April 9, 2009

Glenda Velez - CIP
United States Environmental Protection Agency – Region 1
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Re: National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)

Annual Report for Town of Wenham (Permit Year 6)

Permit Number: MAR041230

Dear Ms. Herrick:

Please find the enclosed Annual Report for Permit Year 6 for the Town of Wenham, Massachusetts. This report is submitted pursuant to the requirements of EPA’s “National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems” issued May 1, 2003.

Very truly yours,

TOWN OF WENHAM, MASSACHUSETTS

Jeff A. Chelgren
Town Administrator

Enclosures

cc: Mr. Bill Tyack – Director of Public Works, Town of Wenham
NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2009)

Part I. General Information

Contact Person: Bill Tyack
Title: Director of Public Works
Telephone #: (978) 468-5520 x6
Email: btyack@wenhamma.gov
Mailing Address: 91 Grapevine Road, Wenham, MA 01984

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: [Signature]
Printed Name: Jeffrey A. Chelgren
Title: Town Administrator
Date: April 14, 2009
Part II. Self-Assessment

The Town of Wenham has completed the required self-assessment and determined that our municipality is in compliance with the permit conditions. The town has finished all of the goals listed in Part III of this permit.

The town has continued the process of replacing older non-BMP style catch basins (CBs) with new deep sump CBs. The Public Works had a budget of approximately $25,000 for replacements for the past Permit Year 6. The Public Works Department replaced six non-BMP style catch basins (CBs) with new deep sump CBs. Additionally, the Public Works Department has a budget of approximately $17,000 (to be voted on at the next Town meeting) for at least (budget dependent) further replacements during the upcoming Permit Year.

All of the catchbasins and outfalls in town were inspected during Permit Year 6. The Public Works/Highway Department did not observe any additional dry weather flow (possible illicit connections) during any of these inspections that had not been sampled during the previous Permit Year 5. Please note, there was no contamination discovered during the sampling/testing of the dry-weather flows in year 5.

The Town has scheduled a cleanup day for Earth Day (April 25, 2009). Community groups, boy scouts, school volunteers, along with DPW workers will work to cleanup the wetland areas throughout the Town to improve the cleanliness and water quality of these areas.

The DPW changed their de-icing product from road salt (sodium chloride) and sand to a proprietary product called Ice Ban 50/50 and sand. Ice Ban 50/50 is a mixture of 50% of magnesium chloride and a proprietary blend of brewer’s condensed solubles—a by-product of the domestic brewing industry. This is an environmentally friendly product that the manufacturer claims will result in a greater than 50% reduction in chloride ions introduced into the environment as opposed to the use of traditional road salt.

To date all of the drainage structures have been located in the field, inventoried using Global Positioning System (GPS), and photographed.
### Part III. Summary of Minimum Control Measures

#### 1. Public Education and Outreach

<table>
<thead>
<tr>
<th>BMP ID #</th>
<th>BMP Description</th>
<th>Responsible Dept./Person Name</th>
<th>Measurable Goal(s)</th>
<th>Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)</th>
<th>Planned Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>Brochures/Fact Sheets</td>
<td>Public Works Department</td>
<td>Develop &amp; distribute to all residents in water bill.</td>
<td>Informational fliers were distributed at the Fall 2008 Town Meeting.</td>
<td>The informational fliers will be distributed again at Town Meeting.</td>
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<tr>
<td>Revised</td>
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<td></td>
<td>Develop &amp; distribute to residents at Town Meetings.</td>
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<td>2A</td>
<td>Storm Drain Stenciling</td>
<td>Public Works Department</td>
<td>Stencil storm drains at various locations around schools.</td>
<td>Stenciling of the storm drains continued in year 6 To date approximately 80% of the Town owned storm drains have been stenciled.</td>
<td>Storm drain stenciling to continue. Expecting to stencil remaining storm drains during the upcoming year.</td>
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<tr>
<td>Revised</td>
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<tr>
<td>3A</td>
<td>Develop web site</td>
<td>Public Works Department</td>
<td>Develop a public informational website.</td>
<td>Continued updating and maintaining the online GIS system of outfalls and storm drain infrastructure as necessary. Continued the process of linking digital pictures of CBs and outfalls to the online GIS system.</td>
<td>To date all of the Town identified drainage structures have been located in the GIS system. The Town will continue updating and maintaining, the online GIS system as necessary.</td>
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<td>Revised</td>
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<td>4A</td>
<td>Implement stormwater hotline</td>
<td>Public Works Department</td>
<td>Create a hotline that residents may use for information/reporting problems.</td>
<td>There were no calls from residents to the DPW about stormwater issues in the past year. If any calls about stormwater issues are received they are routed to the appropriate people at the Public Works/Highway Department. A log is being kept at the DPW to document all stormwater related calls that are received.</td>
<td>Continue to inform residents of the proper town offices to contact if they need information or to report problems dealing with stormwater issues. Logs will continue to be kept with information on the calls received and the actions/responses performed.</td>
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<td>Revised</td>
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1a. Additions
2. Public Involvement and Participation

