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Municipality/Organization: Town of Watertown

EPA NPDES Permit Number: MAR041083

MaDEP Transmittal Number: W-131118

**Annual Report Number
& Reporting Period:** No. 11: April 2013-March 2014

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: April 29, 2014

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.

The Town continued to enforce the Animal Control Ordinance for pet waste management through issuance of warnings and fines to violators by the Board of Health and the Animal Control Officer. The Board of Health also continued with advising restaurant owners on proper operation of the grease traps and disposal of grease. The DPW and the Conservation Agent strengthened their collaboration in areas of shared jurisdiction.

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 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 11. The annual Charles River Clean-up day was held on 27 April 2013. The DPW supported the clean-up day with supplies and staff resources. The DPW conducted its on-going Riverwatch program in conjunction with the Charles River Clean-up day to inspect the bank of the Charles River for signs of dumping and pollution and to keep the outfalls free and clear of debris. 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 11 with over 130 vehicles participating during 8 separate collection days. Water quality monitoring remained a high priority over the past year with a total of 67 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.

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 12. Some on-going issues with unidentified sources of contamination in upstream tributary areas has precluded completing the IDDE investigations in Permit Year 11. Through the past year 168 out of 172 key junction manholes (97%) were inspected and tested for the presence of illicit connections indicator parameters. Through Permit Year 11 a total of approximately 316,000 linear feet of storm drain, representing over 87 percent of the entire MS4 system, has been inspected and tested under the IDDE Program. A total of 3 test kit analyses for illicit connections were performed resulting in the identification of an illicit discharge. Repairs were made to remove the one (1) identified illicit connection.

In response to concerns by the EPA that progress had slowed in identifying and removing illicit discharges as evidenced from continued incidents of high bacterial counts at certain outfalls, the Town requested and received approval from EPA to modify the approved IDDE Protocol of the "top-down" approach for finding illicit connections. The "modified top-down" approach involves bypassing the immediate upstream area with low level contamination to search for more significant sources of downstream illicit discharges. Starting just downstream of the low level contamination, the top-down approach in the approved IDDE Plan would continue to be followed. The investigations of the MS4 key junction manholes downstream of the low level contamination using the field test kits would account for the background level of ammonia and/or surfactants recorded just upstream in determining if illicit discharges existed before moving downstream. Any increase in the concentration of ammonia and/or surfactants above the background level would serve as an indicator of a potential illicit discharge. In such a case, steps would be taken to locate and remove the illicit discharge source(s) prior to proceeding further downstream. The benefit of the modified top-down approach is the ability to continue searching for illicit discharges that would otherwise require delaying investigations until the elusive sources of the low level contamination are found and removed. Watertown began implementing the modified top-down approach in September 2011 which proved to be successful with 4 illicit discharges being identified shortly after implementation. Another illicit discharge was identified and repaired this past permit year.

As part of the MWRA Local Financial Assistance Program under Contract 12-015, 1,363 feet of 10-inch PVC sewer and 881 feet of 12-inch drain were replaced on Hovey Street. The estimated average infiltration and inflow (I/I) removal was 21,600 gpd for the Hovey Street sewer improvements.

Approximately 4,000 linear feet of sewer and drain piping was inspected by CCTV methods to identify defects that could allow intercommunication of the systems and illicit discharges as well as I/I. Portable field test kit sampling was conducted at 4 locations for suspect illicit connections. As a result of findings from field investigations for illicit connections and I/I sources, a total of 1,170 linear feet of sewers were replaced or rehabilitated by the DPW in Permit Year 11 removing an estimated 144,000 gpd of I/I.

The Town Council voted on the formation of the Stormwater Advisory Committee in April 2009. The Stormwater Advisory Committee completed finalizing the Illicit Discharge Prohibition ordinance which was submitted to the Town's legal counsel for refining to comply with the applicable legal language. The legal review was completed and the IDDE Ordinance submitted to the Town Council for review, approval and adoption which took place following on public hearing on 11 May 2011.

