

Municipality/Organization: City of Waltham, MA

EPA NPDES Permit Number: MA0410066

MassDEP Transmittal Number: W-041267

Annual Report Number & Reporting Period: Year 7
April 1, 2009 – March 31, 2010

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2010)

Part I. General Information

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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: Stephen A. Casazza, P.E.

Title: City Engineer

Date: 04/28/2010

Part II. Self-Assessment

The City of Waltham has completed a self-evaluation regarding its stormwater activities for Year 7 and determined that our municipality is in compliance with the 2003 NPDES Phase II Small MS4 General Permit. The City of Waltham acknowledges that some aspects of its stormwater management program can be improved and therefore new Best Management Practices (BMPs) for Permit Year 8 have been added. A brief evaluation of each minimum control measure is as follows:

1) Public Education and Outreach

The public education goals for Permit Year 7 have been achieved. The City of Waltham will continue to increase its targeted communications to different audiences (residents and businesses & institutions) during Permit Year 8.

2) Public Involvement and Participation

The activities listed under this section for Permit Year 7 were successfully executed by the City of Waltham. The City will continue to perform these activities, which have been positively received by the public.

3) Illicit Discharge Detection & Elimination (IDDE)

The City of Waltham is successfully implementing its IDDE Program. Identified sources of contamination are being removed from the City's storm system.

As of March 31st of 2010, the City of Waltham has completed the inventory and sampling of all outfalls in the Charles River (43 outfalls) and Beaver Brook (34 outfalls) as well as all identified Inter-Municipal Connections (17 IMCs). These have been prioritized based on their pollutant loading and other qualitative criteria described in the City's IDDE Plan. The top eight outfall areas and IMC contributing areas were sampled and inspected to isolate illicit connection sources. A total of seven illicit flow sources were identified under this first phase of work, and to date, two of these sources have been eliminated. On-going construction work is scheduled to remove the remaining identified illicit flows, resulting in an estimated removal of approximately 2.1 million gallons of polluted stormwater per year.

During Permit Year 8, the City of Waltham will perform inventory and sampling of outfalls within the Chester and West Chester Brook watersheds. Sampling results will be used to estimate pollutant loading from these outfalls and this data will be included in a re-prioritized list of outfalls. The next round of drainage area investigations and illicit connection detection and elimination will be performed during 2010 and 2011 for the next group of most polluted outfalls.

4) Construction Site Stormwater Runoff Control

The City of Waltham successfully implemented all the proposed measures for Permit Year 7, including implementation of a check-list to be used during the site-plan review process. The need for potential improvements in the site-plan review process will be evaluated during Permit Year 8. If deemed necessary, detailed site-plan review procedures will be included in new Rules and Regulations to be promulgated during this permit year.

5) Post-Construction Stormwater Management in New Development and Redevelopment

The City of Waltham successfully implemented the BMPs proposed for Permit Year 7 with the exception of the preparation of new Rules and Regulations as the new NPDES MS4 Permit was not issued by EPA during this period. The City of Waltham will attempt the promulgation of post-construction stormwater management Rules and Regulations during this permit year. The new Rules & Regulations will focus on long-term O&M of private stormwater infrastructure, as well as inspection and enforcement by the City.

6) Pollution Prevention and Good Housekeeping in Municipal Operations

All the proposed measures for Permit Year 7 were executed by the City of Waltham. These activities will be continued during Permit Year 8 to guarantee proper stormwater management and avoid stormwater pollution. Written O&M procedures for municipal operations will be developed during Permit Year 8.