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<tr>
<th>BMP ID #</th>
<th>BMP Description</th>
<th>Responsible Dept./Person Name</th>
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<th>Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)</th>
<th>Planned Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B</td>
<td>Storm drain stenciling</td>
<td>Public Works Department</td>
<td>Public information.</td>
<td>Stenciling of the storm drains continued in year 5. To date approximately 80% of the Town owned storm drains have been stenciled</td>
<td>Storm drain stenciling to continue. Expecting to stencil remaining storm drains during the upcoming year.</td>
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<td>Revised</td>
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<tr>
<td>2B</td>
<td>Household hazardous waste collection</td>
<td>Public Works Department</td>
<td>Annual collections to promote a cleaner environment.</td>
<td>A household hazardous waste drop off day for residents occurred in September 2008.</td>
<td>A household hazardous waste drop off day for residents is currently scheduled for September 19, 2009 at the Wenham DPW.</td>
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<td>Revised</td>
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<tr>
<td>3B</td>
<td>Community cleanup</td>
<td>Public Works Department</td>
<td>Schedule community cleanup days to promote community awareness.</td>
<td>A community cleanup of Pleasant Pond took place the second weekend in June 2008.</td>
<td>Pleasant Pond community cleanup days are scheduled annually on the second weekend of every June. Additional community cleanup days for, specifically the Miles River, are in discussion. The Town has recently scheduled a town-wide cleanup day for Earth Day, April 25, 2009.</td>
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<td>Revised</td>
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<td>4B</td>
<td>Adopt a storm drain</td>
<td>Public Works Department</td>
<td>Have individuals/groups cleanup storm drains to promote public awareness.</td>
<td>During Permit Year 6 advertisements on cable access television were run asking for volunteers. However, no community groups have shown interest in participating in the adopt-a-storm drain program. Eagle Scouts were asked about interest but were already busy with other projects they were involved with.</td>
<td>Continue to run advertisement for volunteers on cable access television. Inquire with local Eagle Scouts again to see if they have interest in program.</td>
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2a. Additions
### 3. Illicit Discharge Detection and Elimination

<table>
<thead>
<tr>
<th>BMP ID #</th>
<th>BMP Description</th>
<th>Responsible Dept./Person Name</th>
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<th>Planned Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1C</td>
<td>Mapping</td>
<td>Public Works Department</td>
<td>Mapping catchbasins &amp; outfalls with GIS/GPS.</td>
<td>All drainage structures have been field located, inventoried and mapped using GIS. A total of 199 outfalls, 615 catchbasins and 114 drainage manholes have been mapped on GIS.</td>
<td>Maintain the GIS mapping and continue to map any new drainage structures as they are constructed.</td>
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<tr>
<td>2C</td>
<td>Identify problem areas</td>
<td>Public Works Department</td>
<td>Inspection of outfalls in dry/wet conditions to determine illicit connections.</td>
<td>Continued inspections of CBs during annual CB cleanings. No additional dry-weather flows were observed that had not been previously inspected and sampled during Permit Year 5. Please note, there was no contamination discovered during the sampling/testing of the dry-weather flows in year 5.</td>
<td>Continue to inspect the catchbasins and outfalls during annual cleanings for signs of illicit connections. Where signs of illicit connection are observed, samples will be taken of the outfall discharge and will be analyzed for typical illicit connection contaminates.</td>
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<tr>
<td>3C</td>
<td>Develop regulations/fines</td>
<td>Public Works Department</td>
<td>Submit a town ordinance to be voted on to establish regulation/fines for illicit discharges.</td>
<td>The ordinance was presented and passed during the May 3, 2008 Town Meeting (Permit Year 5).</td>
<td>The DPW will continue to enforce the regulations for illicit discharges.</td>
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<td>Revised</td>
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<tr>
<td>4C</td>
<td>Elimination of illicit discharge</td>
<td>Public Works Department</td>
<td>Perform smoke testing on drainage systems to determine/eliminate illicit discharges.</td>
<td>No smoke testing occurred during the past year because no signs of illicit discharges were observed during the inspections of the drain structures.</td>
<td>Any suspected illicit discharges noted during the annual CB/outfall inspections by the Public Works/Highway Department will be sampled and analyzed for typical illicit connection contaminates. If contaminates are found, smoke testing will occur to locate and eliminate the source of the discharges.</td>
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</table>

