

**Municipality/Organization:** City of Waltham, MA

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**EPA NPDES Permit Number:** MA0410066

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**MassDEP Transmittal Number:** W-041267

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Annual Report Number      Year 10  
**& Reporting Period:**      **April 1, 2012 – March 31, 2013**

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## NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2013)

### Part I. General Information

Contact Person: Stephen A. Casazza, P.E.      Title: City Engineer

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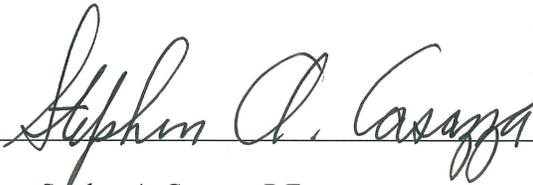
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### Certification:

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.

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Title: City Engineer

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Date: \_\_\_\_\_

4/30/2013

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## **Part II. Self-Assessment**

The City of Waltham has completed a self-evaluation regarding its stormwater management activities for Permit Year 10. The City of Waltham continues to be fully engaged with its stormwater management program and 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 the implementation of some of the Best Management Practices (BMPs) proposed for Permit Year 10 requires additional time for full implementation. A brief evaluation of each minimum control measure is as follows:

### **1) Public Education and Outreach**

The City of Waltham continues to publicize information about its stormwater program mainly on the City's web-site. The stormwater site within the Engineering Department's web-site has functioned continuously through Permit Year 10 and contained links to related documents such as the City's Stormwater Ordinance, the stormwater program web-site, the general stormwater brochure, an informational brochure for businesses as well as the Illicit Discharge Detection and Elimination (IDDE) Program web-site. Links to EPA, MassDEP and MWRA were also available. Additionally, links to the EPA, DEP web-sites, and information on release, spill, and tank removal issues as well as other stormwater-related links (such as LID development ) continued to be active in the City's Emergency Management web-page.

### **2) Public Involvement and Participation**

The City of Waltham performed several stormwater-related activities in collaboration with residents. An example is cleanup that took place with a group of 20 children and adults of the Beaver Brooks area along Waverly Oaks Road and areas along the Charles River in collaboration with the Charles River Watershed Association.

Collaboration with local educational institutions and residents continued this year in the form of 3 interns from Brandeis University. In addition a team of 5 Bentley undergraduates conducted a survey for the Waltham Energy Action Committee at the Waltham Farmers' Market and subsequently submitted a report regarding the most auspicious ways for WEAC to promote its programs to 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.

The City of Waltham completed the second construction work package which included outstanding Phase 1 outfall areas (second round of construction) along with Phase 2 outfalls (first round of construction). Phase 3 of the IDDE Project is on-going. Dry weather sampling of Phase 3 outfalls has been completed and wet weather sampling is on-going. Design of a third work package for outstanding work in Phases 1 and 2 is being completed after performing additional field investigations and will be executed during Spring/Summer of 2013. Field investigations of the most contaminated Phase 3 areas and design of a remediation, construction work package are on-going and will be put out to bid during spring/early summer of 2013. To date, a total of twenty six outfall areas have been or are being investigated in phases 1,2, or 3 of the IDDE Program. Since the program started, eighteen sources of illicit flow have been removed from the storm drain, which represents an estimated 13.5MGY.

#### **4) Construction Site Stormwater Runoff Control**

The City of Waltham continues to perform construction erosion control management inspection and enforcement activities as mandated in its Stormwater Ordinance. Final draft Rules and Regulations describing clear requirements for construction projects of one acre or more have been clearly specified in this document, which are expected to be set in front of the City Council by the Mayor for promulgation this permit year. In 2012, the City of Waltham performed seventeen periodic inspections to the 110 Bear Hill Road development , which is located within a drinking water supply watershed.

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

The City of Waltham has continued to implement its stormwater, on-site treatment policy for new development and redevelopment. In an attempt to make this policy a firm rule, the City of Waltham has drafted post-construction stormwater management Rules and Regulations for developments of one acre or more that are expected to be sent by the Mayor for promulgation to the City Council this permit year.