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
1.1	Recycling Department Web-Site	Recycling Coordinator	<p>Goal in PY7: To have an operational web-site</p> <p>Goal in PY8: To have an operational web-site with similar number of hits per year as PY7</p>	<p>As of March 4th, 2010, the City of Waltham’s recycling web-site had 27,122 hits. This represents 18,122 hits since February of 2008 and over 9,000 hits since last year’s report. Between January 1st and April 1st, 2010 the web-site had 1,400 hits.</p> <p>Recycling paper brochures were distributed and are available in all municipal departments</p> <p>Quarterly newsletters were e-mailed to residents during 2009</p> <p>Recycling brochures have been translated into Spanish and posted on the Recycling Department’s web-site. Spanish literature was distributed through local churches and Latino organizations</p>	<p>Continue to make recycling brochures available at all municipal departments and buildings.</p> <p>Continue to e-mail quarterly newsletters during 2010.</p> <p>Evaluate the need of translating the recycling brochures into other languages if communities with a significant presence within Waltham are identified.</p>
Revised by:					
Stormwater Subcommittee members					
Recycling Coordinator					

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
1.2	Targeted Communications	Engineering	<p>Goal in PY 7: Send communications to office parks</p> <p>Goal in PY8: Keep web-links active during PY8 Have at least 250 hits to the stormwater brochure</p>	<p>The stormwater brochure has been posted on the City's web-site. The stormwater brochure was mailed to residents with their water bills. A link to Mass DEP "Wetlands Protection Act" was added to the Conservation Commission web-site.</p>	Include links to EPA and DEP websites in the CPW website
<p>Revised by: Stormwater Subcommittee members</p>					
1.3	NPDES Phase II Brochure	Engineering	<p>Goal in PY 7: The City will use the periodic billing inserts to inform residents of the location of the stormwater brochure on the City's web-site</p> <p>Goal in PY8: Achieve at least 300 hits to the stormwater brochure</p>	The current stormwater brochure continued to be available to residents through the City's web-site.	The brochure will be updated and distributed as necessary and/or posted on the City's web-site after the 2010 NPDES PII Small MS4 General Permit is issued.
<p>Revised by: Stormwater Subcommittee members</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
1.4	Watershed Signage	Engineering in cooperation with the City of Cambridge	<p>Goal in PY7: Install 10 watershed signs around Cambridge Reservoir</p> <p>Goal in PY8: Keep adequate level of signage in Cambridge Reservoir Area (as needed)</p>	<p>(Reliance on non-municipal partners indicated, if any)</p> <p>A total of 42 watershed signs for the Cambridge Reservoir have been made and installed to promote watershed protection awareness among local residents.</p>	Continue to install watershed signs in coordination with Cambridge as needed.
Revised by: Stormwater Subcommittee members					

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
1.5	Recycling Department Initiatives	Recycling Department	<p>Goal in PY7:</p> <p>Develop literature in Spanish</p> <p>Promote the sale of rain barrels to conserve rainwater</p>	<p>Educational sessions about the recycling program were performed in 2009 for senior citizens at the St. Mary Senior Center.</p> <p>The recycling coordinator was interviewed on Cable Access television.</p> <p>A compost bin was donated to the McDevitt School to develop an educational recycling program.</p> <p>Six outdoor recycling receptacles were provided for ball parks. Four of them have been installed while the other two will be installed in the near future.</p> <p>Extra recycling bins were offered to residents at no cost.</p> <p>The recycling department hosted 4 interns from local universities and high schools to provide students with environmental experience.</p>	<p>Continue the rain barrel campaign and continue to distribute the rain barrel brochure through the Department's web-site.</p> <p>Continue hosting students from local universities or high schools to provide them with environmental learning experiences.</p> <p>Larger recycling bins will be offered at a \$15 cost.</p>
Revised by: Stormwater Subcommittee members			<p>Goal in PY8:</p> <p>Distribute at least 40 rain barrels during PY8</p>	<p>An annual rain barrel sale was conducted and a rain barrel brochure is available at the City's Recycling Department web-site. In 2009, a total of 88 rain barrels were sold.</p>	

1a. Additional BMP for 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
1.6	Other Targeted Communications	Engineering	Goal in PY7: N/A	N/A	Send to residents or post on the City’s web-site a brochure talking about the importance of not dumping into catch basins and proper pet waste disposal. The brochure will focus on explaining the potential detrimental effects of such activities on receiving waterbodies.
Revised by: Stormwater Subcommittee members			Goal in PY8: Send at least 1,000 brochures to residents or get at least 200 hits to the brochure posted on the City’s web-site during PY8. Send an educational message to at least 70% of businesses, institutions and commercial spaces during PY8.		Send one message (brochure or letter) to businesses, institutions, and commercial spaces about the importance of proper storage of chemicals and other materials, lawn maintenance (use of fertilizers and pesticides), parking lot sweeping, management of waste materials and dumpsters, proper car care activities, and use of de-icing or anti-icing materials.

