



TOWN OF WATERTOWN

DEPARTMENT OF PUBLIC WORKS

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30 April 2009

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Ms. Glenda Velez, CIP
U.S. Environmental Protection Agency Region 1 (CIP)
One Congress Street, Suite 1100
Boston, MA 02114-2023

Reference: NPDES Phase II Annual Report – Permit Year 6
Town of Watertown (MAR041083)

Dear Ms. Velez:

The Town of Watertown is pleased to submit the enclosed NPDES Phase II MS4 Annual Report (Permit #MAR041083) for Permit Year 6. The Annual Report has been signed and certified by Town Manager Michael J. Driscoll in accordance with the signatory criteria of the general permit.

We welcome any comments or questions you may have on the Annual Report for Permit Year 6. Please feel free to contact me at 617.972.6420.

Thank you.

Sincerely,

Gerald S. Mee, Jr.
Superintendent of Public Works

Enclosure

C: Michael Driscoll, Town Manager
Christopher Hayward, Watertown Conservation Agent
Mark R. Reich, Kopelman and Paige, P.C.
John E. Murphy, Stantec

Municipality/Organization: Town of Watertown

EPA NPDES Permit Number: MAR041083

MaDEP Transmittal Number: W-131118

**Annual Report Number
& Reporting Period:** No. 6: April 2008-March 2009

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

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

Telephone #: 617.972.6420 **Email:** c/o stamber@watertown-ma.gov

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.

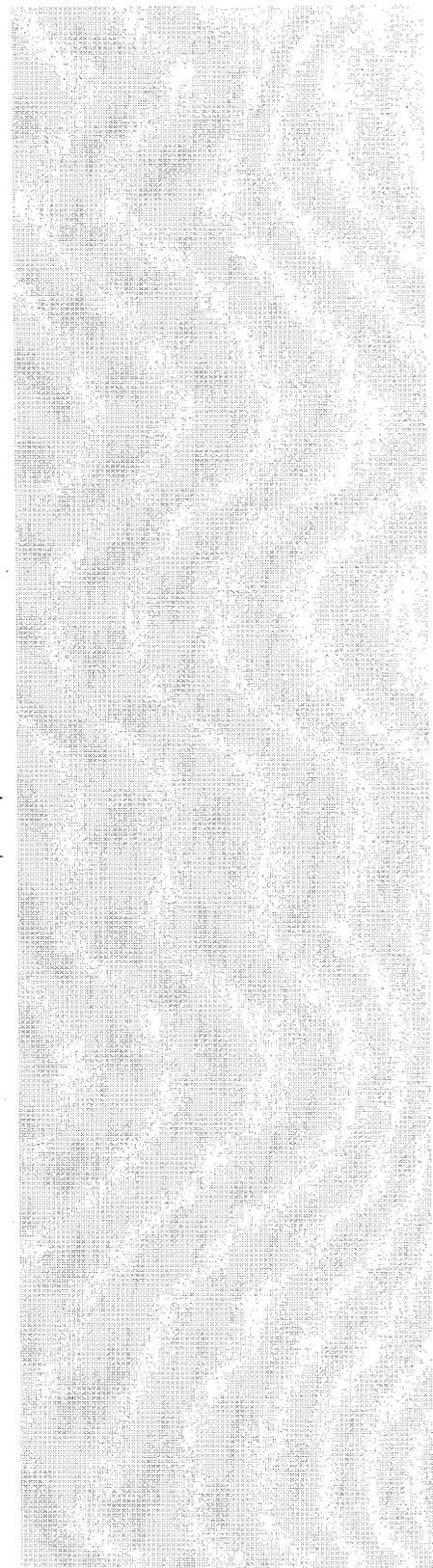
Signature: _____



Printed Name: Michael J. Driscoll

Title: Town Manager

Date: April 28, 2009



Part II. Self-Assessment

Watertown has made significant strides over the past year toward meeting its goals pursuant to the Phase II NPDES outlined below:

Public Education and Outreach

Watertown has developed and implemented public education and outreach on environmental issues in general and particular through a number of programs and awareness campaigns. Watertown continued promoting and supporting educating the public on the impacts of activities on stormwater quality and mitigative measures to protect water quality. A forum for public education and outreach each year is the annual Faire on the Square that attracts up to 15,000 people. Color brochures "Protecting our Waterways" and "Reducing I&I" are widely distributed, large displays of the drain and sewer systems are presented for people to review and ask questions, and special events focusing on the environment, community groups, environmental advocates and vendors promoting awareness of products and methods for reducing environmental and water quality. The 2008 event was cancelled due to weather conditions but the Town's public education continued. The most notable was the mini Faire conducted by the Environmental Committee in February 2009, plus features that would have been included in the planned "Green Section" of the September Faire on the Square.