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. The DPW requires new construction sites to post a copy of their Construction Permit in a conspicuous location for easy reference by the public. The permit sign includes the phone number of the DPW for the public to report complaints of erosion and sedimentation, litter or other contaminants from the site reaching public ways. No complaints regarding construction site activities and problems were received in the reporting period.

In Permit Year 11, the Stormwater Advisory Committee met on 11 occasions and worked on finalizing language for the Erosion and Sedimentation Control and Grading Ordinance and the Post Construction Stormwater Control Ordinance. The Committee worked to ensure there were no conflicts or inconsistencies in the requirements of these two ordinances, or between the two ordinances and the Mass. Stormwater Policy, and that the ordinances would meet likely requirements of the new draft Stormwater MS4 Permit. The Erosion and Sedimentation Control and Grading Ordinance was reviewed by the Town's legal counsel for conformance to Town ordinance language. This will be followed by a public comment period and vote to approve. The Ordinance is now under review by the full Town Council. This will be followed by a public comment period and vote to approve.

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. The Stormwater Advisory Committee completed final drafting of the Post-Construction Stormwater Control Ordinance which has been passed on to the Town Council Subcommittee on Public Works and Rules and Regulations who recommended sending to the Full Town Council for approval. Currently the DPW requires that a post construction maintenance schedule be submitted with plans prior to approval.

