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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. 7: April 2009-March 2010

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, 2010

Part II. Self-Assessment

Watertown has made significant strides 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 kept up with performing routine inspections of restaurants to verify the presence and proper operation of the grease traps and disposal of grease. Environmental awareness in Watertown has continued in earnest during the past year through lectures and programs offered by the Environmental Energy Efficiency Committee. Employees and citizens are strengthening existing programs on stormwater management and awareness at the middle school and with Roots and Shoots. The Department of Public Works continued the successful program for the sale of rain barrels on 29 April 2009. The DPW and the Conservation Agent strengthened their collaboration in areas of shared jurisdiction.

Public Involvement and Participation

A big step was taken this year in public involvement and participation of stormwater issues with the establishment of a Stormwater Advisory Committee. 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 objectives of the new Stormwater Advisory Committee (SAC) is assisting in editing the final draft 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 each month and held 6 meetings in Permit Year 7. The annual Charles River Clean-up day, organized by the Watertown Police Department and Senator Tolman with cooperation from DCR, was held on 25 April 2009 and attracted around 100 volunteers. 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, a grass roots group that promotes environmental awareness through development and distribution of information to the public and businesses in Town.

The Household Hazardous Waste Collection program continued to be a success in Permit Year 7 with over 150 vehicles participating

during 8 separate collection days. Water quality monitoring remained a high priority over the past year with a total of 109 water samples taken at the Town's stormwater outfalls over 4 quarterly sampling periods. In addition to sampling at outfalls, water quality samples of stormwater runoff were also collected and analyzed at ten (10) locations throughout the Town on 4 occasions at entrances to catch basins for the purposes of gaining a better understanding of the impacts of urban runoff on stormwater contamination.

The Department of Public Works continued the successful program for the sale of rain barrels holding an event on 29 April 2009. 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 in the Spring of Permit Year 8 promoting the benefits of rain barrel usage for capturing roof runoff and providing rain barrels at a nominal fee to local residents. The next rain barrel sale event is scheduled for 28 April 2010.

Illicit Discharge Detection and Elimination

The IDDE Program activities continued the aggressive schedule to complete the top-down inspection and testing of the entire MS4 system by Permit Year 8. Through the past year 168 out of 172 key junction manholes (97%) plus 116 upstream tributary manholes were inspected and tested for the presence of illicit connections indicator parameters. Through Permit Year 7 a total of approximately 307,000 linear feet of storm drain, representing over 85 percent of the entire MS4 system, has been inspected and tested under the IDDE Program. A total of 52 drain manholes were sandbagged and monitored for contaminated flow under dry weather conditions. As a result, 47 dye tests were performed to confirm the locations of illicit connections resulting in 7 confirmed illicit connections being identified and all seven being removed.

Enacting protocols in its IDDE program, the Town continued wet weather testing with its water quality monitoring this past year. Refinements are being made to GIS mapping of the Town's storm drain, sewer and water systems that were completed in 2005.

Through the MWRRA Local I/I Financial Assistance Program, almost 4,800 linear feet of sewers were TV inspected this past year to look for defects and deficiencies including possible indirect communication between the sewer and nearby storm drain. The DPW replaced or rehabilitated 115 linear feet of defective sewers identified by IDDE field investigations. The completion of the sewer improvements will reduce I/I and the potential for inter-communication with nearby storm drains.

The Town Council voted on the formation of the Stormwater Advisory Committee in April 2009. The SAC has finalized edits to the IDDE ordinance which will be forwarded to the Town's legal counsel for refining to comply with the applicable legal language.

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.

The Stormwater Advisory Committee has reviewed and made edits to the erosion and sediment control ordinance drafted in a prior permit year from the EPA Stormwater Center model ordinance and is preparing to present it to Town's counsel for legal review .

Post-Construction Stormwater Management in New Development and Redevelopment

The draft ordinance will be reviewed shortly by the Stormwater Advisory Committee. The finalized ordinance will include references to non-structural and structural Best Management Practices (BMPs) for post construction runoff control of projects exceeding one acre in size. The Stormwater Center model "Post-Construction Stormwater Runoff Control Ordinance" is being used as the basis of drafting language for an ordinance suited to Watertown's situation requiring post-construction runoff control at developed and redeveloped parcels in accordance with the NPDES General Permit conditions in Part II.B.5.(a).

The Stormwater Advisory Committee will have input in the ordinance language and in facilitating its adoption by the Town Council.