The Town continued to enforce the Animal Control Ordinance for pet waste management through issuance of warnings to violators by the Board of Health and the Animal Control Officer. The Board of Health also kept up with performing inspections of restaurants to verify the presence and proper operation of the grease traps and disposal of grease. Environmental awareness in Watertown has increased greatly during the past year. Employees and citizens are strengthening existing stormwater management and awareness at the high school and devising new programs for recycling in the middle schools. Members of the Environment and Energy Efficiency Committee have continued working with Town employees on the construction of our new Police Station. The Department of Public Works continued the successful program sale of rain barrels holding events on 1 May and 24 June 2008. The DPW and the Conservation Agent strengthened cooperation in areas of shared jurisdiction.

Public Involvement and Participation

The DPW Superintendent met frequently with the Conservation Agent and issues of stormwater management and water quality to be on the shared agenda. The DPW supported volunteers and local community groups involved in river clean-up activities and staff resources. The DPW continues to support activities of the Watertown Citizens for Environmental Protection group that promotes environmental awareness through development and distribution of information to the public in Town. The DPW conducted its on-going Riverwatch program to inspect the bank of the Charles River for signs of pollution and to keep the outfalls free and clear of debris.

The Household Hazardous Waste Collection program continued to be a success in Permit Year 6 with over 170 vehicles during 8 separate collection days. Water quality monitoring remained a high priority over the past year with a total of

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 at entrances to catch basins for the purposes of gaining a better understanding of the impacts of urban runoff on stormwater contamination.

The DPW conducted rain barrel distributions on 1 May and 24 June 2008. 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 7 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 29 April 2009.

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 7. Over the past year 106 out of 172 key junction manholes (61%) plus 94 upstream tributary manholes were inspected and tested for the presence of illicit connections indicator parameters. Through Permit Year 6 a total of approximately 252,000 linear feet of storm drain, representing over 86 percent of the entire MS4 system, has been inspected and tested under the IDDE Program. A total of 148 drain manholes were sandbagged and monitored for contaminated flow under dry weather conditions. As a result, 165 dye tests were performed to confirm the locations of illicit connections resulting in 6 confirmed illicit connections being identified and 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 MWRA Local I/I Financial Assistance Program, almost 6,400 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, with its sewer consultant completed construction plans, bid and had nearly 4,000 linear feet of defective sewers identified by TV inspection replaced or rehabilitated. The completion of the sewer improvements will reduce I/I and the potential for inter-communication with nearby storm drains.

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 were received in the reporting period.

The final round of serious discussions about a Stormwater Advisory Subcommittee began in December 2008. The Town Council voted on the committee in April 2009. The Committee will advise on the updating the relevant ordinances of stormwater control for mitigating erosion and sedimentation from active construction sites.

Post-Construction Stormwater Management in New Development and Redevelopment

A draft ordinance is in progress. The draft 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 recently voted Stormwater Advisory Subcommittee will have input in the ordinance language and 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 100% 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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
1A <small>Revised</small>	Distribute public education brochures	DPW, Health Dept.	1 brochure each permit year Develop, print and distribute brochures in 2008.	Brochures distributed at Charles River Clean-up Day held on 26 April 2008. 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 25 April 2009 and Faire on the Square scheduled for 26 September 2009.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
1B	Participate in municipal services exhibit at local mall	DPW	1 day per permit year	<p>Traditionally, the Department participates in the annual Faire on The Square event that draws between 12-15,000 people to inform the public what services the DPW provides including protection of the river through stormwater management. Due to severe weather conditions on the scheduled date of 27 September 2008, the event had to be cancelled.</p> <p>An informational showing of the PBS documentary film "Liquid Assets" about water, wastewater and stormwater infrastructure was presented on 4 December 2008 to town staff and general public. The purpose of the showing was to raise public awareness on the challenges of water management. In addition, a Town Energy Faire, featuring exhibits originally planned to be part of the Faire on The Square event, was held on 8 February 2009 with vendors and groups interested in local environmental issues attending. Vendors ranged from NStar discussing energy upgrades to local committees concerned with biking and recycling.</p>	<p>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 Sept. 26, 2009. 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.</p>
Revised	<p><i>The Town's annual Faire on the Square is effectively a municipal services day.</i></p>				

