

**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 12  
**& Reporting Period:** April 1, 2014 – March 31, 2015

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## NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2015)

### Part I. General Information

Contact Person: Stephen A. Casazza, P.E.

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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: \_\_\_\_\_

*Stephen A. Casazza*

Printed Name: Stephen A. Casazza, P.E.

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Title: City Engineer

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

*May 1, 2015*

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

The City of Waltham has completed a self-evaluation regarding its stormwater management activities for Permit Year 12. 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 has retained the services of a consulting engineering firm in October 2013 for a period of three years to assist the City with the implementation of the Small MS4 General Permit. 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 12 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 12 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, pet waste management brochure 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. The Recycling Department web-site provides information on recycling, yard waste and hazardous waste management. More than 350 single family homes were visited as part of the City's Sump Pump Amnesty Program. The residents were educated on stormwater management in addition to reducing flows to sanitary sewer system.

### **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 Moody Street area in the along the Charles River in collaboration with the Waltham West Suburban Chamber of Commerce and Waltham Downtown Partnership.

Collaboration with local educational institutions and residents continued this year in the form of 2 interns from Brandeis University to provide them with environmental learning experiences. The Waltham Energy Action Committee is working with the Transportation Committee to promote bike rides, walking, solar energy and encouraging energy audits.

### **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). Design

of the Phase 3 of the IDDE Project is complete. The construction work package for Phase 3 is ready to be bid in 2015. Outfall inventory and dry weather sampling of all outfalls within Clematis Brook and Masters Brook watersheds and its tributaries (i.e. Sibley Brook is a tributary to Masters Brook) has been completed. Wet weather sampling has been performed in nineteen out of thirty-nine inventoried outfalls and is ongoing. An extremely dry Summer and Fall of 2013 precluded successful completion of the wet weather sampling program. Wet weather sampling of the remaining Phase 3 outfalls will be completed in Spring of 2014, weather permitting. Since the program started, eighteen sources of illicit flow have been removed from the storm drain, which represents an estimated 13.5 MGY.

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

The City of Waltham continues to monitor construction erosion control management on large construction projects. The City's Engineering Department receives periodic reports for stormwater compliance from the former Polaroid Site and the 110 Bear Hill Road development, which is located within a drinking water supply watershed. Final draft Rules and Regulations describing clear requirements for construction projects of one acre or more are set to be in front of the City Council by the Mayor this permit year for review and approval.

#### **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 to the City Council for approval this permit year.

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

Most of the proposed measures for Permit Year 12 were executed by the City of Waltham. These activities will be continued during Permit Year 13 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

| BMP ID #                                            | BMP Description               | Responsible Dept./Person Name | Measurable Goal(s)                                                                                                                                                                                                                                           | Progress on Goal(s) – Permit Year 11<br>(Reliance on non-municipal partners indicated, if any)                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Planned Activities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| 1.1<br><br>Revised by:<br><br>Recycling Coordinator | Recycling Department Web-Site | Recycling Coordinator         | <p><b>Goal in PY12:</b><br/>Continue to have an operational web-site and achieve a similar number of hits with respect to PY11</p> <p><b>Goal in PY13:</b><br/>Keep improving web- site and keep reaching out to residents with no computer availability</p> | <p><b>Planned Activity:</b><br/>Great effort will continue to go into improving the new Recycling Department web-site.<br/><b>Status:</b><br/>The web-site received a total of 24,291 hits since April 1, 2014 and has been fully active.</p> <p><b>Planned Activity:</b><br/>The City of Waltham will continue to mail information to those residents with no computer availability, particularly seniors.<br/><b>Status:</b><br/>A mailer including Recycling, Yard Waste and Hazardous waste information was mailed city-wide (22,000 households) early April 2014.</p> | <p>Keep improving web-site and keep reaching out to residents with no computer availability.<br/>Examples include:</p> <p>The 2014-2015 <i>Recycling, Yard Waste, and Hazardous Waste Mailer</i> will be mailed out city-wide this year. <i>Capitol Waste</i>, City's waste and recycling vendor will provide funding for printing and mailing.</p> <p>The City will promote it's rain barrel program and encourage the residents to conserve rainwater.</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> |