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
2.1	Earth Day Celebration	CPW & Engineering	<p>Goal in PY7: Organize and staff annual celebration</p> <p>Goal in PY8: Assist and support resident cleanup activities within Waltham</p>	<p>Cleanup of the Trapelo Road area was held on April 18th, 2009 with participation by the Eastview Park Neighborhood Association and the City.</p>	<p>Charles River Cleanup in collaboration with CRWA (~100 residents)</p> <p>Hardy Pond cleanup (~60 residents participated)</p> <p>Chester Brook (Trapelo Road North area)</p> <p>Logan Park cleanup and planting of perennial plants (~8 people participated)</p> <p>Cleanup of a section of Chester Brook between 900 Lexington Street and Trapelo Road in collaboration with local universities, schools and other institutions.</p> <p>Continue to perform cleanup of the Chester Brook banks behind the City Yard as indicated in the City Yard's SWPPP.</p>
2.2	Stream Cleanup	CPW	<p>Goal in PY7: Support existing cleanup program & identify new areas for future cleanup efforts</p> <p>Goal in PY8: Cleanup at least 2 stream sections per year</p>	<p>Cleanup of a section of Chester Brook behind the Racket Ball Club in Lexington Street was performed.</p> <p>Cleanup of banks in Chester Brook behind the City Yard was performed.</p> <p>Clean-up of the Woerd Ave Riverwalk was performed by students from Brandeis University and from a local school.</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
2.3	Catch Basin Curb Markers (Decal)	CPW	<p>Goal in PY7: Install curb markers in 80 CB, install castings at 15 CB</p> <p>-----</p> <p>Goal in PY8: Install at least 50 catch basin curb markers</p>	<p>A total of 30 catch basins curb markers were installed in 2009. Installation was performed by students from Brandeis University.</p> <p>A total of 771 catch basins curb markers were installed before 2009.</p> <p>Locations of catch basins with curb markers were added to the City's GIS system.</p>	<p>Continue the catch basin curb marker campaign in partnership with colleges, high schools and others in the educational community within the City of Waltham.</p> <p>Curb marker installation in one to two hundred catch basins in the Hardy Pond area is projected.</p> <p>Continue to upload the marked catch basin locations to the City's GIS system.</p>
<p>Revised by: Stormwater Subcommittee members</p>					
2.4	Clear Racks of Debris	CPW	<p>Goal in PY7: Maintain racks frequently</p> <p>-----</p> <p>Goal in PY8: Clear each rack at least twice</p>	<p>The CPW cleared racks before forecasted heavy storms. A total of fourteen racks exist in the City.</p> <p>The location of these racks has been added to the City's GIS system.</p>	<p>Continue cleaning debris from the racks before forecasted heavy storms.</p> <p>Develop a routine cleaning schedule and record dates and staff performing the cleanings tasks as well as an estimation of the mass of debris removed from each rack.</p> <p>Continue to update the City's GIS system with information from routine rack cleaning and installation of new racks.</p>
<p>Revised by: Stormwater Subcommittee members</p>					

