near the street as it can float and block storm drain grates, and to keep storm drain grates clear.

To publicize stormwater as an issue in Watertown and advertise and support the table, the SAC submitted an article to the local newspaper, the Watertown TAB, which was published on September 10, 2014. The article discussed water resources in Watertown and steps that residents can take to reduce stormwater pollution.

Public Involvement and Participation

The Watertown Stormwater Advisory Committee was formed in 2009 as the principal proponent for public involvement and participation in stormwater related issues. The Committee is comprised of the Conservation Agent, the Planning Director, the Superintendent of Public Works, two Public Works designees and four individuals from the general public. One of the main focuses of the Stormwater Advisory Committee (SAC) is editing the final drafts of stormwater related ordinances and advocating for passage by the Town Council. The Illicit Discharges Ordinance has been adopted and the other 2 are well on their way to completion. The SAC has been working on re-structuring of the Erosion and Sedimentation Control Ordinance and the Post Construction Ordinance

by merging into a single document titled “The Town of Watertown Ordinance for Stormwater Management and Erosion Control”. A companion document titled “Town of Watertown Rules and Regulations for Stormwater Management and Erosion Control” was developed to allow specific rules and regulations which evolve over time to be more readily updated without the need to modify the Ordinance itself. The restructured ordinance and rules and regulations documents were finalized by the SAC and sent to the Town Counsel for legal review and first and second readings for the public comment period and vote to approve.

The SAC is also charged with the mission of identifying and securing stormwater related funding and raising public awareness of stormwater pollution and mitigation. The SAC conducts a public meeting generally on a monthly basis and held 11 meetings in Permit Year 12. The annual Charles River Clean-up day was held on 26 April 2014. The DPW supported the clean-up day with supplies and staff resources. The DPW continues to support activities of the Watertown Citizens for Environmental Safety (WCES), a grass roots group that promotes environmental awareness through development and distribution of information to the public and businesses in Town. The Environmental Task Force of the WCES continued its advocacy for control of overpaving by businesses and homeowners during new or redevelopment construction.

The Household Hazardous Waste Collection program continued to be a success in Permit Year 12 with over 137 vehicles participating during 8 separate collection days. Water quality monitoring remained a high priority over the past year with a total of 182 water samples taken at the Town’s stormwater outfalls over 4 quarterly sampling periods. Outfall sampling included 2 quarterly rounds under wet weather conditions and 2 quarterly rounds under dry weather conditions. Water quality samples were also taken at 10 non-municipal outfall locations to the Charles River each quarter to supplement the data from the Town’s outfalls.

The Department of Public Works continued the successful program for the sale of rain barrels to the public on a full-time year-round basis as opposed to the previous practice of holding a single rain barrel sale event day. The Department advertised through the local newspaper, and cable TV. Benefits of rain barrels were even promoted in tax bills. The DPW is continuing this program promoting the benefits of rain barrel usage for capturing roof runoff and providing rain barrels at a nominal fee to local residents. Rain barrels will continue to be offered for sale to the public on a year-round basis.

Illicit Discharge Detection and Elimination

The IDDE Program activities continued the aggressive schedule with a goal to complete the top-down inspection and testing of the entire MS4 system by Permit Year 13. Some on-going issues with unidentified sources of contamination in upstream tributary areas has precluded completing the IDDE investigations in Permit Year 12. This past year, 50 key junction manholes were inspected and tested for the presence of illicit connections indicator parameters representing nearly 28,000 feet of storm drain piping. Through Permit Year 12 a total of approximately 326,000 linear feet of storm drain, representing nearly 90 percent of the entire MS4 system, has been inspected and tested under the IDDE Program. A total of 36 dye tests for illicit connections were performed resulting in the identification of a 5 illicit discharges. Repairs were made to remove 4 of the 5 identified illicit connections and the Town is in the process of confirming a private building owner has corrected the fifth illicit connection of a sink tied to the building storm drain. Through March 2015, a total of 27 illicit discharges have been identified and corrected removing approximately 1,600 gpd of illicit discharges to public waterways.

Construction Site Stormwater Runoff Control

The DPW is one of multiple departments responsible for reviewing site development plans prior to Site Plan Approval by the Planning Board and ensuring that the proper measures are incorporated for controlling erosion and sediment runoff to the Town's stormwater system and waterways. Developers and land owners seeking new construction permits are provided a set of the Town's standard site construction details including erosion and sediment control requirements. The DPW performs inspections of the construction sites of all sizes to ensure compliance with the stormwater runoff control requirements. The DPW also enforces its parking lot drainage standard of using oil/gas separators for areas with 4 or more parking spaces if they connect to the Town's drainage system.