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| 1.2<br><br>Revised by:<br><br>Engineering | Targeted Communications | Engineering                                           | <b>Goal in PY 12:</b><br>Keep web-links active during PY12<br><br><b>Goal in PY13:</b><br>This task is complete                                         | <b>Planned Activity:</b><br>Continue to have an operational web-site where all information is available to the general public.<br><br><b>Status:</b><br>Complete                                                                                                                                                                                                                                                                     | This task is complete                                                                                                                                  |
| 1.3<br><br>Revised by:<br><br>Engineering | NPDES Phase II Brochure | Engineering                                           | <b>Goal in PY 12:</b><br>Achieve at least 300 hits to the new stormwater brochure<br><br><b>Goal in PY13:</b><br>Achieve similar number of hits as PY12 | <b>Planned Activity:</b><br>The brochure will be updated and distributed as necessary and/or posted on the City's web-site after the new NPDES PII Small MS4 General Permit is issued.<br><br><b>Status:</b><br>There were 73 hits on the stormwater brochure on the City's website in PY12.<br><br>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 NPDES PII Small MS4 General Permit is issued. |
| 1.4<br><br>Revised by:<br><br>Engineering | Watershed Signage       | Engineering in cooperation with the City of Cambridge | <b>Goal in PY12:</b> Keep adequate level of signage in Cambridge Reservoir Area (as needed)<br><br><b>Goal in PY13:</b><br>Same as PY12                 | <b>Planned Activity:</b><br>Continue to install watershed signs in coordination with Cambridge as needed.<br><br><b>Status:</b><br>This activity has continued on an as-needed basis during PY12                                                                                                                                                                                                                                     | Same as PY12                                                                                                                                           |