3a. Additions
4. Construction Site Stormwater Runoff Control

<table>
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<tr>
<th>BMP ID #</th>
<th>BMP Description</th>
<th>Responsible Dept./Person Name</th>
<th>Measurable Goal(s)</th>
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<th>Planned Activities</th>
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</thead>
<tbody>
<tr>
<td>1D</td>
<td>Ordinance/regulatory mechanism for development</td>
<td>Public Works Department &amp; Planning Board</td>
<td>Limiting stormwater run-off.</td>
<td>The town has reviewed and amended their existing regulations to include provisions for construction site stormwater runoff controls.</td>
<td>The appropriate Town committee will use and enforce their recent regulation revisions covering construction site stormwater runoff control.</td>
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<td>Revised</td>
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<tr>
<td>2D</td>
<td>Site plan review</td>
<td>Public Works Department, Conservation &amp; Planning Board</td>
<td>Limiting storm water run-off.</td>
<td>All proposed construction projects will have to be reviewed and signed off on by the Public Works Department and by the Project Review Committee (PRC), which includes among others the Planning Board and the Conservation Commission.</td>
<td>The Public Works Department and the PRC will continue to review all proposed plans for new/re-development in the town.</td>
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<td>Revised</td>
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<tr>
<td>3D</td>
<td>Site inspection</td>
<td>Public Works Department</td>
<td>Compliance with newly adopted ordinance.</td>
<td>Site inspections performed by the Public Works Department and by the appropriate town committees (Planning Board/Conservation Commission).</td>
<td>The Public Works Department and by the appropriate town committees (Planning Board/Conservation Commission) will continue to perform site inspections for new/re-development in the town.</td>
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<td>Revised</td>
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<td>Public Works Department/Town Boards.</td>
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4a. Additions
### 5. Post-Construction Stormwater Management in New Development and Redevelopment

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<tr>
<th>BMP ID #</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1E</td>
<td>Develop structural / non structural BMP's</td>
<td>Public Works Department</td>
<td>Reduce pollutants.</td>
<td>Six non-BMP style CBs were replaced with new deep sump CBs. The town implemented a rain barrel program and sold 25 rain barrels during the previous permit year to residents. The DPW changed their de-icing product from road salt (sodium chloride) and sand to a proprietary product “Ice Ban 50/50” and sand. Ice Ban 50/50 is a mixture of 50% of magnesium chloride and a proprietary blend of brewer's condensed solubles - a by-product of the domestic brewing industry.</td>
<td>The Town has obtained approximately 25 rain barrels available to residents for the upcoming permit year. The Public Works Department will continue to promote the use of infiltration BMPs for new/redevelopment and require all new/replaced CBs have deep sumps. Continue the use of Ice Ban as the primary road de-icer. The Public Works/Highway Department has $17,000 in their upcoming budget (to be voted on at Town meeting) dedicated to replacing older non-BMP style CBs with new deep sump CBs.</td>
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<td>Revised</td>
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<tr>
<td>2E</td>
<td>Ordinance governing post construction</td>
<td>Public Works Department / Town Boards</td>
<td>Reduce pollutants.</td>
<td>The town has reviewed and amended their existing regulations to include provisions for post-construction stormwater management in new and redevelopment projects.</td>
<td>The appropriate Town committee will use and enforce their recent regulation revisions covering post-construction stormwater management in new and redevelopment projects.</td>
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<td>Revised</td>
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<tr>
<td>3E</td>
<td>Ensure long-term maintenance</td>
<td>Public Works Department / Private</td>
<td>Assure long-term maintenance.</td>
<td>Continued aggressive maintenance plan for the town owned BMPs with annual inspections by the Public Works/Highway Department. Issued 6 permits to trap beavers that were restricting flow of rivers/streams, causing flooding and disrupting stormwater flows.</td>
<td>Continue aggressive maintenance plan for the town owned BMPs with annual inspections. Four beaver trapping permits are issued to stop beavers from restricting flow of rivers/streams, causing flooding and disrupting stormwater flows.</td>
</tr>
<tr>
<td>4E</td>
<td>Determine appropriate BMP</td>
<td>Public Works Department/Town Boards</td>
<td>Improve clarity/reduce sediment</td>
<td>One detention basin was installed for the new housing development at 365 Grapevine Road to reduce and treat stormwater runoff. All proposed new/re-development project plans were reviewed by Public Works Department and by the Project Review Committee (PRC), for appropriate BMPs. All new/replaced CBs are required to be installed with deep sumps. Appropriate BMPs are recommended for use whenever feasible.</td>
<td>Public Works Department and the PRC will continue to review all plans for new/re-development to ensure appropriate BMPs are being implemented.</td>
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5a. Additions
### 6. Pollution Prevention and Good Housekeeping in Municipal Operations