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
3.1	Mapping	Engineering & GIS Coordinator	<p>Goal in PY7: Completion of city-wide drainage GIS</p> <p>Goal in PY8: Update GIS map as necessary based on findings from the outfalls inventory for the next phase of the IDDE program.</p>	<p>Since April 1st 2009, a total of 34 outfalls and two Inter-Municipal Connections (IMC) along Beaver Brook were inventoried, located using GPS equipment, and added to the City's GIS system. Privately-owned structures identified during the outfall inventory were located with the GPS and uploaded into the City's GIS system.</p> <p>GIS layers of the storm and sewer system were modified as necessary using results from field investigations which showed discrepancies from the existing GIS map.</p>	<p>All outfalls in the Chester and West Chester Brook watersheds will be inventoried, located using GPS equipment, and added to the City's GIS system.</p> <p>Privately-owned stormwater structures identified during the outfall inventory will be located and added to the GIS system.</p> <p>Discrepancies found during field investigations between the existing GIS maps and the actual field conditions will be recorded and the GIS layers modified accordingly.</p>
<p>Revised by: Stormwater Subcommittee members</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
3.2	Illicit Discharge Ordinance	Engineering & Law Department	Goal in PY 7: Adoption of an ordinance	The City council and mayor adopted the IDDE Ordinance –Ord. No. 30917- on June 23, 2008.	Promulgate Rules & Regulations and include them in the City of Waltham’s legal code and/or in the Stormwater Management Plan.
Revised by: Stormwater Subcommittee members			Goal in PY8: Promulgation of Rules & Regulations	An evaluation of different elements to be included in the new Rules and Regulations for the different phases of implementation of the City of Waltham’s Ordinance # 30917 (IDDE Ordinance) has been performed and recommendations issued to the City for internal review and comment.	

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
3.3	Illicit Discharge Detection Program	Engineering	<p>Goal in PY7:</p> <p>Inspect 40 or more outfalls per year</p>	<p>A total of 34 outfalls and 2 IMCs were inventoried and sampled in Beaver Brook by MWH.</p> <p>Outfalls were ranked based on their pollutant contribution potential.</p> <p>Investigations have been performed by MWH to identify sources of illicit flows into the storm system from the top eight outfalls and their respective contributing areas (approximately 50 junction manholes).</p>	<p>All active outfalls in Chester and West Chester Brook will be inventoried and sampled.</p> <p>Results from the sampling will be used to prioritize the outfalls with respect to the previously sampled outfalls in the Charles River and Beaver Brook.</p> <p>The top priority areas (up to 50 junction manholes) will be investigated for the detection of illicit connections and contaminated flows.</p>
<p>Revised by:</p> <p>Stormwater Subcommittee members</p>			<p>Goal in PY8:</p> <p>Sample 40 new outfalls and include them in the outfall ranking list</p> <p>Investigate most polluting outfalls and respective catchment areas up to 50 junction manholes.</p> <p>Eliminate identified sources of illicit flows</p>	<p>Construction work is ongoing (spring 2010). The total contaminated flow that will be removed from the stormwater system during this first phase of work is estimated to be 2.1 million gallons per year.</p>	<p>Mitigation and corrective actions will be executed based on results from the priority area investigations.</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
3.4	Testing of All Interior Floor Drains in Municipal Buildings	Engineering & Building Department	<p>Goal in PY7: Implement dye test program</p> <p>Goal in PY8: Inspection of 4 municipal buildings</p>	<p>Since April 1st, 2009, a total of 4 municipal buildings have been inspected for illicit connections, a total of 7 gas/oil separators have been installed, and a total of 12 floor drains were disconnected from the storm drain system and reconnected to the sanitary sewer.</p>	<p>Continue floor-drain inspections in municipally-owned buildings and installation of gas/oil separators.</p> <p>Continue to update inventory of floor drains in municipal buildings.</p> <p>Dye-testing of floor drains and reconnection of those connected to the stormwater system in pre-1950 municipal buildings will be subcontracted.</p>
Revised by: Stormwater Subcommittee members					

3a. Additional BMP for 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
3.5 Revised by: Stormwater Subcommittee members	Employee Training	CPW & Engineering	Goal in PY7: N/A Goal in PY8: Participation of 5 to 10 field staff members	N/A	Perform one training sessions for personnel in the Water, Sewer & Drain Division, CPW, and the Building Department with direct or indirect roles in stormwater management. The training session will focus on the identification of illicit discharges and SSOs and their negative impacts.