#### **6) Pollution Prevention and Good Housekeeping in Municipal Operations**

Most of the proposed measures for Permit Year 10 were executed by the City of Waltham. These activities will be continued during Permit Year 11 to guarantee proper stormwater management and avoid stormwater pollution. The Municipal Standard Operating Procedure (SOP) for proper management of waters in existing or new City –owned and operated spray parks has been developed and is pending final implementation.

**Part III. Summary of Minimum Control Measures**

**1. Public Education and Outreach**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 10</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities</b>
<p>1.1</p> <p>Revised by:</p> <p>Stormwater Subcommittee members</p> <p>Recycling Coordinator</p>	<p>Recycling Department Web-Site</p>	<p>Recycling Coordinator</p>	<p><b>Goal in PY10:</b> Continue to have an operational web-site and achieve a similar number of hits with respect to PY9</p> <p><b>Goal in PY11:</b> Keep improving web-site and keep reaching out to residents with no computer availability</p>	<p><b>Planned Activity:</b> Great effort will continue to go into improving the new Recycling Department web-site.</p> <p><b>Status:</b> The web-site received a total of 46,540 hits since April 2012 and has been fully active.</p> <p><b>Planned Activity:</b> The City of Waltham will continue to mail information to those residents with no computer availability, particularly seniors.</p> <p><b>Status:</b> A mailer including Recycling, Yard Waste and Hazardous waste information was mailed city-wide at the end of March 2013.</p>	<p>Keep improving web-site and keep reaching out to residents with no computer availability. Examples include:</p> <p>The 2013-2014 <i>Recycling, Yard Waste, and Hazardous Waste Mailer</i> will be mailed out city-wide this year. Covanta SEMASS, Waltham’s waste-to-energy combustion facility, will provide funding for printing and mailing.</p> <p>The City of Waltham will continue to distribute the Mass Water Resources Authority’s booklet, <i>Guide to Reducing Household Hazardous Products</i>. There has been a strong show of interest in this booklet.</p>

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1.2  Revised by:  Stormwater Subcommittee members	Targeted Communications	Engineering	<b>Goal in PY 10:</b> Keep web-links active during PY10  <b>Goal in PY11:</b> This task is complete	<b>Planned Activity:</b> Continue to have an operational web-site where all information is available to the general public.  <b>Status:</b> Complete	This task is complete
1.3  Revised by:  Stormwater Subcommittee members	NPDES Phase II Brochure	Engineering	<b>Goal in PY 10:</b> Achieve at least 300 hits to the new stormwater brochure  <b>Goal in PY11:</b> Achieve similar number of hits as PY10	<b>Planned Activity:</b> 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.  <b>Status:</b> There were 507 hits on the stormwater brochure on the City’s website in PY10.  The new NPDES PII Small MS4 General Permit has not been issued to date. Therefore, the stormwater brochure has not been updated.	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.
1.4  Revised by:  Stormwater Subcommittee members	Watershed Signage	Engineering in cooperation with the City of Cambridge	<b>Goal in PY10:</b> Keep adequate level of signage in Cambridge Reservoir Area (as needed)  <b>Goal in PY11:</b> Same as PY10	<b>Planned Activity:</b> Continue to install watershed signs in coordination with Cambridge as needed.  <b>Status:</b> This activity has continued on an as-needed basis during PY10	Same as PY10

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1.5  Revised by:  Stormwater Subcommittee members	Recycling Department Initiatives	Recycling Department	<p><b>Goal in PY10:</b> Continue outreach and collaboration activities with local institutions and residents</p> <p><b>Goal in PY11:</b> Continue outreach and collaboration activities with local institutions and residents</p>	<p><b>Planned Activity:</b> Continue the rain barrel campaign and continue to distribute the rain barrel brochure through the Department’s web-site.</p> <p><b>Status:</b> The rain barrel vendor has gone out of business, due to the death of the owner. Subsequent research did not turn up another vendor with a suitable sales and delivery program. Residents are now being referred to local stores for the purchase of rain barrels. This task is now considered complete.</p> <p><b>Planned Activity:</b> A new mercury-reduction initiative was launched in April, 2012, for thermometer exchange and collection of thermostats</p> <p><b>Status:</b> The CPW Director in conjunction with the Recycling Department, initiated a program to provide for the free disposal of mercury thermometer and thermostats at the Recycling Department for residents and businesses who service Waltham residents. A Brandeis intern organized and executed a mailing to all appropriate vendors. The Recycling Department has collected two 5-gallon pails of mercury thermometers and thermostats; they were picked up by the New England Disposal Technologies, Inc for recycling. .</p>	Continue outreach and collaboration activities with local institutions and residents