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| <p>1.5</p> <p>Revised by:</p> <p>Recycling Coordinator</p> | <p>Recycling Department Initiatives</p> | <p>Recycling Department</p> | <p><b>Goal in PY12:</b><br/>Continue outreach and collaboration activities with local institutions and residents</p> <p><b>Goal in PY13:</b><br/>Continue outreach and collaboration activities with local institutions and residents</p>       | <p><b>Planned Activity:</b><br/>Continue the rain barrel campaign and continue to distribute the rain barrel brochure through the Department's web-site.</p> <p><b>Status:</b><br/>The City has recently found a vendor for rain barrels.</p> <p><b>Planned Activity:</b><br/>Continue hosting students from local universities or high schools to provide them with environmental learning experiences.</p> <p><b>Status:</b><br/>The Department has hosted 2 interns from Brandeis University.</p> <p><b>Planned Activity:</b><br/>Continue to offer recycling bins at a \$5 cost.</p> <p><b>Status:</b><br/>On-going. Recycling bins now cost \$6 but residents get the first one for free. This task is now considered complete.</p> | <p>Continue outreach and collaboration activities with local institutions and residents</p>                                                                                                                                                                                                     |
| <p>1.6</p> <p>Revised by:</p> <p>Engineering</p>           | <p>Other Targeted Communications</p>    | <p>Engineering</p>          | <p><b>Goal in PY12:</b><br/>Continue to have the business brochure active for Waltham residents and business owners</p> <p><b>Goal in PY13:</b><br/>Continue to have the business brochure active for Waltham residents and business owners</p> | <p><b>Planned Activity:</b><br/>The business brochure was posted on the Engineering Department's website in May 2012.</p> <p><b>Status:</b><br/>A total of 2 hits were recorded during PY12.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>Continue to have the business brochure active for Waltham residents and business owners.</p> <p>The City 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 12<br>(Reliance on non-municipal partners indicated, if any)                                                                                                                                                                                                                                                                                                                                                                  | Planned Activities                                                                                                                                                                                                     |
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| 2.1<br><br>Revised by:<br><br>CPW | Stream Cleanup              | CPW                           | <p><b>Goal in PY12:</b><br/>Hardy Pond annual weed harvesting in collaboration with the Hardy Pond Association</p> <p><b>Goal in PY13:</b><br/>Continue collaboration with Hardy Pond Association and CRWA</p> | <p><b>Planned Activities:</b><br/>Participate in the annual weed harvesting at Hardy Pond with the Hardy Pond Association<br/><b>Status:</b><br/>Completed</p> <p><b>Planned Activities:</b><br/>Continue collaboration with CRWA to cleanup public shores along the Charles River on Earth Day<br/><b>Status:</b><br/>Completed</p> <p><b>Planned Activities:</b><br/>CPW will lead Earth Day volunteer City-Wide cleanup<br/><b>Status:</b><br/>Completed</p> | <p>Continue collaboration with Hardy Pond Association for cleanup. Weed harvesting is a contracted project and is funded for July 2014.</p> <p>CPW will lead Earth Day volunteer City-Wide cleanup on May 2, 2015.</p> |
| 2.2<br><br>Revised by:<br><br>CPW | Clear Trash Racks of Debris | CPW                           | <p><b>Goal in PY12:</b><br/>Inspect and clear if necessary hydraulic bottlenecks twice a year</p> <p><b>Goal in PY13:</b><br/>Continue activity</p>                                                            | <p><b>Planned Activity:</b><br/>Continue cleaning debris from the racks before forecasted heavy storms.</p> <p><b>Status:</b><br/>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 12<br>(Reliance on non-municipal partners indicated, if any)                                                                                                                                                                                                                                                                                                                                          | Planned Activities                                                                               |
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| 3.1<br><br>Revised by:<br><br>Engineering & GIS Coordinator | Mapping                     | Engineering & GIS Coordinator | <b>Goal in PY12:</b><br>Update GIS map as necessary based on findings from the outfall inventory for Phase 3 of the IDDE program.<br><br><b>Goal in PY13:</b><br>Continue activity                                                                    | <b>Planned Activity:</b><br>Update GIS map as necessary based on findings from the outfall inventory for Phase 3 of the IDDE program.<br><br><b>Status:</b><br>A total of forty outfalls have been inventoried and uploaded to the City's GIS as part of Phase 3.                                                                                                                                                                       | Continue execution of Phase 3 of the IDDE Program and provide results in a GIS format.           |
| 3.2<br><br>Revised by:<br><br>Engineering & Law Department  | Illicit Discharge Ordinance | Engineering & Law Department  | <b>Goal in PY12:</b><br>Implementation of Rules & Regulations in new projects upon approval by the Mayor and the City Council<br><br><b>Goal in PY13:</b><br>Implementation of Rules & Regulations in new projects upon approval by the City Council. | <b>Planned Activity:</b><br>Implementation of proposed Rules and Regulations upon approval by the Mayor and the City Council<br><br><b>Status:</b><br>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 was sent to Mayor for review and approval and then her subsequent submittal to the City Council for approval. | Implementation of proposed Rules and Regulations upon approval by the Mayor and the City Council |



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| <p>3.3</p> <p>Revised by:</p> <p>Engineering</p> | <p>Illicit Discharge Detection and Elimination Program</p> | <p>Engineering</p> | <p><b>Goal in PY12:</b><br/>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 PY13:</b><br/>Continue the implementation of the IDDE Program</p> | <p><b>Planned Activity:</b><br/>Sample outfalls in Clematis Masters, and Sibley Brook (Phase 3 outfalls).</p> <p><b>Status:</b><br/>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 complete and will be bid in 2015.</p> <p><b>Planned Activity:</b><br/>Adopt mitigation and corrective measures whenever new illicit connections are identified.</p> <p><b>Status:</b><br/>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> | <p>Continue the implementation of the IDDE Program</p> |
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| <p>3.5</p> <p>Revised by:</p> <p>CPW and Engineering</p> | <p>Employee Training</p> | <p>CPW &amp; Engineering</p> | <p><b>Goal in PY12:</b><br/>Perform one training session with participation of CPW and Engineering staff</p> <p><b>Goal in PY13:</b><br/>Same as PY12</p> | <p><b>Planned Activity:</b><br/>Continue to provide IDDE and stormwater management training to staff members with a direct or indirect role in stormwater.</p> <p><b>Status:</b><br/>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> | <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.</p> |
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#### 4. Construction Site Stormwater Runoff Control