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
4.1	Construction Site Runoff Control Ordinance	Engineering & Law Department	<p>Goal in PY7: Enforce existing runoff BMPs</p> <p>Goal in PY8: Promulgation of Rules & Regulations for the Stormwater Management Ordinance –Ord. No. 30916-</p>	<p>Drainage calculation guidelines are given and actual calculations are reviewed by the City for any development or redevelopment exterior work greater than 150 square feet.</p> <p>An evaluation of different elements that need to be included in the new rules and regulations for the different phases of implementation of the City of Waltham’s Ordinance # 30916 (Stormwater Ordinance) has been performed and recommendations issued to the City for internal review.</p>	Promulgate Rules & Regulations and include them in the City of Waltham’s legal code and/or in the Stormwater Management Plan.
Revised by: Stormwater Subcommittee members					
4.2	Conservation Commission Rules & Regulations	Conservation Commission	<p>Goal in PY7: Continue to review projects under the WPA jurisdiction</p> <p>Goal in PY8: Perform project review as needed</p>	<p>The City of Waltham’s Conservation Commission reviews proposed mitigation measures for construction projects and activities located in areas affected by the <i>Massachusetts Wetlands Protection Act</i>. A total of 10 Notice of Intent (NOI) were submitted and reviewed by the Conservation Commission during Permit Year 7.</p>	Continue activity during PY8
Revised by: Stormwater Subcommittee members					

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
4.3	Plan Review Process	Engineering, CPW, Bldg. Department	<p>Goal in PY7: Develop a checklist to be completed and submitted for a plan review process</p> <p>Goal in PY8: Review projects as needed</p>	<p>The check-list is currently in use and is part of the site plan review process requirements.</p> <p>Recommendations for a more effective site-plan review and permitting process have been issued to the City for internal review and are being discussed by impacted City departments.</p>	<p>The City will assess the need to develop a detailed written protocol for the site-plan review process which will incorporate requirements for the Stormwater Management Plan, Waste Management & Erosion and Sediment Control Plan, as well as the long-term O&M Plan for new private stormwater facilities.</p> <p>Request submission of as-built plans from private developers depicting stormwater BMPs.</p>
Revised by: Stormwater Subcommittee members					

4a. Additional BMPs for 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
4.4	Develop City Guidelines on Construction-Site Management and Erosion and Sediment Control Measures	Engineering	Goal in PY7: N/A	N/A	Investigate the need for development of a set of guidelines to be followed by developers with detailed information about required minimum measures to prevent damage from excessive sediment loading and erosion during construction. These guidelines will be based on the recommendations set forth in the EPA's <i>Stormwater Management for Construction Activities</i> report and Mass DEP's <i>Erosion and Sediment Control Guidelines in Urban and Suburban Areas</i> report.
Revised by: Stormwater Subcommittee members			Goal in PY8: If implemented, distribute to current developers and contractors prior to site-plan review		

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
5.1	Post-construction Rules & Regulations	Engineering & Law Department	<p>Goal in PY7: Continue to enforce existing Rules and Regulations</p> <p>Goal in PY8: Promulgation of Rules & Regulations for post-construction stormwater management</p>	<p>An evaluation of different aspects that need to be included in the new rules and regulations for the different phases of implementation of the City of Waltham's Ordinance # 30916 (Stormwater Ordinance) has been performed and recommendations for long-term O&M have been issued to the City for internal review.</p>	<p>Promulgate Rules & Regulations specifying minimum requirements for proper long-term O&M of private stormwater structures and include them in the City of Waltham's legal code and/or in the Stormwater Management Plan.</p>
5.2	Enhancement of Engineering Design Guidelines	Engineering	<p>Goal in PY7: Implementation of improved engineering guidelines</p> <p>Goal in PY8: Two meetings among staff members of the Engineering Department involved in stormwater management</p>	<p>The City requests on-site stormwater management for developments or redevelopment projects greater than 150 sq-ft during its site plan review process.</p>	<p>Investigate the need for an evaluation of potential enhancements to the City of Waltham Engineering Design Guidelines following issuance of requirements and deadlines in the 2010 NPDES Phase II Small MS4 General Permit. The evaluation of potential changes in the engineering guidelines will be geared towards reduction of impervious surfaces in new construction projects and retrofitting existing areas whenever possible.</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
5.3	BMP Monitoring & Maintenance Plan	Engineering and GIS Coordinator	Goal in PY7: Develop database for BMP's and GIS map	New drainage control features built within the City limits are added to the City's GIS database.	Request a long-term O&M Plan for privately operated stormwater structures as part of the site-plan review process after promulgation of Rules & Regulations.
			Goal in PY8: Receive stormwater O&M plans for all projects that need site-plan review after promulgation of Rules & Regulations		Perform inspection and enforcement activities to secure proper O&M of private stormwater infrastructure to ensure compliance with promulgated Rules & Regulations.
					Continue to update the City's GIS system with private stormwater structures.