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 were 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 resulted in 3,025 CBs being cleaned and removing over 600 cubic yards of debris. 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 105 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|---------------|---------------------------------------|-------------------------------|---|--|--|
| IA Revised | Distribute public education brochures | DPW, Health Dept. | 1 brochure each permit year Develop, print and distribute brochures. | <p>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 27 April 2013.</p> <p>The Charles River Watershed Association brochure <i>Phosphorus in the Charles River: What You Should Know</i> brochure was distributed at the Conservation Commission's table at the Faire on the Square in Sept. 2013. In both instances, it was made available for people to take copies of the brochure.</p> <p>In addition at the Faire on the Square, the DPW distributed to the public 6 different stormwater related postcards and 3 different posters that were purchased from the SUASCO Watershed Community Council.</p> | <p>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 26 April 2014 and Faire on the Square scheduled for 27 September 2014.</p> |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year II (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|--|-------------------------------|--|---|--|
| 1B | Participate in municipal services exhibit at local mall <i>The Town's annual Faire on the Square is effectively a municipal services day.</i> | DPW | 1 day per permit year | The Department participated in the annual Faire on The Square on Sat. 28 September 2013 to allow the public an opportunity to learn what services the DPW provides including protection of the river through stormwater management. Stormwater related brochures, postcards and posters were distributed for educating people on the connection between runoff in their neighborhood and impacts to the Charles River and tributary water ways. An estimated 12,000 to 15,000 people attended the Faire on the Square. The Watertown Citizens for Environmental Safety (WCES) have a Local Environmental Task Force (LETF) that actively participated in the Faire on the Square event. The Mission of the LETF is to create opportunities for government and individual actions that will lead to a clean and safe environment in Watertown. They promote walking, bicycling, chemical free gardening, and other environmentally friendly practices. | Distribute stormwater brochures, postcards and posters and display the Town's GIS map of the stormwater system at the annual Fall, "Faire on The Square" event scheduled for 27 September 2014. A table and display board will be set up along the sidewalk in Watertown Square where passersby can obtain public education materials, view the Town's stormwater map and learn what steps they can take to reduce impacts on stormwater runoff. DPW officials will be present to address questions and comments made by the public. |
| Revised | | | | | |
| 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. Fully implement program by Fall 2008. | The DPW was unable to coordinate with the High School Science Department to have its curriculum include stormwater related impacts to the environment. An "Environmental Studies" class for the future and stormwater pollution prevention was a topic that was hoped to be covered. The DPW had hoped to continue its public education program with local middle school students by having student volunteers install curb markers | Continue to work with the High School Science Dept. regarding stormwater pollution control education in the coursework. The goal is to have stormwater pollution control be a part of the science department curriculum at as many grade levels as possible. Coordinate with the Middle School on having student volunteers work with the DPW staff for installing curb markers at Town catch basins to |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|----------------------|--------------------------------|---|---|--|
| Revised | | | <p>Continue meetings and discussions with High School Science Dept. for enhancing curriculum for understanding of impacts to public waterways and stormwater pollution prevention.</p> <p>Label all outfalls with signs</p> | <p>on catch basins as they had in the past. However, they were not able to coordinate on a mutually available date to perform the catch basin markings in Permit Year 11.</p> | <p>continue the program started in 2008 (Permit Year 5).</p> |
| 1D | Outfall Signs | DPW/Community Groups | <p>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.</p> | <p>The DPW continues to perform maintenance and repairs to signs damaged by vandalism and weather.</p> | <p>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.</p> <p>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. New DPW brochure I</p> |
| 1E | Pet Waste Management | Health Dept., DPW and citizens | <p>The Town’s current Animal Control Ordinance requires pet owners to leash, curb and clean up after pets. Pet waste education included Health Dept. brochures on requirements for pet waste management as well as “Protecting Our Waterways” brochure. Enforcement of pet waste management rules continued this year through routine inspections of public park areas by Animal Control Officer and issuance of citations. Pet Waste Management for riverfront areas are beyond Watertown’s jurisdiction and the Town relies upon DCR to enforce this BMP in these public areas. The Health Dept. issued information on requirements for picking up pet waste which were distributed by the Town Clerk’s office at the time pet owners renewed pet licenses.</p> | | |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|---|--|--|--|---|
| 1F | Education of restaurant owners and auto service garage owners | DPW/Board of Health | Visit and provide educational materials on preventing <u>stormwater pollution</u> at least once every 3 years. | <p>In Permit Year 11, the Health Department reported there were no grease trap inspections by the Health Department of food service establishments.</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> | <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.</p> |
| 1G | Public education through environmental speaker series | DPW, Environmental Committee, Stormwater Management 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. Although none were made during Permit Year 11, the SAC hopes to have at least 2 conducted in Permit Year 12.</p> <p>The Environmental Task Force of the WCES continued its advocacy for control of overpaving by businesses and homeowners during new or redevelopment construction.</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 12 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|----------------------------|---|--|---|---|
| 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. Their mission is to: (1) Review and make recommendations on a new stormwater ordinance and related regulations being developed by the Town; (2) Identify and advocate for stormwater funding through grants and other sources; (3) Develop educational programs to increase public awareness of stormwater management; and (4) Perform any other tasks relevant to assisting the Superintendent of Public Works with the implementation of best practices for stormwater management.</p> <p>The SAC conducts posted public meetings on a monthly basis at the DPW and has met on 11 occasions during Permit Year 11. 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.</p> <p>The Stormwater Advisory Committee has re-directed its focus to step-up public education now that their primary goal of developing and implementing the required stormwater Ordinances are well on their way to completion.</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 dedicated to Watertown Stormwater issues (WatertownStormwater.org) and expect to have it up and running in Permit Year 12 with valuable materials for the public's reference.</p> |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|------------|----------------------------|---|--|---|-------------------------------------|