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1.5 (continued)  Revised by:  Stormwater Subcommittee members	Recycling Department Initiatives	Recycling Department	<p><b>Goal in PY10:</b> Continue outreach and collaboration activities with local institutions and residents</p> <p><b>Goal in PY11:</b> Continue outreach and collaboration activities with local institutions and residents</p>	<p><b>Planned Activity:</b> Continue hosting students from local universities or high schools to provide them with environmental learning experiences.</p> <p><b>Status:</b> The Department has hosted 3 interns from Brandeis University. In addition a team of 5 Bentley undergraduates conducted a survey for the Waltham Energy Action Committee at the Waltham Farmers' Market and subsequently submitted a report regarding the most auspicious ways for WEAC to promote its programs to the public.</p> <p><b>Planned Activity:</b> Continue to offer recycling bins at a \$5 cost.</p> <p><b>Status:</b> On-going. Recycling bins now cost \$6 but residents get the first one for free. This task is now considered complete.</p>	Continue outreach and collaboration activities with local institutions and residents

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 10</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities</b>
1.6  Revised by:  Stormwater Subcommittee members	Other Targeted Communications	Engineering	<p><b>Goal in PY10:</b> If the business brochure is approved, send an educational message via hard copy or through the City’s web-site to at least 70% of businesses, institutions and commercial spaces during PY10.</p> <p><b>Goal in PY11:</b> Continue to have the business brochure active for Waltham residents and business owners</p>	<p><b>Planned Activity:</b> If the business brochure is approved, send an educational message via hard copy or through the City’s web-site to at least 70% of businesses, institutions and commercial spaces during PY10.</p> <p><b>Status:</b> The business brochure was posted on the Engineering Department’s website in May 2012.</p> <p>A total of 2 hits were recorded since the business brochure was posted.</p>	<p>Continue to have the business brochure active for Waltham residents and business owners.</p> <p>The City is will coordinate with <i>128 Business Council of Waltham</i> and the <i>West Suburban Chamber of Commerce</i> to help distribute the business brochure to the targeted audience.</p>

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2.1  Revised by:  Stormwater Subcommittee members	Stream Cleanup	CPW	<p><b>Goal in PY10:</b> Cleanup of Beaver Brook section along Waverley Oaks Road</p> <p>Hardy Pond annual weed harvesting in collaboration with the Hardy Pond Association</p> <p><b>Goal in PY11:</b> Continue collaboration with Hardy Pond Association and CRWA</p>	<p><b>Planned Activities:</b> Participate in the annual weed harvesting at Hardy Pond with the Hardy Pond Association</p> <p><b>Status:</b> Completed</p> <p><b>Planned Activities:</b> Continue collaboration with CRWA to cleanup public shores along the Charles River on Earth Day</p> <p><b>Status:</b> Completed</p> <p><b>Planned Activities:</b> CPW will lead Earth Day volunteer cleanup of the Beaver Brook section along Waverley Oaks Road</p> <p><b>Status:</b> Completed</p>	Continue collaboration with Hardy Pond Association and CRWA
2.2  Revised by:  Stormwater Subcommittee members	Clear Racks of Debris	CPW	<p><b>Goal in PY10:</b> Inspect and clear if necessary hydraulic bottlenecks twice a year</p> <p><b>Goal in PY11:</b> Continue activity</p>	<p><b>Planned Activity:</b> Continue cleaning debris from the racks before forecasted heavy storms.</p> <p><b>Status:</b> Completed. See Attachment 1.</p>	Continue activity