| BMP ID #                                                   | BMP Description                             | Responsible Dept./Person Name | Measurable Goal(s)                                                                                                                             | Progress on Goal(s) – Permit Year 11<br>(Reliance on non-municipal partners indicated, if any)                                                                                                                                                                                                                                                                                                                                          | Planned Activities                                                                               |
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| 4.1<br><br>Revised by:<br><br>Engineering & Law Department | Construction Site Runoff Control Ordinance  | Engineering & Law Department  | <b>Goal in PY12:</b><br>Send proposed Rules and Regulations to the City Council for promulgation<br><br><b>Goal in PY13:</b><br>Implementation | <b>Planned Activity:</b><br>Implementation of proposed Rules and Regulations upon approval by the Mayor and the City Council<br><br><b>Status:</b><br>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 was sent to Mayor for review and approval and then her subsequent submittal to the City Council for approval. | Implementation of proposed Rules and Regulations upon approval by the Mayor and the City Council |
| 4.2<br><br>Revised by:<br><br>Conservation Commission      | Conservation Commission Rules & Regulations | Conservation Commission       | <b>Goal in PY12:</b><br>Perform project reviews as needed<br><br><b>Goal in PY13:</b><br>Perform project reviews as needed                     | <b>Planned Activity:</b><br>The City of Waltham's Conservation Commission reviews proposed mitigation measures for construction projects and activities located in areas affected by the Massachusetts Wetlands Protection Act.<br><br><b>Status:</b><br>As of 3/31/2015, a total of 15 Notices of Intent (NOI) were submitted and reviewed by the Conservation Commission during PY12.                                                 | Continue activity during PY13                                                                    |

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| <p>4.3</p> <p>Revised by:</p> <p>Engineering,<br/>CPW, Bldg.<br/>Department</p> | <p>Plan Review<br/>Process</p>                              | <p>Engineering,<br/>CPW, Bldg.<br/>Department</p> | <p><b>Goal in PY12:</b><br/>Rules and Regulations are being finalized before approval by the Mayor and the City Council</p> <p><b>Goal in PY13:</b><br/>Implementation</p>          | <p><b>Planned Activity:</b><br/>Implement review tasks described in the Rules and Regulations upon approval by the Mayor and the City Council</p> <p><b>Status:</b><br/>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 was sent to Mayor for review and approval and then her subsequent submittal to the City Council for approval.</p> | <p>Implementation of proposed Rules and Regulations upon approval by the Mayor and the City Council</p> |
| <p>4.4</p> <p>Revised by:</p> <p>Engineering</p>                                | <p>Large Construction Site Oversight in Sensitive Areas</p> | <p>Engineering</p>                                | <p><b>Goal in PY12:</b><br/>Monitor implementation of BMP in large construction sites</p> <p><b>Goal in PY13:</b><br/>Monitor implementation of BMP in large construction sites</p> | <p><b>Planned Activity:</b><br/>Monitor reporting of large construction sites in sensitive areas such as 110 Bear Hill Road and former Polaroid site</p> <p><b>Status:</b><br/>The Engineering Department receives monthly reports from major construction sites and monitors the BMP implementation</p>                                                                                                                                                      | <p>Continue to monitor BMP implementation in large construction sites</p>                               |