Revised by:

Stormwater Subcommittee members

5a. Additional BMP for 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
5.4	Develop Long-Term O&M Requirements	Engineering	Goal in PY7: N/A	N/A	The Engineering Department will assess the need to create a document listing the minimum O&M requirements for different types of structures used for stormwater control
			Goal in PY8: If adopted, distribute to current City developers and contractors prior to site plan review		

Revised by:

Stormwater Subcommittee members

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
6.1	Catch Basin Cleaning	Engineering	<p>Goal in PY7: Perform annual cleaning of catch basins</p> <p>Goal in PY8: Improve the quality of information collected for future prioritization of catch basin cleanings</p>	<p>A total of 1,347 catch basins have been cleaned and 35 repaired. This represents a 25% of the total number of catch basins within the City of Waltham. Approximately, 1,200 tons of debris were removed</p>	<p>Continue catch basin cleaning and repair activities as needed.</p> <p>A log indicating date, time, crew member, operations performed, mass of sediment or debris removed, date of last inspection, and percentage of sump full of debris will be completed during each inspection. This information will then be added to the City’s GIS system.</p>
<p>Revised by: Stormwater Subcommittee members</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
6.2	Stormwater Manhole and Pipe Cleaning	Engineering	<p>Goal in PY7: Address emerging issues throughout the year</p> <p>Goal in PY8: Address emerging issues throughout the year</p> <p>Improve quality of information collected for future prioritization of municipal drain & sewer cleaning operations</p>	Two storm drain spot repairs were performed during PY7. Drain and sewer cleaning were performed by the City or by its contractors as part of on-going projects (e.g. IDDE)	<p>Continue cleaning activities as needed.</p> <p>A log indicating date, time, crew member, operations performed, and mass of sediment or debris removed will be completed during each inspection. This information will then be added to the City's GIS system.</p>
Revised by: Stormwater Subcommittee members					
6.3	Street Sweeping	CPW	<p>Goal in PY7: Sweep city streets at least once annually</p> <p>Goal in PY8: Sweep all streets at least twice per year</p>	The City of Waltham followed its current street sweeping program. Under this program, main streets and roads were cleaned a minimum of four times per year while secondary roads and streets were cleaned at least twice per year. Downtown streets were swept weekly (Main, Moody, Lexington, School Street, etc.).	Investigate the need to optimize current street sweeping program.
Revised by: Stormwater Subcommittee members					

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
6.4	Watershed Maintenance Program	CPW	<p>Goal in PY7: Perform annual weed harvesting</p> <p>Goal in PY8: Perform annual weed harvesting</p>	Annual weed harvesting by the Hardy Pond Association was executed.	Continue to perform the annual weed harvesting in collaboration with the Hardy Pond Association.
Revised by: Stormwater Subcommittee members					
6.5	BMP Maintenance	Engineering	<p>Goal in PY7: Annual cleaning of sediment and debris from particle separators</p> <p>Goal in PY8: Clean particle separators once a year</p>	The City cleaned 10 particle separators located near Hardy Pond and various public schools.	Continue activity. Record mass of sediment removed, BMP condition at time of cleanup, dates, location, and crew members.
Revised by: Stormwater Subcommittee members					