<table>
<thead>
<tr>
<th>BMP ID #</th>
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</thead>
<tbody>
<tr>
<td>1F</td>
<td>Operation / maintenance program</td>
<td>Public Works Department</td>
<td>Sweep all streets and clean all catch basins.</td>
<td>Swept 100% of town’s roads (approx. 33 miles) and cleaned and inspected approximately 615 CBs.</td>
<td>The annual street sweeping has already been complete for the current permit year and CB inspection/cleaning program will continue as planned.</td>
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<td>Revised</td>
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<td>2F</td>
<td>Employee training</td>
<td>Public Works Department</td>
<td>Conduct catch basin survey for integrity/dry weather flows.</td>
<td>Continued training employees on all outfall locations, proper inspection techniques of outfalls and CBs, and proper actions needed for chemical spills into the stormdrain system.</td>
<td>Continue the training of all public works employees on outfall and CB inspections, and on proper chemical spill actions.</td>
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<td>Revised</td>
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<tr>
<td>3F</td>
<td>Determine appropriate BMP</td>
<td>Public Works Department</td>
<td>Installed deep sump catch basins w/ infiltration trenches for new cemetery and Pleasant St. sidewalk &amp; roadwork.</td>
<td>Six non-BMP style CBs were replaced with new deep sump CBs. One detention basin was installed for the new housing development at 365 Grapevine Road to reduce and treat stormwater runoff.</td>
<td>The Public Works Department and the PRC will continue to review all plans for new/re-development to ensure appropriate BMPs are being implemented. The Public Works/Highway Department has $17,000 in their upcoming budget (to be voted on at Town meeting) dedicated to replacing older non-BMP style CBs with new deep sump CBs.</td>
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<td>Revised</td>
<td>Public Works Department/Town Boards.</td>
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</table>
A community cleanup of Pleasant Pond took place in the second weekend in June 2008. A household hazardous waste drop off day for residents occurred in September 2008.

Additional community cleanup days, for specifically the Miles River, are being discussed.

### 6a. Additions

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<tr>
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</thead>
<tbody>
<tr>
<td>1G</td>
<td>Vegetation swales</td>
<td>Public Works Department</td>
<td>Reduce pollutants.</td>
<td>Grass vegetation swales have been installed for the soccer fields near the Iron Rail. Continued to monitor opportunities to use vegetation swales on new/re-development projects and use on existing drainage facilities.</td>
<td>The Public Works Department along with the PRC will continue to monitor opportunities for use of vegetation swales.</td>
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<tr>
<td>2G</td>
<td>Infiltration drain fields</td>
<td>Public Works Department</td>
<td>Reduce runoff.</td>
<td>Continued to monitor opportunities to use infiltration drain fields on new/re-development projects and use on existing drainage facilities.</td>
<td>The Public Works Department along with the PRC will continue to monitor opportunities for use of infiltration drain fields.</td>
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</table>
| 3G | Dry wells | Public Works Department / Planning Board | Reduce runoff | Continued to monitor and required all new development in Town to infiltrate roof runoff on-site. | The Conservation Commission mandates that roof runoff be infiltrated for new projects.

The Public Works Department and the PRC will continue to monitor opportunities for drywell use. |
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| 4G | Deep sumps / hooded catch basins | Public Works Department / Planning Board | Reduce sediment / pollutants | Six non-BMP style CBs were replaced with new deep sump CBs. | The Public Works/Highway Department has $17,000 in their upcoming budget (to be voted on at Town meeting) dedicated to replacing older non-BMP style CBs with new deep sump CBs.