### 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3.1  Revised by:  Stormwater Subcommittee members	Mapping	Engineering & GIS Coordinator	<p><b>Goal in PY10:</b> Update GIS map as necessary based on findings from the outfall inventory for Phase 3 of the IDDE program.</p> <p><b>Goal in PY11:</b> Continue activity</p>	<p><b>Planned Activity:</b> Update GIS map as necessary based on findings from the outfall inventory for Phase 3 of the IDDE program.</p> <p><b>Status:</b> A total of forty outfalls have been inventoried and uploaded to the City’s GIS as part of Phase 3.</p>	Continue execution of Phase 3 of the IDDE Program and provide results in a GIS format.
3.2  Revised by:  Stormwater Subcommittee members	Illicit Discharge Ordinance	Engineering & Law Department	<p><b>Goal in PY10:</b> Implementation of Rules &amp; Regulations in new projects, if promulgated by the City Council.</p> <p><b>Goal in PY11:</b> Implementation of the Rules and Regulations when promulgated by the City Council.</p>	<p><b>Planned Activity:</b> Implementation of Rules &amp; Regulations in new projects, if promulgated by the City Council.</p> <p><b>Status:</b> Initial draft Rules and Regulations were modified to only affect developments of one acre or more after comments from the Law Dept.. Final draft version is complete and will be sent to the Mayor for review and submittal to the City Council for promulgation.</p>	Implementation of the Rules and Regulations if promulgated by the City Council.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3.3  Revised by:  Stormwater Subcommittee members	Illicit Discharge Detection and Elimination Program	Engineering	<p><b>Goal in PY10:</b> Sample all IDDE Phase 3 outfalls (25 approx.) 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><b>Goal in PY11:</b> Continue the implementation of the IDDE Program</p>	<p><b>Planned Activity:</b> Sample outfalls in Clematis Masters, and Sibley Brook (Phase 3 outfalls).</p> <p>Include results in outfall database and continue junction manhole investigations of most polluted areas.</p> <p>Eliminate identified sources of illicit flows</p> <p><b>Status:</b> All Phase 3 outfalls have been inventoried and sampled in dry weather conditions.</p> <p>Results were added to the outfall database and junction manhole investigations of most polluted areas have been performed and are still on-going.</p> <p>Design of a remediation work package is under way and expected to be bid and awarded during spring/early summer 2013.</p>	Continue the implementation of the IDDE Program

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3.3 (continued) Revised by:  Stormwater Subcommittee members	Illicit Discharge Detection and Elimination Program	Engineering	<p><b>Goal in PY10:</b> Sample Phase 3 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><b>Goal in PY11:</b> Continue implementation of Phase 3 of the IDDE Project</p>	<p><b>Planned Activity:</b> The top priority areas (up to 50 junction manholes) will be investigated to identify illicit connections and contaminated flows entering the storm system.</p> <p>Adopt mitigation and corrective measures whenever new illicit connections are identified.</p> <p><b>Status:</b> After sampling Phase 3 outfalls, the most contaminated outfall areas are being investigated. Remediation measures to remove identified sources of illicit flow are being designed based on the investigation results.</p>	Continue implementation of Phase 3 of the IDDE Project
3.5 Revised by:  Stormwater Subcommittee members	Employee Training	CPW & Engineering	<p><b>Goal in PY10:</b> Perform one training session with participation of CPW and Engineering staff</p> <p><b>Goal in PY11:</b> Same as PY10</p>	<p><b>Planned Activity:</b> Continue to provide IDDE and stormwater management training to staff members with a direct or indirect role in stormwater.</p> <p><b>Status:</b> Posters on pollution and stormwater BMPs in municipal operations have been developed by the Environmental Specialist and CPW and posted in various appropriate areas in municipal buildings as part of the municipal employee stormwater and pollution prevention training program</p>	Continue to provide IDDE and stormwater quality management training to staff members with a direct or indirect role in stormwater. Including, but not limited to, SSO management, first responders, and spill prevention.