During Permit Year 12, the DPW and SAC drafted a new single draft Stormwater Management and Erosion Control Ordinance and Rules and Regulations. The SAC voted to formally support the Ordinance and the Rules and Regulations on January 15, 2015. Both documents have been submitted in final draft form to Town Counsel for legal review.

The Town is developing a set of standard construction details for work in Watertown. Erosion and sediment control details will be included. Upon completion, the details will be available to engineers and contractors. Work shall be completed in calendar year 2015.

DPW created a document entitled *DPW Site Plan Review—On-site Drainage Requirements*. The document summarizes the DPW standards and policies for providing stormwater management on projects that require DPW review and approval. The document sets specific requirements for construction period and post-construction stormwater controls and references the State Stormwater Management Handbook.

DPW created a checklist entitled *Site Plan Review Checklist for Single and Two-Family Construction*. The checklist is to be completed by the design engineer and contains a list of items that must be included in any plan for single and two-family construction that requires a permit from DPW. A stormwater management design and report is required and all roof runoff must be directed to an infiltration system. Erosion controls such as hay bales/silt fence must be shown on the plan. As-built plans are also required.

During Permit Year 12, there were 7 new development projects with a total area over 1 acre in size that were reviewed by the DPW for implementation of measures to adequately control erosion and sedimentation in conformance with the Town's standards. Also in Permit Year 12, there were 2 redevelopment projects with 4 or more parking spaces which were required to install oil/gas separators as a BMP in their on-site drainage system.

Post-Construction Stormwater Management in New Development and Redevelopment

As noted above, the Stormwater Advisory Committee has been working on getting the Post-Construction Stormwater Control Ordinance language completed for Town Council review and adoption. During Permit Year #12, the DPW and SAC drafted a new single draft Stormwater Management and Erosion Control Ordinance and Rules and Regulations. The SAC voted to formally support the Ordinance and the Rules and Regulations on January 15, 2015. Both documents have been submitted in final draft form to Town Counsel for legal review.

Pollution Prevention and Good Housekeeping in Municipal Operations

The DPW continued its extensive list of activities for stormwater pollution prevention. Each of the Town's 27 outfalls was inspected at least once during the permit year to review its condition and appropriate steps were taken to remove blockages, clean-up debris and maintain its full function.

The catch basin cleaning program this permit year was unable to be fully completed due to the selected contractor not complying with sections of the specifications resulting in the contract being cancelled. Prior to the contract being cancelled, a total of 405 catch basins were cleaned. The specifications for catch basin cleaning have been revised and the Town will issue a new contract for cleaning of all catch basins in calendar year 2015. The DPW's two street sweepers were used to sweep all the Town's streets at least twice during the permit year for removal of salt residue, sand, debris, leaves and litter before entry into the storm drain system. Nearly 522 tons of debris was collected by street sweeping this permit year. The DPW continued maintenance of the stormwater system focusing on problem locations where blockages and flooding have occurred.