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
1C	Send stormwater information and work with science depts..	DPW/public schools	<p>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.</p> <p>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.</p>	<p>During the permit period the High School revamped its curriculum to meet MCAS requirements. This has temporarily dislocated the stormwater education program in place for the past few years. The intent is to reorganize the curriculum to include an environmental science and environmental engineering component.</p>	<p>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. If possible, the new environmental sciences and environmental engineering curriculum will be implemented in the fall of 2009.</p>
Revised					
1D	Outfall Signs	DPW/Community Groups	<p>Label all outfalls with signs</p>	<p>Vandalism and ravages of weather have taken their toll on a fair portion of the Town's outfall signs.</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>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
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.	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.
1F	Education of restaurant owners and auto service garage owners	DPW/Board of Health	Visit and provide educational materials on preventing stormwater pollution. Target is to meet with 33% of the restaurant and garage owners each permit year for 3 remaining permit years.	In permit Year 6, the Board of Health has visited 117 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 inspections/ education conducted at the 117 restaurants was 234. 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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
1G	Public education through environmental speaker series	DPW and Environment and Energy Efficiency Committee	Three to five annual speakers or movies on environmental topics	<p>During permit year 6 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. At a 5 February 2009 meeting of the Environment and Energy Efficiency Committee, Energy Service Companies (ESCOs) in the area presented information on alternative energy sources and methods that can be implemented by homeowners and building owners to reduce energy consumption. An information session was held with the MIT Conservation Program on 11 March 2009. On 8 February 2009, the committee held a mini Green Faire for some of the presentations initially scheduled for the Faire on the Square which had been cancelled the preceding September. Committee members promoted the Solar Challenge at the High School on 1 April 2008.</p> <p>The movie “Renewal”, on the rise of environmental activism in America, was shown on the Watertown Library on 1 May 2008. The group also sponsored the movie the Eleventh Hour at the end of May 2008.</p>	Continue to support activities of citizen advisory groups, distribute existing brochures, expand information on the DPW page of the Town website.

IG Revised	Public Education through films, speakers and other events	DPW, Environmental Committee, Stormwater Management Committee and other Town committees and citizen groups			Continue to support activities of citizen advisory groups, distribute existing brochures, expand information on the DPW page of the Town website.
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2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
2A	Public stormwater meetings	DPW, Planning Bd., Con. Comm.	1 meeting per permit year with Con. Comm., Planning Bd., Bd. of Health & DPW	<p>DPW Superintendent met many times with the Conservation Agent regarding a variety of water quality and stormwater issues such as conditions at the Town's outfalls along Pleasant Street, steps to reduce stormwater related pollution, and measures that can be implemented to improve public education on the issue.</p> <p>Discussions regarding the creation of a Stormwater Advisory Committee culminated in a Town Council vote in April 2009. The committee will assist Town Departments providing input and research on stormwater management and water quality.</p>	<p>Conduct both formal and informal meetings on stormwater issues between DPW, Con. Comm., and 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 will be posted at the Town Hall and Libraries, and included in the local newspaper in an effort to encourage public attendance at the meeting.</p>
2B	Community Clean Up	DPW/volunteers	1 clean up day per year. Participation by at least 100 volunteers	At this point we cannot document that a formal community clean-up event was organized in Permit Year 6 beyond the River Clean-up event noted below. We will continue to seek contacts to provide confirmation. In the reporting period the Town planted 169 trees.	Continue to support annual community clean up day. 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		