Continue to monitor and enforce that all new/re-installed CBs have deep sumps. |
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### 7a. Additions

### 7b. WLA Assessment

Not applicable – Draft Pathogen TMDLs have been prepared for the Ipswich River Watershed and North Coastal Watershed but have not yet been approved by the EPA.
Part IV. Summary of Information Collected and Analyzed

The town’s drainage system has been mapped on Geographic Information System (GIS). Approximately a total of 199 outfalls, 615 catchbasins and 114 drainage manholes were located in the field, inventoried using Global Positioning System (GPS) and photographed during the duration of this permit. Any new drainage structures will continue to be located, photographed and added in the field on the Town’s online GIS system.

Approximately 615 catch basins were visually inspected during the cleaning program and no dry weather discharges (possible illicit discharges) were noted that had not been sampled during the previous Permit Year 5. Please note, there was no contamination discovered during the sampling/testing of the dry-weather flows in year 5.

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, 2008 through March 31, 2009)

### Programmatic

<table>
<thead>
<tr>
<th>Stormwater management position created/staffed</th>
<th>(Preferred Units)</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual program budget/expenditures **</td>
<td>($)</td>
<td>N</td>
</tr>
<tr>
<td>Total program expenditures since beginning of permit coverage</td>
<td>($)</td>
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<td>Funding mechanism(s) (General Fund, Enterprise, Utility, etc)</td>
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### Education, Involvement, and Training

| Estimated number of property owners reached by education program(s) | (# or %) | 4,500 |
| Stormwater management committee established | (y/n) | N |
| Stream teams established or supported | (# or y/n) | Y, Miles River Collaborative |

<p>| Shoreline clean-up participation or quantity of shoreline miles cleaned ** | (y/n or mi.) | ~0.25 |
| Shoreline cleaned since beginning of permit coverage | (mi.) | ~1.50 |
| Household Hazardous Waste Collection Days | (#) | 1 |
| • days sponsored ** | | |</p>
<table>
<thead>
<tr>
<th></th>
<th>In Place Prior to Phase II</th>
<th>Reviewing Existing Authorities</th>
<th>Drafted</th>
<th>Draft in Review</th>
<th>Adopted</th>
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<tbody>
<tr>
<td>Regulatory Mechanism Status (indicate with “X”)</td>
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<td></td>
</tr>
<tr>
<td>- Illicit Discharge Detection &amp; Elimination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>- Erosion &amp; Sediment Control</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Post-Development Stormwater Management</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accompanying Regulation Status (indicate with “X”)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Illicit Discharge Detection &amp; Elimination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>- Erosion &amp; Sediment Control</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Post-Development Stormwater Management</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Legal/Regulatory

<table>
<thead>
<tr>
<th></th>
<th>(# or %)</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>community participation **</td>
<td>(# or %)</td>
<td>N/A</td>
</tr>
<tr>
<td>material collected **</td>
<td>(tons or gal)</td>
<td>N/A</td>
</tr>
<tr>
<td>School curricula implemented</td>
<td>(y/n)</td>
<td>N</td>
</tr>
</tbody>
</table>

### Mapping and Illicit Discharges

<table>
<thead>
<tr>
<th></th>
<th>(Preferred Units)</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outfall mapping complete</td>
<td>(%)</td>
<td>100%</td>
</tr>
<tr>
<td>Estimated or actual number of outfalls</td>
<td>(#)</td>
<td>199</td>
</tr>
<tr>
<td>System-Wide mapping complete (complete storm sewer infrastructure)</td>
<td>(%)</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>(%)</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper/Mylar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CADD</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>GIS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>(# or %)</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outfalls inspected/screened **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outfalls inspected/screened (Since beginning of permit coverage)</td>
<td>(# or %)</td>
<td>100%</td>
</tr>
<tr>
<td>Illicit discharges identified **</td>
<td>(#)</td>
<td>0</td>
</tr>
<tr>
<td>Illicit discharges identified (Since beginning of permit coverage)</td>
<td>(#)</td>
<td>0</td>
</tr>
</tbody>
</table>
** Ilicit connections removed: **

<table>
<thead>
<tr>
<th>Measure</th>
<th>Preferred Units</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illicit connections removed **</td>
<td>(#); and (est. gpd)</td>
<td>0</td>
</tr>
<tr>
<td>Illicit connections removed (Since beginning of permit coverage) **</td>
<td>(#); and (est. gpd)</td>
<td>0</td>
</tr>
<tr>
<td>% of population on sewer</td>
<td>(%)</td>
<td>&lt;5%</td>
</tr>
<tr>
<td>% of population on septic systems</td>
<td>(%)</td>
<td>&gt;95%</td>
</tr>
</tbody>
</table>