#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4.1 Revised by:  Stormwater Subcommittee members	Construction Site Runoff Control Ordinance	Engineering & Law Department	<p><b>Goal in PY10:</b> Send proposed Rules and Regulations to the City Council for promulgation</p> <p><b>Goal in PY11:</b> Implementation of proposed R&amp;R if promulgated by the City Council</p>	<p><b>Planned Activity:</b> Implementation of proposed Rules and Regulations if promulgated by the City Council</p> <p><b>Status:</b> Initial draft Rules and Regulations were modified to only affect developments of one acre or more after review by the Law Dept. Final draft version is complete and will be sent to Mayor for review and submittal to the City Council for promulgation.</p>	Implementation of proposed Rules and Regulations if promulgated by the City Council
4.2 Revised by:  Stormwater Subcommittee members	Conservation Commission Rules & Regulations	Conservation Commission	<p><b>Goal in PY10:</b> Perform project review as needed</p> <p><b>Goal in PY11:</b> Perform project review as needed</p>	<p><b>Planned Activity:</b> 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>.</p> <p><b>Status:</b> As of 03/28/2013, a total of 12 Notices of Intent (NOI) were submitted and reviewed by the Conservation Commission during Permit Year 10.</p>	Continue activity during PY11

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4.3  Revised by:  Stormwater Subcommittee members	Plan Review Process	Engineering, CPW, Bldg. Department	<p><b>Goal in PY10:</b> Rules and Regulations are being finalized before promulgation by City Council</p> <p><b>Goal in PY11:</b> Implementation of proposed Rules and Regulations if promulgated by the City Council</p>	<p><b>Planned Activity:</b> Implement review tasks described in the Rules and Regulations if promulgated by the City Council.</p> <p><b>Status:</b> Initial draft Rules and Regulations were modified to only affect developments of one acre or more after review by the Law Dept. Final draft version is complete and will be sent to the Mayor for review and submittal to the City Council for promulgation.</p>	Implementation of proposed Rules and Regulations if promulgated by the City Council
4.4  Revised by:  Stormwater Subcommittee members	Large Construction Site Oversight in Sensitive Areas	Engineering	<p><b>Goal in PY10:</b> Monitor implementation of BMP in large construction sites bi-weekly</p> <p><b>Goal in PY11:</b> Continue inspection activity when construction work resumes.</p>	<p><b>Planned Activity:</b> Bi-weekly site inspections and reporting of large construction sites in sensitive areas such as 110 Bear Hill Road</p> <p><b>Status:</b> In 2012, the City of Waltham performed seventeen periodic inspections to the 110 Bear Hill Road development, which is located within a drinking water supply watershed. The inspection program is currently on hold as there is no construction work occurring at the moment.</p>	Continue inspection activity when construction work resumes.

## 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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5.1  Revised by:  Stormwater Subcommittee members	Post-construction Rules & Regulations	Engineering & Law Department	<p><b>Goal in PY10:</b> Implementation of activities described in the Rules and Regulations after promulgation</p> <p><b>Goal in PY11:</b> Implementation of proposed Rules and Regulations if promulgated by the City Council</p>	<p><b>Planned Activity:</b> Implementation of activities described in the Rules and Regulations if promulgated by the City Council.</p> <p><b>Status:</b> Initial draft Rules and Regulations were modified to only affect developments of one acre or more after review by the Law Dept. Final draft version is complete and will be sent to the Mayor for review and submittal to the City Council for promulgation.</p>	Implementation of proposed Rules and Regulations if promulgated by the City Council
5.2  Revised by:  Stormwater Subcommittee members	Enhancement of Engineering Design Guidelines	Engineering	<p><b>Goal in PY10:</b> Same as PY9</p> <p><b>Goal in PY11:</b> Same as PY10</p>	<p><b>Planned Activity:</b> Same as PY9</p> <p><b>Status:</b> On hold since the new NPDES Permit Phase II Small MS4 General Permit has not been issued to date. However, proposed Rules and Regulations require on-site treatment of stormwater in newly paved areas of one acre or more .</p>	On hold since the new NPDES Permit Phase II Small MS4 General Permit has not been issued to date.