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
6.6	City Yard Drainage Study and Improvements	CPW, Engineering and Environmental Specialist	<p>Goal in PY7: Assess City Yard drainage and implement measures to improve stormwater discharges</p> <p>Goal in PY8: Zero spills to the City Yard's stormwater system</p>	<p>The City Yard was modified to update its stormwater drainage system.</p> <p>Implementation of the Stormwater Pollution Prevention Plan (SWPPP).</p> <p>Regular maintenance is being performed.</p>	<p>Continue to implement proper O&M maintenance and implementation of the City Yard's SWPPP.</p> <p>Monthly walk-throughs by the Pollution Prevention (P2) team</p> <p>Staff training on stormwater pollution prevention will be performed as part of the SWPPP.</p>
Revised by: Stormwater Subcommittee members					
6.7	Idling Reduction Initiative	Recycling Department	<p>Goal in PY7: New initiative to reduce idling of vehicles in the City</p> <p>Goal in PY8: Distribute at least one hundred (100) brochures in municipal buildings</p>	<p>Two (2) idling-reduction signs were received from MA DEP and have been installed in Prospect Hill Park.</p>	<p>Continue distribution of idling-reduction information via web-site and distributing brochures in municipal offices, buildings, and schools.</p>
Revised by: Stormwater Subcommittee members					

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
6.8	City of Waltham Energy Efficiency Initiative	Waltham Energy Action Committee	<p>Goal in PY7: Not specified</p> <p>Goal in PY8: Continue promoting energy savings initiatives within the City</p>	<p>The City of Waltham became a member of ICLEI (International Council for Local Environmental Initiatives) after being recognized as a <i>City for Climate Protection</i>.</p> <p>A City-wide energy inventory of energy efficiency and greenhouse gas emissions was performed.</p> <p>The Waltham Energy Action Committee which holds monthly regular meetings was created.</p> <p>A home energy audit for 25 Waltham homeowners was performed under the Home Energy Audit Program.</p> <p>Participated in Warm Up to Earth Day which provided energy efficiency resource fact sheet to residents and promoted new watt meters soon available for residents to borrow at the Waltham Public Library</p> <p>Energy Efficiency for low-income housing –Partnered with WATCH to apply for EPA grant for Healthy Communities Program, promoting <i>Mass Save</i> energy auditing and retrofit services, as well as additional services for healthy homes.</p> <p>Established a Facebook page</p>	<p>Continue work to meet criteria to become a Green Community and thereby qualify for the Department of Energy Resources (DOER) grants</p> <p>Develop Clearing House of Information about past, present, and future municipal energy initiatives. This information will be used to identify and recommend energy efficiency (EE) projects/funding for cost saving to the city of Waltham.</p> <p>Develop EE Public Education and Outreach Programs.</p> <p>Develop Waltham Energy Action Plan utilizing the Waltham Energy Inventory, 2008, as a baseline to measure reductions in emissions</p>
Revised by: Stormwater Subcommittee members Recycling Coordinator					

6a. Additional BMP for 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
6.9	Develop an Inventory of Municipally-Owned Facilities	CPW & Engineering	Goal in PY7: N/A	N/A	Perform inventory of municipally-owned facilities including parks and open spaces, schools, town offices, police, and fire stations, pools, parking garages and other permittee-owned or operated buildings or utilities, as well as parking and fueling areas for municipal vehicles.
	Revised by: Stormwater Subcommittee members		Goal in PY8: Inventory all municipal facilities and buildings		
6.10	O&M Procedures for Municipal Housekeeping Activities and Facilities	CPW & Engineering	Goal in PY7: N/A	N/A	Develop municipal O&M procedures for at least one of these municipal properties: parks and open space, buildings and facilities, and vehicles and equipment
	Revised by: Stormwater Subcommittee members		Goal in PY8: Creation of O&M municipal procedures		

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

N/A

7a. Additional BMP for Permit Year 8

N/A

7b. WLA Assessment

N/A

Part IV. Summary of Information Collected and Analyzed

The City of Waltham has inventoried and sampled all stormwater outfalls in the Charles River (48 outfalls) and Beaver Brook (34 outfalls) as well as all Inter-Municipal Connections (17 IMCs). Polluted outfalls and IMCs were prioritized based on their pollutant contribution.