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

| BMP ID #                                                   | BMP Description                              | Responsible Dept./Person Name | Measurable Goal(s)                                                                                                                                           | Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)                                                                                                                                                                                                                                                                                                                                             | Planned Activities                                                                                |
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| 5.1<br><br>Revised by:<br><br>Engineering & Law Department | Post-construction Rules & Regulations        | Engineering & Law Department  | <b>Goal in PY12:</b><br>Implementation of activities described in the Rules and Regulations after promulgation<br><br><b>Goal in PY13:</b><br>Implementation | <b>Planned Activity:</b><br>Implementation of proposed Rules and Regulations upon approval by the Mayor and the City Council<br><br><b>Status:</b><br>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 was sent to Mayor for review and approval and then her subsequent submittal to the City Council for approval. | Implementation of proposed Rules and Regulations upon approval by the Mayor and the City Council  |
| 5.2<br><br>Revised by:<br><br>Engineering                  | Enhancement of Engineering Design Guidelines | Engineering                   | <b>Goal in PY12:</b><br>Same as PY9<br><br><b>Goal in PY13:</b><br>Same as PY9                                                                               | <b>Planned Activity:</b><br>Same as PY9<br><br><b>Status:</b><br>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 .                                                                                                                                           | On hold since the new NPDES Permit Phase II Small MS4 General Permit has not been issued to date. |

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| <p>5.3</p> <p>Revised by:</p> <p>Engineering and GIS Coordinator</p> | <p>BMP Monitoring &amp; Maintenance Plan</p>  | <p>Engineering and GIS Coordinator</p> | <p><b>Goal in PY112:</b><br/>Same as PY9</p> <p><b>Goal in PY13:</b><br/>Start implementing post- construction requirements upon approval of the proposed Rules and Regulations by the Mayor and the City Council.</p> | <p><b>Planned Activity:</b><br/>Implementation of proposed Rules and Regulations upon approval by the Mayor and the City Council</p> <p><b>Status:</b><br/>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 was sent to Mayor for review and approval and then her subsequent submittal to the City Council for approval.</p> | <p>Request a long-term O&amp;M Plan for privately operated stormwater structures as part of the site-plan review process after approval of the proposed Rules &amp; Regulations.</p> <p>Continue to update the City's GIS system with private stormwater management structures.</p> |
| <p>5.4</p> <p>Revised by:</p> <p>Engineering</p>                     | <p>Develop Long-Term O&amp;M Requirements</p> | <p>Engineering</p>                     | <p><b>Goal in PY12:</b><br/>On hold</p> <p><b>Goal in PY13:</b><br/>On hold</p>                                                                                                                                        | <p><b>Planned Activity:</b><br/>Develop O&amp;M requirements for stormwater infrastructure draining into the public conveyance system</p> <p><b>Status:</b><br/>This task is on hold until the new NPDES Permit requirements are clearly defined.</p>                                                                                                                                                                                            | <p>This task is on hold until the new NPDES Permit requirements are clearly defined.</p>                                                                                                                                                                                            |

## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

| BMP ID #                                  | BMP Description                      | Responsible Dept./Person Name | Measurable Goal(s)                                                                                                                                                                                                                            | Progress on Goal(s)– Permit Year 11 (Reliance on non-municipal partners indicated, if any)                                                                                                                                                                                                              | Planned Activities                                                                                                                                                                                                                                                                                                                         |
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| 6.1<br><br>Revised by:<br><br>Engineering | Catch Basin Cleaning                 | Engineering                   | <p><b>Goal in PY12:</b><br/>Continue maintenance and sediment monitoring</p> <p><b>Goal in PY13:</b><br/>Continue maintenance and sediment monitoring</p>                                                                                     | <p><b>Planned Activity:</b><br/>Continue maintenance and sediment monitoring</p> <p><b>Status:</b><br/>Catch basins were cleaned city-wide during this reporting period, totaling 741 tons of sediment. See Attachment 2.</p>                                                                           | Continue maintenance and sediment monitoring                                                                                                                                                                                                                                                                                               |
| 6.2<br><br>Revised by:<br><br>Engineering | Stormwater Manhole and Pipe Cleaning | Engineering                   | <p><b>Goal in PY12:</b><br/>Continue collecting information for prioritization of areas that need to be maintained</p> <p><b>Goal in PY13:</b><br/>Continue collecting information for prioritization of areas that need to be maintained</p> | <p><b>Planned Activity:</b><br/>Create a prioritized drain and sanitary sewer cleaning plan.</p> <p><b>Status:</b><br/>On 3/30/15 and 3/31/15, the City cleaned and CCTV inspected 582 feet of drain on Fuller Street, Juniper Hill Road, Weston Street, Beal Road, Shirley Road, and Manning Road.</p> | <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.</p> <p>Finalize prioritization strategy.</p> |