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 townwide annual catch basin cleaning program continued during the permit year with 2,810 of the 3,700 CBs cleaned. The DPW's two street sweepers were used to sweep all the Town's streets at least once during the permit year for removal of salt residue, sand, debris, leaves and litter before entry into the storm drain system. 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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
1A Revised	Distribute public education brochures	DPW, Health Dept.	1 brochure each permit year Develop, print and distribute brochures.	Brochures have been placed in display racks at Town facilities including DPW Office, Town Hall, Libraries, and Schools. The DPW continued to support the public education work of the Environment and Energy Efficiency Committee	Continue distribution and displaying of “Protecting Our Waterways” and “Reducing I&I” brochures. Print additional brochures as needed to maintain adequate supply for distribution at annual environmental events and for posting at DPW and Town building venues. Distribute brochures at the annual river clean-up program scheduled for 24 April 2010 and Faire on the Square scheduled for 25 September 2010.
1B Revised	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. 26 September 2009 to allow the public an opportunity to learn what services the DPW provides including protection of the river through stormwater management. The stormwater brochure was distributed for educating people on the connection between runoff in their neighborhood and impacts to the Charles River and tributary waster ways. An estimated 12,000 to 15,000 people attended the Faire on the Square. An environmental fair inside Faire on the Square took place to focus on environmental issues. Vendors, local community groups and committees interested in environmental issues were invited to promote awareness of their specialties and building connections amongst the different environmental groups.	Distribute stormwater brochures and display the Town's GIS map of the stormwater system at the annual Fall, “Faire on The Square” event scheduled for 25 September 2010. 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.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 High School Science Department was unable to continue the environmental sciences and engineering studies in its curriculum this past school year. The High School science teacher reported that it proved to be too time and labor intensive however, the teacher noted that they are planning an “Environmental Studies” class for the future and stormwater pollution prevention would be one of the topics covered. In May 2009 Department Staff and Roots and Shoots marked catch basins with discs that replace stenciling. Middle School students marked catch basins with discs in October 2009.	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.
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.		
1D	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. There is still on-going issue with the DCR on placement of two outfall signs on their boardwalk.	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.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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.	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 information contained in DPW's "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.	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.
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.	In permit Year 7, the Health Department visited 135 area restaurants to inspect for presence of grease traps and to provide information on proper grease trap maintenance. Due to mandatory reporting requirements to inspect twice a year the number of routine inspections including the grease trap inspection/ education conducted at the 135 restaurants was 270. The Health Dept. requires restaurants to produce receipts to prove they have had grease removed and disposed with an appropriate contractor.	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.