| 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. The SAC also completed the drafting of Erosion and Sedimentation Control and Grading Ordinance which then went to the Town Council Subcommittee on Public Works and Rules and Regulations where a joint meeting was conducted on 3 April 2012. They voted unanimously to recommend approval of the ordinance to the full Town Council. The Erosion and Sedimentation Control and Grading Ordinance was reviewed by the Town's legal counsel for conformance to Town ordinance language. This will be followed by a public comment period and vote to approve. The Stormwater Advisory Committee completed final drafting of the Post-Construction Stormwater Control Ordinance which has been passed on to the Town Council Subcommittee on Public Works and Rules and Regulations who recommended sending to the Full Town Council for approval.</p> | |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|---|---------------------------------|--|---|--|
| 2B | Community Clean Up | DPW/volunteers | 1 clean up day per year. Participation by at least 100 volunteers | A formal community clean-up event took place on 27 April 2013. 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. The groups included the Coolidge Ave. area citizens group and the Perkins School group. | 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 Town Tree Warden authorized the planting of 191 trees throughout the Town. Further, the Tree Warden held an Arbor Day event with the Hosmer School that included a tree being planted on the School Campus, a presentation where trees, the Charles River and stormwater related matters were discussed. Over 700 seedlings were distributed to the students and teachers as part of the celebration. | |
| 2C | River Clean Up | DPW | 1 clean up day per year. Participation by general public and local community groups. | Annual spring clean up conducted on 27 April 2013. The DPW supplied barrels and a truck for collecting litter and debris and arranged for its removal and proper disposal and distributed informational brochures. The River Watch program was conducted in conjunction with the river clean up. | 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 12 is scheduled for 26 April 2014. |
| 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|------------------------|---------------------|---------------------------------|---|--|--|
| 2D Revised | 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.</p> <p>.Aim for 1 clean up 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> | <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> |
| <i>Further revised</i> | | | | | |
| Revised April 2009 | | | | | |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|--|-------------------------------|-------------------------|--|---|
| 2E | Riverwatch Program | DPW | 2 times per permit year | DPW conducted Riverwatch Program during the river clean-up day on 27 April 2013 to inspect the river bank areas and outfalls for signs of pollution and dumping of debris. Inspection of the outfalls and waterway is by use of the DPW's boat which was taken out during the river clean-up event. The bank areas were inspected each of the 4 quarterly periods the outfalls were sampled for water quality during Permit Year 11. | Continue Riverwatch Program with 2 inspections performed in Permit Year 12. |
| 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 130 cars to Household Hazardous Waste events in 2013. | 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|-----------------------|-------------------------------|---|---|--|
| 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, they were not able to coordinate on mutually available date to perform the catch basin markings in Permit Year 11. | 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 12. 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|---------------------------------------|---|--|--|---|
| 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 67 water quality samples were taken at the MS4 outfalls and in-system locations over 4 quarterly periods and sent to the lab for analysis during Permit Year 11 including 39 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. | The Town along with the Stormwater Advisory Committee will continue its efforts to enlist volunteers for the upcoming permit year to launch the Adopt a Storm Drain program in Watertown. |
| 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. | 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|--------------------------|-------------------------------------|---|---|-------------------------------------|
| 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 11. | 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|---------------------------------|-------------------------------|---|--|--|
| 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 11. 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. One (1) illicit connection was discovered in Permit Year 11 and corrective measures were taken to eliminate the illicit discharge. Through March 2014, a total of 23 illicit discharges have been identified and corrected since the start of the IDDE Program removing nearly 1,000 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|------------|------------------------------|-------------------------------|--|---|---|
| 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 11 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 3,958 linear feet of piping and conducted 3 portable field test kit samples suspect illicit connections. As a result of findings from field investigations for illicit connections and I/I sources, a total of 1,170 linear feet of sewers were replaced or rehabilitated by the DPW in Permit Year 11 removing an estimated 144,000 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 MWRRA'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 23 illicit discharges. The DPW is in the process of coordinating with the private landowner and scheduling the repairs to remove the one remaining identified illicit discharge. | Use information gained from the top down approach 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|---------------------------|--|--|--|---|
| 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, they were not able to coordinate on mutually available date to perform the catch basin markings in Permit Year 11.</p> | <p>The IDDE outreach program will continue for Permit Year 12 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. <p>Install discs on catch basin inlet curbs throughout the Town using Middle School students as noted under BMP #2G.</p> <ul style="list-style-type: none"> • 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|-----------------------------------|-------------------------------|--|--|---|
| 3G | Prohibition of Illicit Discharges | DPW / SAC | Since 1990, town regulations “Sanitary Sewer and Storm Drain Regulations” have forbidden improper discharges to the storm drains. Supplanting 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. | The Stormwater Advisory Committee completed finalizing the Illicit Discharge Prohibition ordinance which was submitted to the Town’s legal counsel for refining to comply with the applicable legal language. The legal review was completed and the IDDE Ordinance submitted to the Town Council for review, approval and adoption which took place following on public hearing on 11 May 2011. | The goal for Permit Year 12 is to continue searching for sources of illicit discharges and implementing enforcement of the new Illicit Discharge Prohibition Ordinance as necessary to ensure compliance. |
| Revised | | | | | |