<b>BMP ID #</b>	<b><u>BMP Description</u></b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 10</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities</b>
5.3  Revised by:  Stormwater Subcommittee members	BMP Monitoring & Maintenance Plan	Engineering and GIS Coordinator	<p><b>Goal in PY10:</b> Same as PY9</p> <p><b>Goal in PY11:</b> Start inspection and enforcement of BMP monitoring post-construction if R&amp;R are promulgated by the City Council.</p>	<p><b>Planned Activity:</b> Implementation after promulgation of Stormwater Rules and Regulations if promulgated by the City Council.</p> <p><b>Status:</b> Initial draft Rules and Regulations were modified to only affect developments of one acre or more after review by the Law Dept. Final draft version is complete and will be sent to the Mayor for review and submittal to the City Council for promulgation.</p>	<p>Request a long-term O&amp;M Plan for privately operated stormwater structures as part of the site-plan review process after promulgation of Rules &amp; Regulations.</p> <p>Perform inspection and enforcement activities to secure proper O&amp;M of private stormwater infrastructure to ensure compliance with promulgated Rules &amp; Regulations.</p> <p>Continue to update the City's GIS system with private stormwater structures.</p>
5.4  Revised by:  Stormwater Subcommittee members	Develop Long-Term O&M Requirements	Engineering	<p><b>Goal in PY10:</b> Develop O&amp;M requirements for stormwater infrastructure drainig into the public conveyance system</p> <p><b>Goal in PY11:</b> On hold</p>	<p><b>Planned Activity:</b> Develop O&amp;M requirements for stormwater infrastructure drainig into the public conveyance system</p> <p><b>Status:</b> This task is on hold until the new NPDES Permit requirements are clearly defined.</p>	This task is on hold until the new NPDES Permit requirements are clearly defined.

## 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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6.1  Revised by:  Stormwater Subcommittee members	Catch Basin Cleaning	Engineering	<p><b>Goal in PY10:</b> Continue maintenance and sediment monitoring</p> <p><b>Goal in PY11:</b> Continue maintenance and sediment monitoring</p>	<p><b>Planned Activity:</b> Continue maintenance and sediment monitoring</p> <p><b>Status:</b> A total of 1,526 catch basins were cleaned during this reporting period, totaling 1,113 tons of sediment (0.70 Tons per catch basin in average). See Attachment 2.</p>	Continue maintenance and sediment monitoring
6.2  Revised by:  Stormwater Subcommittee members	Stormwater Manhole and Pipe Cleaning	Engineering	<p><b>Goal in PY10:</b> Continue collecting information for prioritization of areas that need to be maintained</p> <p><b>Goal in PY11:</b> Continue collecting information for prioritization of areas that need to be maintained</p>	<p><b>Planned Activity:</b> Create a prioritized drain and sanitary sewer cleaning plan.</p> <p><b>Status:</b> A total of 3,700 linear feet of drain pipe was cleaned between 04/01/2012 and 03/15/2013, 3,500 of which were cleaned under the IDDE program. No prioritization strategy has been created to date.</p>	Continue regular cleaning of drains and sanitary sewer especially in areas that are more vulnerable and prone to clogging as recorded in the City's records for stoppages, sanitary overflows as well as other drainage problems due to blockages and accumulation of debris in the pipes.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6.3  Revised by:  Stormwater Subcommittee members	Watershed Maintenance Program	CPW	<p><b>Goal in PY10:</b> Perform two watershed maintenance or cleanup activities per year</p> <p><b>Goal in PY11:</b> Same as PY10</p>	<p><b>Planned Activity:</b> Continue to perform the annual weed harvesting in collaboration with the Hardy Pond Association.</p> <p><b>Status:</b> Hardy Pond weed harvesting project was completed in July of 2012 and is scheduled and funded for 2013.</p> <p><b>Planned Activity:</b> The Engineering Department and CPW are evaluating the need to perform a comprehensive maintenance and cleaning effort along Chester Brook. At the same time, flooding mitigation alternatives are being evaluated in Chester Brook.</p> <p><b>Status:</b> On April 21, 2012 approximately 100 people participated in a citywide cleanup effort in which a group of people cleaned up several loads of trash from the Chester Brook. A flood mitigation project in front of the JFK Middle School will be put out to bid in April of 2013. Construction is expected to start in summer of 2013.</p>	Continue activity