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
1A	Distribute public education brochures	DPW, Health Dept.	1 brochure each permit year	Brochures have been placed in display racks at Town facilities including DPW Office, Town Hall, Libraries, and Schools. DPW participated in the annual river clean-up held 26 April 2014.	Continue distribution and displaying of “Protecting Our Waterways”, “Reducing I&I” and Phosphorous in the Charles River” brochures as well as SUASCO stormwater education materials. Print additional brochures and purchase additional SUASCO postcards and posters as needed to maintain adequate supply for distribution at annual environmental events and for posting at DPW and Town building venues. Distribute stormwater education materials at the annual river clean-up program scheduled for 25 April 2015 and Faire on the Square scheduled for 26 September 2015.
Revised			Develop, print and distribute brochures.	<p>The DPW created a 1-page flyer entitled <i>Summer Storm Preparedness</i> that was posted on the DPW web page. The flyer included reminders to not blow mowed grass unto the street as it blocks drain grates, to avoid using bark mulch near the street as it can float and block storm drain grates, and to keep storm drain grates clear.</p> <p>The Stormwater Advisory Committee (SAC) has created a web page, www.watertownstormwater.org to promote its activities and provide additional outreach and education to the community. A general discussion of the water resources in Watertown, in addition to a clean water pledge a flyer about the committee, and a map showing the Town’s drainage areas (this was referenced in 2A last year).</p>	Continue to update and enhance the Stormwater Advisory Committee website.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
Revised			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.	The SAC met with the Science Coordinator for Grades 6 – 12 regarding student and teacher involvement with stormwater related projects and learning opportunities. They brainstormed around possibilities of a science classroom connection with the curriculum and of a media literacy project with possibly video production classes.	Coordinate with the Middle School on having student volunteers work with the DPW staff for installing curb markers at Town catch basins to continue the program started in 2008 (Permit Year 5). Continue collaboration between the SAC and the school science teachers/directors to integrate stormwater subject matter into the curriculum.
ID	Outfall Signs	DPW/Community Groups	Label all outfalls with signs	The DPW continues to perform maintenance and repairs to signs damaged by vandalism and weather.	Missing and damaged signs will be replaced to bring labeling of all outfalls up to standards. The Town will continue to work with DCR to resolve the placement of the two outfall signs on their boardwalk.
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.	DPW and the SAC worked with the Health Department to include pet waste information in their updated Responsible Dog Ownership in Watertown brochure. The new brochure includes a statement reminding owners to pick up and throw out pet waste. There is also a note stating to never place pet waste in a storm drain as it is not treated, but rather is released straight to our waterways.	Continuation and expansion of public education and enforcement activities. The DPW published “Protecting Our Waterways” brochure includes a section on pet waste management and will be distributed to the public and pet owners at town sponsored events and public displays. The Department of Public Works and the Health Department will work with the Clerk’s office to have them distributed when pet licenses are renewed.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
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.	<p>In Permit Year 12, the Health Department reported 243 grease trap inspections of food service establishments were performed by the Health Department.</p> <p>The Health Dept. requires restaurants to produce receipts to prove they have had grease removed and disposed with an appropriate contractor. The Health Department provides a summary of the Town's Rules and Regulations for the Maintenance of Grease Traps and Removal of Grease from Food Establishments. In addition, the Health Department has a partial list of vendors that provide the grease removal and disposal services if the food establishment needs such services.</p>	Provide information to restaurants on impacts of grease disposal in storm drains and to automotive service garages on impacts of improper handling and disposal of oil and coolant wastes.
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	<p>The Stormwater Advisory Committee worked on reviewing topics and arranging speakers to present talks on stormwater related matters and general environmental issues.</p> <p>An SAC member gave a presentation about stormwater at the October 2014 annual meeting of a local neighborhood citizens group (Concerned Citizens Group).</p> <p>A public meeting was held by the Planning Dept. on the draft of the Town's Comprehensive Plan which members of the SAC attended to discuss aspects of the Plan that covered stormwater issues.</p>	<p>Continue to support activities of the Stormwater Advisory Committee, citizen advisory groups, distribute existing brochures, postcards and posters, expand information on the DPW page of the Town website.</p> <p>The SAC is planning on sponsoring at least 2 speakers during Permit Year 13 to present talks to the public about stormwater and environmental issues.</p>

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
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	<p>In April 2009 the Town Council voted to form the Stormwater Advisory Committee (SAC) which is comprised of the DPW Superintendent and his designees, the Planning Director, the Conservation Agent and private citizens. The SAC was formed as an advocacy group for stormwater management and pollution prevention.</p> <p>The SAC conducts posted public meetings on a monthly basis at the DPW and has met on 11 occasions during Permit Year 12. The SAC's initial focus has been on re-drafting MS4 related local ordinances including: (1) Illicit Discharges Prohibition; (2) Construction Site Erosion and Sediment Control; and (3) Post-Construction Stormwater Management. The Illicit Discharges Ordinance has been adopted and the other 2 are well on their way to completion. The SAC has re-directed its focus to step-up public education, student involvement in stormwater subjects, and opportunities for incorporating stormwater concerns/green infrastructure in Town Projects.</p> <p>Members of the SAC met on several occasions with the Stormwater Working Group in the adjoining Town of Belmont to learn what activities they are performing which might apply to Watertown and to discuss opportunities share outreach with Belmont and other surrounding communities for regional initiatives.</p>	<p>Conduct both formal and informal meetings on stormwater issues with Stormwater Advisory Committee throughout the year to review progress on initiatives to reduce impacts of runoff on waterways, measures to improve public education and awareness on the issue, setting of appropriate stormwater erosion and sediment control requirements in Orders of Condition issued to developers, and identification of priority areas for community clean-up events.</p> <p>Notices of the formal meetings are posted at the Town Hall and included in the local newspaper in an effort to encourage public attendance at the meeting.</p> <p>The SAC initiated the planning and development of a public web site in Permit Year 12 dedicated to Watertown Stormwater issues (WatertownStormwater.org) and currently have it up and running with valuable materials for the public's reference. They will continue to update the information on the website and add new features.</p> <p>Continue meeting with stormwater committees and advocates in surrounding communities to promote regional initiatives on stormwater quality improvement. The focus will be on working with officials and citizens in the towns of Belmont, Arlington, Waltham, Newton and Lexington.</p>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
2A (Cont.)	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	<p>The SAC targeted public education to focus on pollutants of concern and increasing knowledge to change the public’s behavior so that pollutants in stormwater are reduced by the distribution of educational materials to the Community. The SAC also set the goal of periodically evaluating the effectiveness of the public education program and adjusting as needed.</p> <p>The SAC successfully completed development of the IDDE Ordinance which was reviewed and approved by the Town’s legal counsel and subsequently adopted by the Town Council after a public hearing on 11 May 2011.</p> <p>The SAC has been working on restructuring of the Erosion and Sedimentation Control Ordinance and the Post Construction Ordinance by merging into a single document titled “The Town of Watertown Ordinance for Stormwater Management and Erosion Control”. A companion document titled “Town of Watertown Rules and Regulations for Stormwater Management and Erosion Control” was developed to allow specific rules and regulations which evolve over time to be more readily updated without the need to modify the Ordinance itself.</p> <p>The restructured ordinance and rules and regulations documents were finalized by the SAC and sent to the Town Council for legal review and first and second readings for the public comment period and vote to approve.</p>	