1a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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>During permit Year 7 many of the efforts of the Environment and Energy Efficiency Committee focused on getting information to the public on a wide range of environmental topics including energy efficiency, conservation and “green” technologies.</p> <p>In April 2009, Harvey Michaelis, Veronica Metzger and grad students from MIT gave a presentation on their research on alternative energy sources and methods that can be implemented by homeowners and building owners to reduce energy consumption. Also in April 2009, Meg Lusardi from EOER spoke about Green Communities. Eileen McHugh of DOER spoke in September 2009 about Green Communities. An RFQ was issued for retaining an Energy Services Company and the Town was awarded funds from the EOER for technical consulting and ESCO project implementation. Further, the Town was granted funds for studying the installation of photovoltaic panels at the DPW. Congressman Ed Markey spoke about the American Clean Energy and Security Act on 31 March 2010 at the Watertown Public Library. Other panelists included State Representative Jonathan Hecht, the Chamber of Commerce, Councilor Falkoff and Watertown Citizens for Environmental Safety.</p>	Continue to support activities of citizen advisory groups, distribute existing brochures, expand information on the DPW page of the Town website.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 6 occasions during Permit Year 7. 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>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>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 25 April 2009. 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.</p> <p>In the reporting period the Town, through Conservation Commission sponsored 3 Arbor Day related events and planted 4 trees at Town building sites.</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		
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 25 April 2009 in the Solomon Park area of Charles River. The event, organized by the office of the local State Senator, involved the DPW, Dept. of Conservation and Recreation (DCR), the Watertown Police Dept. and around 100 volunteers. 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>	<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 8 is scheduled for on 24 April 2010.</p>
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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 newly formed 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 Environment and Energy Efficiency Committee continued to distribute public education materials for general public and business community and continues to work with the Town to incorporate green building practices in the construction of the new Police Station. The Town Bicycle Committee and Recycling Committees also continued to promote environmentally friendly activities that have positive impacts on the river.</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 of 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>
Further revised					
Revised April 2009					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
2E	Riverwatch Program	DPW	2 times per permit year	DPW conducted Riverwatch Program during the river clean-up day on 25 April 2009 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 7.	Continue Riverwatch Program with 2 inspections performed in Permit Year 8.
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 154 cars to Household Hazardous Waste events from 25 April 2009 to 7 November 2009.	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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
2G	CB Stenciling Program	DPW/SAC/Volunteers	Stencil 25% of key CBs in Town each year over 4 years	The DPW coordinated with the Roots and Shoots children's program in May 2009 and with faculty and student volunteers from the Middle School in October 2009 to label CBs using permanent plaques.	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 8. 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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 109 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 7 including 81 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.	Held rain barrel distribution event on 29 April 2009.	The Town will again sell rain barrels on 28 April 2010 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.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 7.	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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 168 out of 172 (97%) key junction manholes were inspected and monitored for illicit connections through Permit Year 7, including 44 in Permit Year 7. In addition, 116 supplemental drain manholes upstream of the key junction manholes were inspected and monitored for the presence of illicit connections. 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. Seven (7) illicit connections were discovered and all 7 connections eliminated. Through March 2010, approximately 307,000 lf (85%) of the MS4 has been inspected and tested following the IDDE top-down protocol.</p>	<p>Implement Updated IDDE Plan with the top down approach for at the remaining 15% of the entire MS4. 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>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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.
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 7 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 4,775 linear feet of piping and dye tested 47 suspect illicit connections. As a result of findings from field investigations for illicit connections and I/I sources, a total of 115 linear feet of sewers were replaced or rehabilitated by the DPW in Permit Year 7	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.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 17 illicit discharge locations and all 17 have been repaired and illicit discharges removed.	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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 High School Science Department was unable to continue the environmental sciences and engineering studies in its curriculum this past school year. The High School science teacher reported that it proved to be too time and labor intensive however, the teacher noted that they are planning an “Environmental Studies” class for the future and stormwater pollution prevention would be one of the topics covered.</p> <p>The DPW coordinated with faculty and student volunteers from the Middle School to label CBs using permanent discs which replaced stencils used previously.</p>	<p>The IDDE outreach program will continue for permit Year 8 and will include the following components:</p> <ul style="list-style-type: none"> • Distribution of stormwater brochures 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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
3G	Prohibition of Illicit Discharges	DPW / SAC	<p>Since 1990, town regulations “Sanitary Sewer and Storm Drain Regulations” have forbidden improper discharges to the storm drains. Supplant existing Storm Drain and Sanitary Sewer Regulations with more specific language regarding prohibition of Illicit Discharges to the MS4. Draft Discharge text for Town Council approval by the end of 2010.</p>	<p>The Town formed the Stormwater Advisory Committee to be an advocacy group for stormwater management and pollution control. The SAC was charged to complete finalizing the draft ordinances required under the MS4 permit, including the Illicit Discharge Prohibition ordinance. The SAC has finalized edits to the IDDE ordinance which will be forwarded to the Town’s legal counsel for refining to comply with the applicable legal language. Regulatory language supports and strengthens Town programs and requirements of developers.</p>	<p>The goal for Permit Year 8 is to have the Town Council adopt the “Illicit Discharge Prohibition Ordinance” modeled after the EPA version to supplant and strengthen the prohibition language contained in the existing “Sanitary Sewer and Storm Drain Regulations”</p>
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
4A	Update Town Ordinances	DPW, SAC, Planning, Con. Comm.	Update ordinance by the end of 2006 and adopt by end of 2007. Update ordinance by the June 2010 and adopt by end of 2010.	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 has reviewed and made edits to the erosion and sediment control ordinance drafted in a prior permit year from the EPA Stormwater Center model ordinance and is preparing to present it to Town's counsel for legal review.	Complete drafting of Construction Site Erosion and Sediment Control ordinance by SAC and approval by legal counsel. Present the finalized ordinance to Town Council by June 2010 and work to get adopted by end of 2010.
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.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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.	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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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.	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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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>-No reports were received during the permit year.</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 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.</p>

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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 runoff control ordinance. The SAC is currently reviewing and making edits to the post construction stormwater ordinance that was drafted in a prior permit year the EPA Stormwater Center model ordinance and is preparing to present it to Town's counsel for legal review.	Complete drafting of Construction Site Erosion and Sediment Control ordinance by SAC and approval by legal counsel. Present the finalized ordinance to Town Council by June 2010 and work to get adopted by end of 2010.
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 runoff control ordinance adopted by Town Council by end of 2010.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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	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: <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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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.

Sa. 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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
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 7. 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	Catch basin cleaning was performed by outside contractors. This year 2,810 catch basins were cleaned or approximately 76% of all 3,700 catch basins.	Continue program
6C	Street Sweeping	DPW	2 street sweepers employed year round, weather permitting to clean all town streets at least once per year.	One street sweeping position in the DPW was lost in Permit Year 7 due to budget constraints. The Town is now down to 1 street sweeper for the entire Town. All streets received sweeping at least once during Permit Year 7. Major arterials received additional sweeping.	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		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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
6G	Integrated Pest Management Program	DPW	Use IPM methods to exclude pesticides on Town properties.	No pesticides whatever 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 6 occasions during permit Year 7 including 2 rounds on the outfalls and 4 rounds of the 10 designated in-system locations.	Wet weather testing of outfalls on 2 occasions and on the 10 areas identified in IDDE Plan 4 times in Permit Year 8.
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 7 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 8
Revised					
Revised					
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Revised					

7a. Additions

7b. WLA Assessment