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6.4  Revised by:  Stormwater Subcommittee members	BMP Maintenance	Engineering	<b>Goal in PY10:</b> Same as PY9  <b>Goal in PY11:</b> Perform annual inspections and cleaning as needed	<b>Planned Activity:</b> Clean 10 particle separators located near Hardy Pond and various public schools.  <b>Status:</b> Stormceptors and particle separators were inspected in January, 2013. Three quotes for particle separator cleaning and maintenance have been obtained and a contractor will be selected to perform the work in Spring/Summer of 2013.	Perform annual inspections and cleaning as needed
6.5  Revised by:  Stormwater Subcommittee members	City Yard Drainage Study and Improvements	CPW, Engineering and Environmental Specialist	<b>Goal in PY10:</b> Zero spills to the City Yard's stormwater system  <b>Goal in PY11:</b> Same as PY10	<b>Planned Activity:</b> Continue activity  <b>Status:</b> Monthly walk-throughs by the CPW Pollution Prevention (P2) Team have been conducted. Minor issues only have been noted and have been promptly addressed/corrected.  There were no spills to report in PY10.	Continue activity

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6.6  Revised by:  Stormwater Subcommittee members	O&M Procedures for Municipal Housekeeping Activities and Facilities	CPW & Engineering	<p><b>Goal in PY10:</b> Develop municipal O&amp;M procedures for buildings and facilities stormwater management.</p> <p><b>Goal in PY11:</b> Begin implementation of the SOP for water management in the City-owned and operated spray parks.</p>	<p><b>Planned Activity:</b> Develop an SOP for water management in City operated spray parks</p> <p><b>Status:</b> An SOP for water management in the City-owned and operated spray parks has been developed.</p>	Begin implementation of the SOP for water management in the City-owned and operated spray parks.
6.7  Revised by:  Stormwater Subcommittee members	Revision and update of the Rhodes Municipal Center/CPW yard SWPPP	CPW & Environmental Specialist	<p><b>Goal in PY10:</b> Update and implement the SWPPP for the City Yard and Rhodes Municipal Center</p> <p><b>Goal in PY11:</b> Begin implementation of the training program</p>	<p><b>Planned Activity:</b> When revised and approved, CPW will implement a program to train it's employees in the revised SWPPP and municipal stormwater pollution prevention practices</p> <p><b>Status:</b> The SWPPP has been updated and revised. The revised SWPPP needs to be reviewed by the Environmental Committee and all departments operating at the City Yard and/or Rhodes Municipal Center before it can be implemented.</p> <p>Posters on pollution and stormwater BMPs in municipal operations have been developed by the Environmental Specialist and CPW and posted in various appropriate areas in municipal buildings as part of the municipal employee stormwater and pollution prevention training program</p>	The SWPPP will be submitted to the Environment Committee for review as required at an upcoming meeting and subsequently by all departments that operate at the City Yard and/or Rhodes Municipal Center. After this review is complete, the CPW and other departments operating at the City Yard and/or Rhodes Municipal Center will complete development of a program to train appropriate employees in the revised SWPPP and municipal stormwater pollution prevention practices and will begin implementation of the training program.

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

N/A

**7a. Additional BMP for Permit Year 10**

N/A

**7b. WLA Assessment**

N/A

#### Part IV. Summary of Information Collected and Analyzed

The City of Waltham has finalized the execution of the second IDDE Construction Work Package, which included outstanding work in outfall areas from Phase 1 and Phase 2 of the IDDE project. All outfalls from Phase 3 have been inventoried and sampled in dry weather conditions. A third construction work package has been finalized for outstanding Phase 1 and 2 outfall areas. Construction of this work is expected to start in spring of 2013. Additionally, investigations of Phase 3 areas are on-going and a construction work package is being designed to mitigate identified sources of illicit flow. Construction for this work package is expected to be bid in spring/summer of 2013.