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
2B	Community Clean Up	DPW/volunteers	1 clean up day per year. Participation by at least 100 volunteers	<p>A formal community clean-up event took place on 26 April 2014. Local citizens groups and institutions participated in cleaning up around waterfront areas and open spaces in conjunction with the River Clean-up event described below in BMP 2C.</p> <p>The Town Tree Warden authorized the planting of 183 trees throughout the Town at the Arbor Day Event held at the Lowell School on 2 May 2014.</p>	Continue to support annual community clean up events through supply and pick-up of disposal bags Tree planting is an annual program and will continue next year.
Revised	<i>Participate in/support of community clean up</i>	DPW supports community clean up	Support 1 clean up day per year. Aim for participation by at least 50 volunteers	The Conservation Agent spoke to students about issues of stormwater.	
2C	River Clean Up	DPW	1 clean up day per year. Participation by general public and local community groups.	<p>Annual spring clean up conducted on 26 April 2014. The DPW supplied barrels and a truck for collecting litter and debris and arranged for its removal and proper disposal and distributed informational brochures.</p> <p>The River Watch program was conducted in conjunction with the river clean up.</p>	Conduct River Clean Up day and associated Community Clean-up activities. Work with volunteers and other participants on a variety of activities aimed at improving environmental quality, river water quality being one of them. The Town is proposing that students assist with clean up and removal of items to prevent entry into the storm drain system as part of satisfying community service obligations. The River clean-up for Permit Year 13 is scheduled for 25 April 2015.
Revised	Community Clean Up	DPW, Police, local senator			

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
<p>2D Revised</p> <p><i>Further revised</i></p> <p>Revised April 2009</p>	<p>Citizen Watch Group</p>	<p>Citizens, DPW, Purchasing Agent</p>	<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 clean up day per year. 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>	<p>The Stormwater Advisory Committee joined the list of groups the Town works with on an ongoing basis. DPW continued working with Watertown Citizens for Environmental Safety (WCES), a grass roots group that promotes environmental awareness through development and distribution of information to the public and businesses in Town.</p>	<p>The Town will continue to work with WCES, Bicycling, Recycling, Stormwater Advisory, Environment and Energy Efficiency Committees. The DPW intends to meet with multiple groups to review topics of environmental interest and to seek participation to support and promote Town initiatives. The DPW will continue to work with the student volunteers such as Roots and Shoots. It is anticipated that this year's Faire on the Square will again feature an environmental section under the auspices of the Environment and Energy Efficiency Committee.</p>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
2E	Riverwatch Program	DPW	2 times per permit year	The Riverwatch Program is no longer in practice.	None.
2F	Household Hazardous Waste Day. The Town is a member of the Minuteman Household Hazardous Waste Collection Location	Health Dept.	8 events per year	There are eight events in any given year. Watertown residents sent over 137 cars to Household Hazardous Waste events in 2014.	Continue HHW Program in conjunction with Minuteman Household Hazardous Waste Collection Days.