The eight contributing areas with the highest pollutant loads at the time of sampling were investigated for illicit connections. Sources of illicit flows were successfully identified and construction work to eliminate these sources is currently being executed. Approximately 2.1 million gallons per year of polluted flow have will have been eliminated in those problem areas upon completion of the first phase of construction activity. Additional outfall sampling, illicit flow detection, and elimination of stormwater contamination sources is scheduled for 2010 and 2011.

Part V. Program Outputs & Accomplishments (OPTIONAL)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2009 through March 31, 2010)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	y
Annual program budget/expenditures **	(\$)	--
Total program expenditures since beginning of permit coverage	(\$)	--
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	60%
Stormwater management committee established	(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
Shoreline cleaned since beginning of permit coverage	(mi.)	--
Household Hazardous Waste Collection Days	One day per month April through November	
<ul style="list-style-type: none"> ▪ days sponsored ** ▪ community participation ** 	(#)	8 days
	(# or %)	426

<ul style="list-style-type: none"> material collected ** 	(tons or gal)	--
School curricula implemented	(y/n)	n

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "X")					
<ul style="list-style-type: none"> Illicit Discharge Detection & Elimination 					X
<ul style="list-style-type: none"> Erosion & Sediment Control 					X
<ul style="list-style-type: none"> Post-Development Stormwater Management 					X
Accompanying Regulation Status (indicate with "X")					
<ul style="list-style-type: none"> Illicit Discharge Detection & Elimination 		X			
<ul style="list-style-type: none"> Erosion & Sediment Control 		X			
<ul style="list-style-type: none"> Post-Development Stormwater Management 		X			

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	100
Estimated or actual number of outfalls	(#)	~200
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100
Mapping method(s)		
<ul style="list-style-type: none"> Paper/Mylar 	(%)	N/A
<ul style="list-style-type: none"> CADD 	(%)	N/A
<ul style="list-style-type: none"> GIS 	(%)	100
Outfalls inspected/screened **	(# or %)	36
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	75
Illicit discharges identified **	(#)	7
Illicit discharges identified (Since beginning of permit coverage)	(#)	7
Illicit connections removed **	(#), and (est. gpd)	2; 1,440 gpd

Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	~10
% of population on sewer	(%)	99.9
% of population on septic systems	(%)	<1%

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	1 (by Eng. Dept.); 3 (Con. Com.)
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100
Site inspections completed **	(# or %)	100
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	0

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	n
Low-impact development (LID) practices permitted and encouraged	(y/n)	y

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	<1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1
Qty of structures cleaned **	(#)	1,347
Qty. of storm drain cleaned **	(%, LF or mi.)	1%
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	1,200 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill

Basin Cleaning Costs			
• Annual budget/expenditure (labor & equipment)**	(\$)		---
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)		---
• Disposal cost**	(\$)		---
Cleaning Equipment			
• Clam shell truck(s) owned/leased	(#)		1
• Vacuum truck(s) owned/leased	(#)		1
• Vacuum trucks specified in contracts	(y/n)		---
• % Structures cleaned with clam shells **	(%)		99% of cleaned catch basins; 1% of cleaned manholes
• % Structures cleaned with vector **	(%)		1% of cleaned catch basins and 99% of cleaned manholes

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	2
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	6
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	3,950 CY
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
• Disposal cost**	(\$)	58,000
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	4 owned
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	0
• % Roads swept with rotary brush sweepers **	%	100
• % Roads swept with vacuum sweepers **	%	0

Reduction (since beginning of permit coverage) in application on public land of:
 (“N/A” = never used; “100%” = elimination)

▪ Fertilizers	(lbs. or %)	2,500
▪ Herbicides	(lbs. or %)	0
▪ Pesticides	(lbs. or %)	0
Integrated Pest Management (IPM) Practices Implemented	(y/n)	n

(Preferred Units) Response

Average Ratio of Anti-/De-Icing products used **	% NaCl	45
	% CaCl ₂	5
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% Sand	50
Pre-wetting techniques utilized **	(y/n or %)	n
Manual control spreaders used **	(y/n or %)	100
Zero-velocity spreaders used **	(y/n or %)	n
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	+10%
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	-10%
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100
Storage shed(s) in design or under construction	(y/n or #)	n
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	--

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n