4. Construction Site Stormwater Runoff Control

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|------------------------|--------------------------------|---|---|---|
| 4A | Update Town Ordinances | DPW, SAC, Planning, Con. Comm. | Update ordinance by the end of 2006 and adopt by end of 2007. | 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 construction site erosion and sediment control ordinance. The SAC completed final editing of the Erosion and Sedimentation Control and Grading Ordinance and presented | The goal for Permit Year 12 is to have the full Town Council vote to adopt the “Erosion and Sedimentation Control and Grading Ordinance” and the “Post-Construction Stormwater Control Ordinance” by Sept 2014. |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|--|-------------------------------|--|---|--|
| Revised | | | Update ordinance by the June 2010 and adopt by end of 2010. | to the Town Council Subcommittee on Public Works and Rules and Ordinances for review. The Town Council Subcommittee held a meeting on 3 April 2012 and voted unanimously to recommend approval of the Ordinance to the full Town Council after legal review by the Town's Attorney. The Erosion and Sediment Control Ordinance was reviewed by the Town's legal counsel for conformance to Town ordinance language. The Ordinance is now under review by the full Town Council. This will be followed by a public comment period and vote to approve. | |
| 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. | The Stormwater Advisory Committee completed final drafting of the Post-Construction Stormwater Control Ordinance which has been passed on to the Town Council Subcommittee on Public Works and Rules and Regulations who recommended sending to the Full Town Council for approval. | 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 | | | | | |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|----------------------------------|-------------------------------|---|--|---|
| 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. | Distributed site construction and erosion and sediment control standards to developers, site construction contractors, and private property owners. State trenching requirements incorporated in conjunction with 520 CMR 14.00 Excavation and Trench Safety Regulations. Development projects over 1 acre included 255 Waltham St., 550 Pleasant St., 555 Pleasant St, and 20 Summer St. | 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. | Review standards and update as needed. Provide developers with standards and review plans and site conditions for compliance. |
| Revised | | | | | |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|---|-------------------------------|---|--|--|
| 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 11, there were three (3) redeveloped properties with 4 or more parking spaces with their drainage connecting to the MS4 which incorporated oil/gas separators. The properties were located at 233 Pleasant St., 255 Waltham St. and 555 Pleasant St. (Repton Place). | 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|-----------------|-------------------------------|--------------------|---|-------------------------------------|
| | | | | | |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|----------------------------------|-------------------------------|--|--|---|
| 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. | Distributed site construction and erosion and sediment control standards to developers, site construction contractors, and private property owners. | 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. | No reports were received during the permit year. 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. | Continue requiring all construction site operators receiving DPW permits to post a sign at the site providing the phone number and address for the public to contact the DPW to report any 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. |