2a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
2G	CB Stenciling Program	DPW/SAC/Volunteers	Stencil 25% of key CBs in Town each year over 4 years	The DPW had hoped to continue its public education program with local middle school students by having student volunteers install curb markers on catch basins as they had in the past. However, due to turnover in staff at the public schools, the catch basin stenciling program did not occur during permit year 12. The DPW, working with the SAC, hopes to reestablish this program.	As noted under the Public Education Minimum Control Measure #1, Watertown implemented a catch basin labeling program in Permit Year 5 and will continue to support the efforts of volunteers seeking to participate in this program in Permit Year 13. Stencils have been replaced with discs that affix to the curb behind the drain with adhesive.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
2H	Water Quality Monitoring Program	DPW/Environmental Community Groups/Volunteers	Conduct Water Quality Monitoring quarterly of waterways known to have high bacterial counts.	DPW routinely sampled and analyzed water quality from drainage outfalls to identify signs of illicit connections and to take measures to remove the sources from the storm drains. A total of 182 water quality samples were taken at the MS4 outfalls, non-municipal outfalls and in-system locations over 4 quarterly periods and sent to the lab for analysis during Permit Year 12 including 56 samples under wet weather conditions.	Continue and further refine water quality monitoring program.
2I	Adopt a Storm Drain Program	DPW/SAC/ Environmental Community Groups/Volunteers	Participation by 15-20 Adopt a Storm Drain volunteers each year.	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.	The Adopt A Storm Drain Program has ceased due to the lack of public interest in participating.
2J	Rain Barrel Distribution	DPW	Distribute rain barrels for purchase by Watertown residents.	Changed the rain barrel distribution from a single day, once a year event to full-time year-round practice.	The Town will continue offering the sale of rain barrels on a year-round basis and will continue promoting benefits of rain barrel usage for capturing roof runoff to reduce runoff from paved surfaces and lawn areas reaching the storm drain system and waterways.
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.	The DEP is no longer offering the Healthy Lawns Workshop. There are currently no plans for future workshops.	The DPW will continue to promote healthy lawn and landscape practices to reduce impacts of runoff from treated lawns entering the Town's stormwater system and waterways through distribution of educational materials.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
2L	Mercury Collection	DPW / Local Hardware Store	Collect and properly dispose of mercury containing household items	The Town received a mercury shed provided by the Wheelabrator North Andover consultant and collections of small mercury bearing devices began at the DPW in early summer 2008. A local vendor is collecting fluorescent tubes for the Town in concert with the program. The program continued successfully in Permit Year 12.	Continue and expand the program.
2M	Curbside CRT Collection	DPW / Private Waste Hauling Company	Collect and properly dispose of Cathode Ray Tube TV's and Computer Monitors	The program of curbside collection of CRTs instead of requiring homeowners to bring them to the Drop-off Center continued successfully. The program increases the convenience of disposal and reduces the likelihood of illegal dumping and associated contamination of the environment, Program began in January 2009.	Continue and expand program.
	Tire Collection Drop Off	DPW/ Private Waste Hauling Company	Elect and properly dispose of Tires	The Town is providing two annual drop off events.	Continue and expand program.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
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>	<p>The Department of Public Works has conducted an extremely active program since 1997, has continued its routine monitoring of outfalls and hot spots to locate the presence of illicit connections. A total of 169 out of 172 (98%) key junction manholes were inspected and monitored for illicit connections through Permit Year 12. Key Junction Manholes identified in the Illicit Discharge Detection and Elimination program were opened, inspected and sampled for the presence of indicator parameters. Manholes with positive findings were traced upstream to locate the source of the illicit connection. Five (5) illicit connections were discovered in Permit Year 12 and corrective measures were taken to eliminate the illicit discharges. Through March 2015, a total of 27 illicit discharges have been identified and corrected since the start of the IDDE Program removing nearly 1,600 gpd of illicit discharges to public waterways.</p>	<p>Implement Updated IDDE Plan with the modified top down approach for the remaining 13% of the entire MS4. Begin process of re-evaluating upstream tributary areas to outfalls where high bacterial counts are still observed.</p> <p>Remove remaining identified illicit connections as soon as feasible. Re-evaluate outfall contaminant levels and establish an updated priority list of drainage areas for follow-up IDDE investigations to find other illicit connections not identified by original top-down investigations. Focus on locations where highest contaminant levels have been observed and greatest chance for indirect communication between the storm drain and sanitary sewer could be occurring.</p>
3B	Work with various Town agencies	Building, FD, Con. Comm, DPW	Training of public employees on illicit discharges completed within one year	The DPW continues to coordinate with the Health Department about improper waste disposal issues and possible impacts to MS4 and water bodies.	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.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
3C	Update Stormwater Map	DPW/Consultants	Update map each year during permit period as new information becomes available. Complete supplemental info. Mapping by 2007.	Mapping of Town's MS4, sanitary sewer, and water systems was completed in the Townwide GIS System in 2005. As new information from field investigations during Permit Year 12 became available, it was compiled and used for updating the Stormwater Map.	Continue updating mapping with IDDE investigation results. Incorporate the other features, to the degree the information is available, recommended by the Center for Watershed Protection.
3C Revised			Update map each year during permit period as new information becomes available.		
3D	TV, smoke and dye testing	DPW/Consultants		TV inspected 278 linear feet of piping and conducted 36 portable dye tests of buildings for suspect illicit connections. As a result of findings from field investigations for illicit connections and I/I sources, a total of 1,296 linear feet of sewers were replaced or rehabilitated by the DPW in Permit Year 12 removing an estimated 37,677 gpd of I/I.	Based on results from top down investigations, perform TV, smoke and dye testing to pinpoint illicit sources. In conjunction with the MWRA's Local I/I Financial Assistance Program, the DPW will work with Consultants to arrange for TV inspection of sewers in areas known to have significant infiltration and structural problems.
3E	Remove dry weather overflows	DPW/Consultants	Eliminate dry weather overflows within 1 year	The Department has an active program including work with outside consulting firms to inspect and test its MS4 looking for sources of dry weather flow and determining if it is from an illicit source. To date, investigations have identified and removed 27 illicit discharges. The DPW is in the process of coordinating with the private building owner and scheduling the repairs to remove the one remaining identified illicit discharge.	Use information gained from the top down approach, as modified, to follow-up investigations to identify illicit sources and have them removed immediately.