|                                                          |                                      |                            |                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                          |
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| <p>6.3</p> <p>Revised by:</p> <p>CPW and Engineering</p> | <p>Watershed Maintenance Program</p> | <p>CPW and Engineering</p> | <p><b>Goal in PY12:</b><br/>Perform two watershed maintenance or cleanup activities per year</p> <p><b>Goal in PY13:</b><br/>Same as PY12</p>                       | <p><b>Planned Activity:</b><br/>Continue to perform the annual weed harvesting in collaboration with the Hardy Pond Association.</p> <p><b>Status:</b><br/>Hardy Pond weed harvesting project was completed in July of 2014 and is scheduled and funded for July 2015.</p> <p><b>Planned Activity:</b><br/>The Engineering Department and CPW are evaluating the need to perform a comprehensive maintenance and cleaning effort along Chester Brook. At the same time flood mitigation alternatives are being evaluated in Chester Brook.</p> <p><b>Status:</b><br/>Construction of flood mitigation project in front of the JFK Middle School along Chester Brook was completed in Fall 2013.</p> | <p>Continue activity</p> <p>Develop a plan to remove sediment and debris from brooks</p> |
| <p>6.4</p> <p>Revised by:</p> <p>Engineering</p>         | <p>BMP Maintenance</p>               | <p>Engineering</p>         | <p><b>Goal in PY12:</b><br/>Perform annual inspections and cleaning as needed</p> <p><b>Goal in PY13:</b><br/>Perform annual inspections and cleaning as needed</p> | <p><b>Planned Activity:</b><br/>Clean particle separators located near Hardy Pond and various public schools.</p> <p><b>Status:</b><br/>Stormceptors and particle separators were inspected.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>Perform annual inspections and cleaning as needed</p>                                 |



|                                                                                                    |                                                                                                |                                                                  |                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                               |                                                                                                                         |
|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <p>6.5</p> <p>Revised by:</p> <p>CPW,<br/>Engineering<br/>and<br/>Environmental<br/>Specialist</p> | <p>City Yard<br/>Drainage Study<br/>and<br/>Improvements</p>                                   | <p>CPW,<br/>Engineering and<br/>Environmental<br/>Specialist</p> | <p><b>Goal in PY12:</b><br/>Zero spills to the<br/>City Yard's<br/>stormwater<br/>system</p> <p><b>Goal in PY13:</b><br/>Zero spills to the<br/>City Yard's<br/>stormwater<br/>system</p>                                                                                                                        | <p><b>Planned Activity:</b><br/>Continue activity</p> <p><b>Status:</b><br/>Monthly walk-<br/>through by the CPW<br/>Pollution Prevention<br/>(P2) Team have been<br/>conducted.</p> <p>There were no spills<br/>to report in PY12.</p>                       | <p>Continue activity</p>                                                                                                |
| <p>6.6</p> <p>Revised by:</p> <p>CPW &amp;<br/>Engineering</p>                                     | <p>O&amp;M Procedures<br/>for Municipal<br/>Housekeeping<br/>Activities and<br/>Facilities</p> | <p>CPW &amp;<br/>Engineering</p>                                 | <p><b>Goal in PY12:</b><br/>Develop<br/>municipal<br/>O&amp;M<br/>procedures for<br/>buildings and<br/>facilities<br/>stormwater<br/>mangement.</p> <p><b>Goal in PY13:</b><br/>Begin<br/>implementation<br/>of the SOP for<br/>water<br/>management in<br/>the City-owned<br/>and operated<br/>spray parks.</p> | <p><b>Planned Activity:</b><br/>Develop an SOP<br/>for water<br/>management in<br/>City operated<br/>spray parks</p> <p><b>Status:</b><br/>An SOP for water<br/>management in<br/>the City-owned<br/>and operated spray<br/>parks has been<br/>developed.</p> | <p>Begin implementation<br/>of the SOP for water<br/>management in the<br/>City-owned and<br/>operated spray parks.</p> |