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
2C Revised	River Clean Up Community Clean Up	DPW DPW, Police, local senator	1 clean up day per year. Participation by general public and local community groups.	Annual spring clean up conducted on 26 April 2008 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 several 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. The River Watch program was conducted in conjunction with the river clean up.	Conduct review clean up day. 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 7 is scheduled for on 25 April 2009.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
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>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. WCES has published a pesticide awareness brochures/pamphlet in conjunction with the Board of Health. DPW met extensively with neighborhood groups regarding maintenance of planting strips</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 Committee planned and conducted an Energy Faire on 8 February 2009 to promote awareness of energy efficiency steps and products. 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, 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>
<i>Further revised</i>					
Revised April 2009					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
2E	Riverwatch Program	DPW	2 times per permit year	DPW conducted Riverwatch Program during the river clean-up day on 26 April 2008 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 each quarterly period the outfalls are sampled for water quality which were 4 occasions during permit year 6.	Continue Riverwatch Program with 2 inspections performed in Permit year 7.
2F	Household Hazardous Waste Day. The Town is a member of the Minuteman Household Hazardous Waste Collection Location	Health Dept.	8-10 events per year	There are eight events in any given year. Watertown residents sent 175 cars to Household Hazardous Waste events from 26 April 2008- to 10 November 2008.	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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
2G	CB Stenciling Program	DPW/Volunteers	Stencil 25% of key CBs in Town each year over 4 years	Labeling of Town catch basins was not able to be conducted in Permit Year 6 due to completion of other higher priority items and the need to develop new connections with the Middle School faculty.	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 7. A tentative date of 10 May has been scheduled to resume the program.

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 71 water quality samples were taken at the MS4 outfalls and in-system locations and sent to the lab for analysis during Permit Year 6 including 44 samples under wet weather conditions.	Continue and further refine water quality monitoring program.
2I	Adopt a Storm Drain Program	DPW/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 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 events on 1 May 2008 and 24 June 2008.	The Town will again sell rain barrels on 29 April 2009 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	Conduct a workshop on lawn and landscape maintenance measures that reduce impacts to the Town's waterways.	Although the DPW had hoped to continue having Healthy Lawns and Landscapes Workshop for the public, the presenter from DEP regarded the turnout from the previous year at 15 - 20 people too low to justify the trip. Therefore, the Town decided not to apply for the workshop in Permit Year 6.	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.
2L	Mercury Collection	DPW / Local Hardware Store	Collect and properly dispose of mercury containing household items	This is a new BMP for Permit Year 6. 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.	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	<p>This is a new BMP for Permit Year 6. The Town arranged for the trash collection / recycling vendor to collect CRTs at the curbside instead of requiring homeowners to bring them to the Drop-off Center thereby increasing the convenience of disposal and reducing the likelihood of illegal dumping and associated contamination of the environment, Program began in January 2009.</p>	Continue and expand program
	Tire Collection Drop Off	DPW/ Private Waste Hauling Company	Elect and properly dispose of Tires	<p>This is a new BMP for Permit Year 6. The Town and the vendor will provide two annual drop off events.</p>	

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
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 106 out of 172 key junction manholes were inspected and monitored for illicit connections in Permit Year 6. In addition, 94 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. Ten (10) illicit connections were discovered and 6 connections eliminated. Through March 2009, approximately 252,000 lf (86%) 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 14% of the entire MS4.</p>
3B	Work with various Town agencies	Building, FD, Con. Comm, DPW	Training of public employees on illicit discharges completed within one year	<p>The DPW continues to coordinate with the Health Department about improper waste disposal issues and possible impacts to MS4 and water bodies. Public employees are being provided copies of the brochure “Protecting Our Waterways” which includes a discussion of illicit connections and their serious impact to the environment.</p>	<p>Continue joint efforts of DPW, 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.</p>