3a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
3F	IDDE Educational Outreach	DPW/SAC/Health Dept./Con. Comm./Volunteers	Include IDDE Education with public education goals under BMP #1.	<p>The DPW published and distributed the “Protecting Our Waterways” brochure to the public at Town sponsored community events and posted in public forums. The brochure includes the topic of illicit discharges.</p> <p>The Stormwater Advisory Committee acquired and distributed 6 different stormwater pollution prevention themed postcards at the annual Faire on the Square event as well as a poster.</p> <p>The DPW had hoped to continue its public education program with local middle school students by having student volunteers install curb markers on catch basins as they had in the past. However, due to a turnover in staff at the public schools, the catch basin stenciling program did not occur during permit year 12. The DPW, working with the SAC, hopes to reestablish this program.</p>	<p>The IDDE outreach program will continue for Permit Year 13 and will include the following components:</p> <ul style="list-style-type: none"> • Distribution of stormwater brochures, postcards and poster boards developed under BMP #1A at Town events and make available within municipal buildings to employees and the public. • Continue collaboration with the volunteer groups for river watch and community clean-up programs. • Continue meeting with restaurant owners and auto service garages as indicated under BMP #1F to review with methods to prevent illicit discharges from reaching the stormwater system and procedures for proper disposal of wastes from their operations. Install discs on catch basin inlet curbs throughout the Town using Middle School students as noted under BMP #2G. • Repair and replacement of labeling of outfalls under BMP #1D with contact information and phone numbers for the public to report suspicious or confirmed illicit discharges. • Continue collaboration with the High School science dept. for teaching stormwater curricular stormwater management into the environmental sciences and engineering curriculum.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
4B	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.	Relevant Departments review and inspect projects more than once. All relevant DPW divisions are included in review process. All sites were inspected by the Town pursuant to the permit process.	Continue review of plans of new site development. Pay special attention to the plans and details provided by the developer for controlling erosion and sediment runoff that could lead to impacts to the Town’s stormwater system and waterways. Conduct a site inspection after the erosion and sediment control measures are installed, as appropriate, for each new construction project of one acre or larger to ensure consistency with local requirements.
Revised				Relevant Departments review and inspect projects more than once. All relevant DPW divisions are included in review process. All sites were inspected by the Town pursuant to the permit process.	Continue review of plans of new site development. Pay special attention to the plans and details provided by the developer for controlling erosion and sediment runoff that could lead to impacts to the Town’s stormwater system and waterways. Conduct a site inspection after the erosion and sediment control measures are installed, as appropriate, for each new construction project of one acre or larger to ensure consistency with local requirements.
					Continue review of plans of new site development. Pay special attention to the plans and details provided by the developer for controlling erosion and sediment runoff that could lead to impacts to the Town’s stormwater system and waterways. Conduct a site inspection after the erosion and sediment control measures are installed, as appropriate, for each new construction project of one acre or larger to ensure consistency with local requirements.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
4C	Standard Construction 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.	<p>Distributed site construction and erosion and sediment control standards to developers, site construction contractors, and private property owners. The Town has retained Weston and Sampson Engineers to develop a set of standard construction details for work in Watertown. Erosion and sediment control details will be included. Upon completion, the details will be available to engineers and contractors. Work shall be completed in calendar year 2015.</p> <p>Development projects over 1 acre subjected to Plan Reviews included: 58 Irving St., 480 Arsenal St., 570 Arsenal St., 65 Grove St., 45 Bacon/60 Howard Sts., 653 – 655 Mt. Auburn St., and 202 – 204 Arsenal St.</p> <p>Development projects under 1 acre subjected to Plan Reviews included: 80 Elm St., 33 Mt. Auburn St., 270 – 274 Palfrey St., and 354 Arsenal St.</p>	Review standards and update as needed. Provide developers with standards and review plans and site conditions for compliance.
Revised	Construction Standards				