|                                                                         |                                                                          |                                           |                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                         |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <p>6.7</p> <p>Revised by:</p> <p>CPW &amp; Environmental Specialist</p> | <p>Revision and update of the Rhodes Municipal Center/CPW yard SWPPP</p> | <p>CPW &amp; Environmental Specialist</p> | <p><b>Goal in PY12:</b><br/>Update and implement the SWPPP for the City Yard and Rhodes Municipal Center</p> <p>Begin implementation of the training program</p> <p><b>Goal in PY12:</b><br/>Continue implementation of the SWPPP and the training program</p> | <p><b>Planned Activity:</b><br/>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><br/>The SWPPP has been updated, revised and reviewed by the Environmental Committee and all departments operating at the City Yard and/or Rhodes Municipal Center and is currently being 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> | <p>Continue to implement SWPPP and training program</p> |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|

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

Not Applicable

**7a. Additions**

Not Applicable

**7b. WLA Assessment**

Not Applicable

#### 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 2015. 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 2015.

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, 2014 through March 31, 2015)

##### 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 %)                                 |        |
| 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<br>Prior to<br>Phase II | Reviewing<br>Existing<br>Authorities | Drafted | Draft<br>in<br>Review | Adopted |
|----------------------------------------------------|----------------------------------|--------------------------------------|---------|-----------------------|---------|
| Regulatory Mechanism Status (indicate with "X")    |                                  |                                      |         |                       |         |
| ▪ Illicit Discharge Detection & Elimination        |                                  |                                      |         |                       | X       |
| ▪ Erosion & Sediment Control                       |                                  |                                      |         |                       | X       |
| ▪ Post-Development Stormwater Management           |                                  |                                      |         |                       | X       |
| Accompanying Regulation Status (indicate with "X") |                                  |                                      |         |                       |         |
| ▪ Illicit Discharge Detection & Elimination        |                                  |                                      |         | X                     |         |
| ▪ Erosion & Sediment Control                       |                                  |                                      |         | X                     |         |
| ▪ 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)                                                  |                        |                      |
| ▪ 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<br>(est. gpd) | 2<br>(17,104)        |
| Illicit connections removed (Since beginning of permit coverage)   | (#); and<br>(est. gpd) | 21<br>(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 %)          | 0        |
| 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 **                                                                 | (#)            | 2,060            |
| Qty. of storm drain cleaned **                                                               | (%, LF or mi.) | <1%<br>As Needed |
| 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**                                 | (\$)                    | \$24,230                                            |
| 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; 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)         | 35-40<br>Main St,<br>Moody St,<br>Lexington St |
| Qty. of sand/debris collected by sweeping **                                            | (lbs. or tons)     | 2,000 lbs                                      |
| 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**                                                                       | (\$)               | \$28,000                                       |
| Sweeping Equipment                                                                      |                    |                                                |
| • Rotary brush street sweepers owned/leased                                             | (#)                | 3                                              |
| • 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:<br>("N/A" = never used; "100%" = elimination) |             |            |
| ▪ Fertilizers                                                                                                                  | (lbs. or %) | ~2,000 lbs |
| ▪ 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 **<br><br>(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas) | % NaCl                | 50       |
|                                                                                                                                                          | % CaCl <sub>2</sub>   | 10       |
|                                                                                                                                                          | % MgCl <sub>2</sub>   | 0        |
|                                                                                                                                                          | % CMA                 | 0        |
|                                                                                                                                                          | % Kac                 | 0        |
|                                                                                                                                                          | % KCl                 | 0        |
|                                                                                                                                                          | % Sand                | 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/ln mi.<br>or %) | 0        |
| Estimated net reduction or increase in typical year sand application rate **                                                                             | (±lbs/ln mi.<br>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  |
| Treatment units induce infiltration within 500-feet of a wellhead protection area                 | # or y/n | -- |