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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|------------|------------------------|--------------------------------|--|--|--|
| 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 Stormwater Control Ordinance. The Stormwater Advisory Committee completed final drafting of the Post-Construction Stormwater Control Ordinance which has been passed on to the Town Council Subcommittee on Public Works and Rules and Regulations. | Complete drafting of Post-Construction Stormwater Control Ordinance by SAC and approval by legal counsel. Have the Rules and Regulations Subcommittee recommend adoption of the Post-Construction Stormwater Control Ordinance by the full Town Council by June 2014 and work to get adopted by end of 2014. |
| 5A Revised | | | Draft an ordinance by the June 2010 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 2010. | | Advocate having the post-construction stormwater control ordinance adopted by Town Council by end of 2014. |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|--------------------------|-------------------------------|--|---|--|
| 5B | Update BMP's and details | DPW, Planning, Con. Comm. | 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. Reduce sedimentation in stormwater runoff and local water bodies downstream of the development as determined from routine observations. | In Progress | <p>Continue to work on strategies for post construction runoff control of projects exceeding one or more acres that include non-structural and structural BMP's for reference in ordinance to be developed under BMP #5A. Non-structural BMP's to be included in the strategies for post construction runoff control are the following:</p> <ul style="list-style-type: none"> • Limiting area of disturbance and use of impervious surfaces for new development and redevelopment projects to the maximum extent possible while meeting the building and infrastructure space requirements of the project. • Promoting the use of cluster type developments to maximize open space. • Promoting the use of buffer zone in sensitive areas that are risk of impacting water quality from stormwater runoff. |

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|--|-------------------------------|--------------------|---|---|
| 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 detention storage or ponds. • 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

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|--|--|--|--|--|--|
| | | | | | |
| | | | | | |

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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|---|-------------------------------|---|--|---|
| 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 11. 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 total of 3,025 catch basins were cleaned by a specialty contractor for the Town removing 605 cubic yards of debris that was properly disposed. | The Catch Basin Cleaning Program will continue in Permit Year 12. |
| 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 11. All other streets received sweeping twice during Permit Year 11. A total of approximately 195 tons of street sweeping debris was collected by 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|------------------------------------|-------------------------------|---|--|---|
| 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 11. A total of 59 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 12. |
| 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 11 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 12 |
|----------|-----------------|-------------------------------|--------------------|---|-------------------------------------|
| Revised | | | | | |
| Revised | | | | | |
| Revised | | | | | |
| Revised | | | | | |
| Revised | | | | | |
| Revised | | | | | |
| Revised | | | | | |

7a. Additions

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
| | | | | | |

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

- 93 Water Quality Samples collected and sent to laboratory analysis.
- 3,958 linear feet of storm drains inspected and tested for illicit connections
- 8 Key junction and upstream manholes inspected for presence of illicit discharges
- 0 Building inspections and dye tests for illicit connections
- 0 linear feet of smoke testing
- 1,170 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 | (%) | 130+ 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 | X |
| ▪ Post-Development Stormwater Management | X | | Updates in progress | X |

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 | (#) | 1 |
| Illicit connections removed | (#) | 1 |
| % of population on sewer | (est. gpd) | 50 gpd |
| % of population on septic systems | (%) | 99.99 % |
| | (%) | <0.01% |

Construction

| | | |
|---|------------|------|
| Number of construction starts (>1-acre) | (#) | 3 |
| 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 | (#) | 3,025 |
| Storm drain cleaned | (LF or mi.) | 0 lf |
| Qty. of screenings/debris removed from storm sewer infrastructure | (lbs. or tons) | 605 CY |
| Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.) | | |
| Cost of screenings disposal | (\$) | \$73,440 |
| | | |
| | | |

| | | |
|--|----------------|-------------|
| 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) | 194.59 tons |

| | | |
|---|------------|--|
| Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) | (location) | LoRusso Landfill – Plainville, MA |
| Cost of sweepings disposal | (\$) | \$2,918.85 |
| 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 | 95% |
| | % CaCl ₂ | 5% |
| | % MgCl ₂ | |
| | % CMA | |
| | % Kac | |
| | % KCl | |
| | % Sand | |
| 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 |
| | | |