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.	Distributed site construction and erosion and sediment control standards to developers, site construction contractors, and private property owners. Updating details for erosion and sediment control as noted in Item 4C above.	Review standards and update as needed. Provide developers with standards and review plans and site conditions for compliance.
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BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
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.	Require new projects connected to Town drain system to have separators installed during new or renovation work. In Permit Year 12, there were no new or redeveloped properties with greater than 4 parking spaces that were connected to the Town's drainage system.	Continue enforcement of oil/gas separator installation at sites with 4 or more parking spaces at 100% of new sites connected to Town drain system.
Revised					
Revised					

4a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
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.	<p>Distributed site construction and erosion and sediment control standards to developers, site construction contractors, and private property owners. DPW created a document entitled <i>DPW Site Plan Review—On-site Drainage Requirements</i>. The document summarizes the DPW standards and policies for providing stormwater management on projects that require DPW review and approval. The document sets specific requirements for construction period and post-construction stormwater controls and references the State Stormwater Management Handbook.</p> <p>DPW created a checklist entitled <i>Site Plan Review Checklist for Single and Two-Family Construction</i>. The checklist is to be completed by the design engineer and contains a list of items that must be included in any plan for single and two-family construction that requires a permit from DPW. A stormwater management design and report is required and all roof runoff must be directed to an infiltration system. Erosion controls such as hay bales/silt fence must be shown on the plan. As-built plans are also required.</p>	Review standards and update as needed. Provide developers with standard details and review plans and site conditions for compliance.

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.	<p>During Permit Year 12, one report was received from the public about construction issues at a site on School St.</p> <p>The Town has established an on-line link to their website that allows the public to report any problems or concerns they may have with activities or conditions at construction sites.</p>	<p>Continue monitoring any public comments, concerns or questions regarding construction activities and impacts to stormwater quality. Comments made on-line, telephone calls made or correspondence written to the DPW by the public will be tracked in a written log noting the location of the project, date of the contact, and nature of the concern or comment made by the public. As appropriate, the DPW or other local authority will follow-up with a site inspection to review construction conditions and speak to the site inspector.</p>
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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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
5A	Update Town Ordinances	DPW, SAC, Planning, Con. Comm.	Draft an ordinance by the spring of 2008 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 2008.	The Stormwater Advisory Committee was formed in April 2009. One of its primary objectives is to help finalize the development of local ordinances required under the MS4 permit and advocate for their adoption by the Town Council. This includes the Post-Construction. During Permit Year #12, the DPW and SAC drafted a new single draft Stormwater Management and Erosion Control Ordinance and Rules and Regulations. The SAC voted to formally support the Ordinance and the Rules and Regulations on January 15, 2015. Both documents have been submitted in final draft form to Town Counsel for legal review.	The goal for Permit Year 13 is to have the full Town Council vote to adopt the new single Stormwater Management and Erosion Control Ordinance along with the companion Rules and Regulations document adopted by the end of 2015.
5A Revised			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.		Advocate having the Stormwater Management and Erosion Control ordinance adopted by Town Council by end of 2015.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
Revised	<i>Post construction runoff controls strategies.</i>				Structural BMP's to be included for post construction runoff control are the following: <ul style="list-style-type: none"> • Limiting off-site runoff to pre-development levels or less through the use of on-site infiltration or detention practices. • Maximizing the use of pervious surfaces to promote percolation of runoff through the soil to the groundwater table such as infiltration basins, dry wells and porous pavement.