To date, approximately 13.5 million gallons per year of polluted flow have been during phase 1 and 2 of the IDDE Program. A total of twenty-one sources of illicit flow have been removed to date.

#### 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, 2012 through March 31, 2013)

<b>Programmatic</b>	<b>(Preferred Units)</b>	<b>Response</b>
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	
▪ days sponsored **	(#)	8 days
▪ community participation **	(# or %)	--
▪ 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
<b>Regulatory Mechanism Status (indicate with “X”)</b>					
▪ Illicit Discharge Detection & Elimination					X
▪ Erosion & Sediment Control					X
▪ Post-Development Stormwater Management					X
<b>Accompanying Regulation Status (indicate with “X”)</b>					
▪ Illicit Discharge Detection & Elimination				X	
▪ Erosion & Sediment Control				X	
▪ Post-Development Stormwater Management				X	

<b>Mapping and Illicit Discharges</b>	<b>(Preferred Units)</b>	<b>Response</b>
Outfall mapping complete	(%)	100
Estimated or actual number of outfalls	(#)	~200
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100
<b>Mapping method(s)</b>		
▪ Paper/Mylar	(%)	N/A
▪ CADD	(%)	N/A
▪ GIS	(%)	100
Outfalls inspected/screened **	(# or %)	0
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	~200
Illicit discharges identified **	(#)	6 new (IDDE Phase 3)
Illicit discharges identified (Since beginning of permit coverage)	(#)	31
Illicit connections removed **	(#); and (est. gpd)	2 (17,104)
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	21 (10,878)
% of population on sewer	(%)	99.9
% of population on septic systems	(%)	<1%

## Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	2
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100
Site inspections completed **	(# or %)	17
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	4 (Felton Street, Cabot/Boynton, Copeland Street, South Street)

## 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 **	(#)	1,576
Qty. of storm drain cleaned **	(%, LF or mi.)	3,700LF
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or 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**	(\$)	\$58,842
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 vacuor **	(%)	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)	10
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	1500
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Vendor
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	40,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	N/A
• Disposal cost**	(\$)	20,000
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	3 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 %)	2,000 +/-
▪ Herbicides	(lbs. or %)	N/A
▪ Pesticides	(lbs. or %)	N/A
Integrated Pest Management (IPM) Practices Implemented	(y/n)	Y

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	50 10 0 0 0 0 40
Pre-wetting techniques utilized **	(y/n or %)	N
Manual control spreaders used **	(y/n or %)	Y
Zero-velocity spreaders used **	(y/n or %)	N
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/l <sub>n</sub> mi. or %)	0
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l <sub>n</sub> mi. or %)	0
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100
Storage shed(s) in design or under construction	(y/n or #)	Complete
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	n
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	y
<ul style="list-style-type: none"> <li>Treatment units induce infiltration within 500-feet of a wellhead protection area</li> </ul>	# or y/n	

# **Attachment 1**



## **Attachment 2**

Catch Basin Tailings  
April 2012 through Present

<b>Date of Pickup</b>	<b>Total Load Tons</b>	<b>Price per Ton</b>	<b>Total Cost</b>
12/6/2012	137.98	\$ 32.70	\$ 4,511.95
10/24/2012	148.36	\$ 32.70	\$ 4,851.37
10/22/2012	94.56	\$ 32.70	\$ 3,092.11
9/24/2012*	180.15	\$ 69.00	\$ 12,430.35
7/12/2012*	257.94	\$ 69.00	\$ 17,797.86
9/24/2012*	180.15	\$ 69.00	\$ 12,430.35
5/8/2012	114.02	\$ 32.70	\$ 3,728.45
<b>TOTAL TONS</b>	<b>1113.16</b>	<b>TOTAL COST</b>	<b>\$ 58,842.44</b>
<b>*Price Increase Due to Fecal Coliform Present</b>			