**ATTACHMENT 1**  
**Brook Cleaning - 2014**

| LOCATION | DATE DONE | DEBRIS AMT. |
|----------|-----------|-------------|
|----------|-----------|-------------|

\*\*\* denotes trash rack

|                                 |           |         |
|---------------------------------|-----------|---------|
| Leitha Drive                    | 10/2/2014 | 1 YARD  |
| Copeland Street                 | 10/2/2014 | MINIMAL |
| Pinevale Road                   | 10/2/2014 | MINIMAL |
| Greenwood Lane ***              | 10/2/2014 | MINIMAL |
| 44 Worcester Lane ***           | 10/2/2014 | 1 YARD  |
| Clark Lane @ Cowassett Lane *** | 10/2/2014 | 1 YARD  |
| Bacon St. @ Worcester Lane ***  | 10/2/2014 | MINIMAL |
| Bacon St. @ Hollow              | 10/2/2014 | 1 YARD  |
| Totten Pond Road                | 10/2/2014 | MINIMAL |
| Pond End School Lane            | 10/2/2014 | MINIMAL |
| Linden Street ***               | 10/2/2014 | 1 YARD  |
| Winter St. Loop                 | 10/2/2014 | MINIMAL |
| Upper Main Street               | 10/2/2014 | MINIMAL |
| Bow St. (Falzone Field)         | 10/2/2014 | MINIMAL |
| Forest St. (Bentley)            | 10/2/2014 | MINIMAL |
| Beaver St. @ Rail Road          | 10/2/2014 | 1 YARD  |
| Prospect Street Park            | 10/2/2014 | MINIMAL |
| Waverly Oaks Road               | 10/2/2014 | MINIMAL |
| Lexington Street @ Windsor      | 10/2/2014 | MINIMAL |
| City Yard                       | 10/2/2014 | MINIMAL |
| Over 128 (in Hollow)            | 10/2/2014 | MINIMAL |
| Trapelo Road (behind park)      | 10/2/2014 | MINIMAL |
| Lakeview Housing                | 10/2/2014 | MINIMAL |
| Behind #1080 & 1088 Trapelo Rd. | 10/2/2014 | MINIMAL |
| 1643 Trapelo Road               | 10/2/2014 | MINIMAL |
| 136 Lyman Street                | 10/2/2014 | MINIMAL |
| Graverson Park                  | 10/2/2014 | MINIMAL |
| Samosett @ Woodland ***         | 10/2/2014 | 1 YARD  |
| Hemlock Terrace                 | 10/2/2014 | 1 YARD  |
|                                 |           |         |
|                                 |           |         |

**Attachment 2**  
**Catch Basin Tailings Disposal History**  
**April 2014 through March 2015**

| DISPOSAL DATE | QUANTITY (TONS) | UNIT PRICE PER TON | TOTAL PRICE         |
|---------------|-----------------|--------------------|---------------------|
| 4/16/2014     | 137.29          | \$ 32.70           | \$ 4,489.38         |
| 5/21/2014     | 28.92           | \$ 32.70           | \$ 945.68           |
| 5/29/2014     | 125.69          | \$ 32.70           | \$ 4,110.06         |
| 6/20/2014     | 126.42          | \$ 32.70           | \$ 4,113.93         |
| 8/1/2014      | 114.07          | \$ 32.70           | \$ 3,730.09         |
| 9/25/2014     | 128.76          | \$ 32.70           | \$ 4,210.45         |
| 10/23/2014    | 80.43           | \$ 32.70           | \$ 2,630.06         |
| <b>TOTALS</b> | <b>741.58</b>   |                    | <b>\$ 24,229.65</b> |