5a. Additions

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
6A	Clean and inspect outfalls	DPW	Clean and inspect at least 1 time per year	Each outfall was inspected a minimum of once and up to 4 times during Permit Year 12. Areas of known difficulty were inspected more often. Upstream testing and inspection was also performed.	Continue program
6B	Clean catch basins	DPW	Clean every catch basin at least once every 2 years	A contractor was retained to clean catch basins in 2014. However, shortly after work commenced, issues arose related to the contractor violating sections of the specifications and as a result, work was halted. The Town has revised its catch basin cleaning specification and intends to clean all catch basins within calendar year 2015. Before the catch basin cleaning was halted, 405 CBs were cleaned.	The Catch Basin Cleaning Program will continue in Permit Year 13.
6C	Street Sweeping	DPW	2 street sweepers employed year round, weather permitting to clean all town streets at least once per year.	All main streets and major arterials received more than 2 street sweepings during Permit Year 12. All other streets received sweeping twice during Permit Year 12. A total of approximately 521.9 tons of street sweeping debris was collected and properly disposed.	Continue program
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.	Problem locations were reviewed as often as possible/needed, but minimally once per year.	Continue program
6E	Update Emergency Management Plan	DPW / Emergency Services	Update Plan 1 time per permit period	Water System Emergency Response Plan was updated.	Review and update Emergency Management Plan as appropriate.
6F	EPA/DPW Spill Truck	DPW	Respond to spill emergencies.	The truck is available as needed. During the permit year, there were no major spills and the spill truck was not deployed.	Available as needed.

6a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
6G	Integrated Pest Management Program	DPW	Use IPM methods to exclude pesticides on Town properties.	No pesticides whatsoever were applied by the Town to public parks, open spaces and other greenways in Town during the reporting period. Limited application of pesticides is used on problem roadside areas.	Continue IPM program for open spaces, parks and greenways under Town jurisdiction.
6H	Wet weather testing.	DPW and consultants	DPW will supplement existing testing program with wet weather testing 5-6 times per year.	Wet weather testing of the MS4 was performed on 2 occasions during Permit Year 12. A total of 56 water quality samples were collected from outfalls and surface water locations under wet weather conditions and sent to a lab for analysis.	Wet weather testing of outfalls on 2 occasions and on the 10 areas identified in IDDE Plan 4 times in Permit Year 13.
6I	Reduce Salt/Sand Usage	DPW	Reduce salt and sand use by 5% normalized for # and severity of storms.	The DPW took all steps possible to limit use of salt on roadways to the degree it could be done without increasing risks to the traveling public. The Department of Public Works discontinued its past practice of placing salt in barrels around Town for public use and also discontinued availability of salt to the public at the DPW facility. This represents a sizeable reduction in salt use.	Take care to not overload salt/sand spreading trucks, instruct operators on proper methods of controlling the dispensing of salt/sand to prevent overdosing, and pay special attention to weather conditions to optimize the usage of sand and sand as needed to provide safe driving conditions.
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.	Pollution prevention and good housekeeping practices are implemented and expanded whenever possible.	Continue to encourage public works employees to follow pollution prevention and good housekeeping practices. The Department will place containers for recycling in public spaces.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 13
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

182 Water Quality Samples collected and sent to laboratory analysis.
 27,975 linear feet of storm drains inspected and tested for illicit connections
 50 Key junction and upstream manholes inspected for presence of illicit discharges
 36 Building inspections and dye tests for illicit connections
 0 linear feet of smoke testing
 1,296 linear feet of sewer replacement and rehabilitation construction work completed

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 %)	20,000
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	(%)	137 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			X
▪ Erosion & Sediment Control	X		X Updates in progress	
▪ Post-Development Stormwater Management			X Updates in progress	
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination	X			X
▪ Erosion & Sediment Control	X		Updates in progress	
▪ Post-Development Stormwater Management	X		Updates in progress	

Mapping and Illicit Discharges

Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	27
System-Wide mapping complete	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened	(# or %)	100%
Illicit discharges identified	(#)	5
Illicit connections removed	(#) (est. gpd)	4 603 gpd
% of population on sewer	(%)	99.99 %
% of population on septic systems	(%)	<0.01%

Construction

Number of construction starts (>1-acre)	(#)	7
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	(#)	0

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)	Once bi-annually
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	Once bi-annually
Total number of structures cleaned	(#)	405
Storm drain cleaned	(LF or mi.)	500 lf
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	N/A
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		
Cost of screenings disposal	(\$)	\$11,418.75

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)	521.9 tons

Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	LoRusso Landfill – Plainville, MA
Cost of sweepings disposal	(\$)	\$6,588.25
Vacuum street sweepers purchased/leased	(#)	2
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 ₂ % MgCl ₂ % 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