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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 6 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 10,184 linear feet of piping and dye tested 165 suspect illicit connections. In conjunction with the MWRA's Local I/I Financial Assistance Program, the DPW worked with Consultants to arrange for TV inspection of sewers in areas known to have significant infiltration and physical problems.	Based on results from top down investigations, perform TV, smoke and dye testing to pinpoint illicit sources.
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. Investigations identified 10 suspect locations of which 6 have been repaired and 4 are scheduled for repair as conditions permit.	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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
3F	IDDE Educational Outreach	DPW/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>During the permit period the High School revamped its curriculum to meet MCAS requirements. This has temporarily dislocated the stormwater education program in place for the past few years. The intent is to reorganize the curriculum to include an environmental science and environmental engineering component.</p> <p>Labeling of Town catch basins was not able to be conducted in Permit Year 6 due to completion of other higher priority items.</p>	<p>The IDDE outreach program will continue for permit year 7 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. The goal for this activity is to conduct outreach to these businesses in Watertown over a 3 year period. • Stencil catch basins throughout the Town with Roots and Shoots as noted under new BMP #2G. 10 May 2009 has been set as a tentative start date. • 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. • If possible, the new environmental sciences and environmental engineering curriculum will be implemented in the fall of 2009.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
3G	Prohibition of Illicit Discharges	DPW	<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 supplanting Illicit Discharge text for Town Council approval by the end of 2010.</p>	<p>Regulatory language supports and strengthens Town programs and requirements of developers. The Town reviewed current ordinances and Storm Drain and Sanitary Sewer Regulations to determine conformity and consistency with EPA standard Illicit Discharge Prohibition ordinance language.</p>	<p>DPW will continue efforts to strengthen existing regulatory language to incorporate by reference supplanting text on prohibition of all non-stormwater discharges into the Town’s MS4 (i.e., Illicit Discharges) in accordance with provisions of the Clean Water Act as required by the US Environmental Protection Agency. The goal for Permit Year 7 is to have the Town Council adopt the “Illicit Discharge and Connection Stormwater 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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
4A	Update Town Ordinances	DPW, Planning, Con. Comm.	Update ordinance by the end of 2006 and adopt by end of 2007. Update ordinance by the May 2009 and adopt by end of 2010.	The Department of Public Works continued its efforts to form a subcommittee to undertake update. A Stormwater Advisory Subcommittee was voted in April 2009 and will assist in updating the relevant ordinances of stormwater control.	Use the Stormwater Center model and sample ordinances to draft an ordinance requiring erosion and sediment controls be in place at all construction sites of one acre or greater prior to start of site work in accordance with the NPDES General Permit condition in Part II.B.4.(a). Present the draft ordinance to the Town Council for adoption with implementing regulations by the end of 2009.
4B	Coordinate construction reviews and site inspections	DPW, Planning, Con. Comm.	Internal review and 1 site inspection per project with 100% compliance with sediment and erosion controls by site operators.	Relevant Departments review and inspect projects more than once. All relevant DPW divisions are included in review process. All sites were inspected by the Town pursuant to the permit process.	Continue review of plans of new site development. Pay special attention to the plans and details provided by the developer for controlling erosion and sediment runoff that could lead to impacts to the Town's stormwater system and waterways. Conduct a site inspection after the erosion and sediment control measures are installed, as appropriate, for each new construction project of one acre or larger to ensure consistency with local requirements.
Revised					

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
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.	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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
4E	Oil/gas separators for areas greater than 4 parking spaces.	DPW	100% of all new construction sites that connect to he 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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
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.	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. 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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
5A	Update Town Ordinances	DPW, 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 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 recently formed Stormwater Advisory Subcommittee will be a partner in drafting the ordinance language and facilitating its adoption by the Town Council.	Present the draft ordinance to the Town Council for adoption with implementing regulations by the end of 2009.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
5A Revised			Draft an ordinance by the end of 2009 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.		Work on ordinance development.
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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
Revised	<i>Post construction runoff controls strategies.</i>				<p>type developments to maximize open space.</p> <ul style="list-style-type: none"> Promoting the use of buffer zone in sensitive areas that are risk of impacting water quality from stormwater runoff. <p>Structural BMP's to be included for post construction runoff control are the following:</p> <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

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 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
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 6. 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 all catch basins were cleaned by outside contractors or 100% of total 3,700.	Continue program
6C	Street Sweeping	DPW	2 street sweepers employed year round, weather permitting to clean all town streets at least once per year.	All streets received sweeping two to three times in Permit Year 6. 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.	Available as needed.

6a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 7
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 3 occasions during permit year 6 including 2 rounds on the outfalls and 1 round of the 10 designated in-system locations.	Wet weather testing of outfalls on 2 occasions and on the 10 areas identified in IDDE Plan 2 times in Permit Year 7.
6I	Reduce Salt/Sand Usage	DPW	Reduce salt and sand use by 5% normalized for # and severity of storms.	In the face of an unusually difficult winter season, 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. One salt barrel is available for public use at the Department but only one load is put out daily. 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 >>

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Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

- 77 Water Quality Samples collected and sent to laboratory analysis.
- 108,259 linear feet of storm drains inspected and tested for illicit connections
- 165 Building inspections and dye tests for illicit connections
- 0 linear feet of smoke testing
- 10,184 Linear feet TV inspected and reviewed
- 3,960 ft 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 (Environment and Energy Efficiency 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	(%)	175 cars
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	Y