** Construction (Preferred Units):**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Preferred Units</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of construction starts (&gt;1-acre) **</td>
<td>(#)</td>
<td>1</td>
</tr>
<tr>
<td>Estimated percentage of construction starts adequately regulated for erosion and sediment control **</td>
<td>(%)</td>
<td>100%</td>
</tr>
<tr>
<td>Site inspections completed **</td>
<td>(# or %)</td>
<td>100%</td>
</tr>
<tr>
<td>Tickets/Stop work orders issued **</td>
<td>(# or %)</td>
<td>0</td>
</tr>
<tr>
<td>Fines collected **</td>
<td>(# and $)</td>
<td>0</td>
</tr>
<tr>
<td>Complaints/concerns received from public **</td>
<td>(#)</td>
<td>0</td>
</tr>
</tbody>
</table>

** Post-Development Stormwater Management: **

<table>
<thead>
<tr>
<th>Measure</th>
<th>Preferred Units</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control</td>
<td>(%)</td>
<td>100%</td>
</tr>
<tr>
<td>Site inspections (for proper BMP installation &amp; operation) completed **</td>
<td>(# or %)</td>
<td>100%</td>
</tr>
<tr>
<td>BMP maintenance required through covenants, escrow, deed restrictions, etc.</td>
<td>(y/n)</td>
<td>Y</td>
</tr>
<tr>
<td>Low-impact development (LID) practices permitted and encouraged</td>
<td>(y/n)</td>
<td>Y</td>
</tr>
</tbody>
</table>
### Operations and Maintenance

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency/Amount</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average frequency of catch basin cleaning (non-commercial/non-arterial streets)</td>
<td>(times/yr)</td>
<td>1</td>
</tr>
<tr>
<td>Average frequency of catch basin cleaning (commercial/arterial or other critical streets)</td>
<td>(times/yr)</td>
<td>1</td>
</tr>
<tr>
<td>Qty of structures cleaned</td>
<td>(#)</td>
<td>615</td>
</tr>
<tr>
<td>Qty. of storm drain cleaned</td>
<td>(%, LF or mi.)</td>
<td>1,000 LF±</td>
</tr>
<tr>
<td>Qty. of screenings/debris removed from storm sewer infrastructure</td>
<td>(lbs. or tons)</td>
<td>150 yd³</td>
</tr>
<tr>
<td>Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.)</td>
<td>(location)</td>
<td>Landfill</td>
</tr>
</tbody>
</table>

#### Basin Cleaning Costs
- **Annual budget/expenditure (labor & equipment)**
  - ($): $4,500 (budgeted)
- **Hourly or per basin contract rate**
  - ($/hr or $/per basin): $16/basin
- **Disposal cost**
  - ($): Included in hourly price

#### Cleaning Equipment
- **Clam shell truck(s) owned/leased**
  - (#): Contracted
- **Vacuum truck(s) owned/leased**
  - (#): 0
- **Vacuum trucks specified in contracts**
  - (y/n): N
- **% Structures cleaned with clam shells**
  - (%): 100%
- **% Structures cleaned with vector**
  - (%): 0

---

### Average frequency of street sweeping (non-commercial/non-arterial streets)
- (times/yr): 1

### Qty. of sand/debris collected by sweeping
- (lbs. or tons): 225 yd³

### Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)
- (location): Landfill

### Annual Sweeping Costs
- **Annual budget/expenditure (labor & equipment)**
  - ($): $9,000 (actual)
- **Hourly or lane mile contract rate**
  - ($/hr. or $/ln mi.): $89.00/hr
**Disposal cost**

<table>
<thead>
<tr>
<th>Sweeping Equipment</th>
<th>($)</th>
<th>Contracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Rotary brush street sweepers owned/leased</td>
<td>(#)</td>
<td>-</td>
</tr>
<tr>
<td>• Vacuum street sweepers owned/leased</td>
<td>(#)</td>
<td>0</td>
</tr>
<tr>
<td>• Vacuum street sweepers specified in contracts</td>
<td>(y/n)</td>
<td>N</td>
</tr>
<tr>
<td>• % Roads swept with rotary brush sweepers **</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>• % Roads swept with vacuum sweepers **</td>
<td>%</td>
<td>0</td>
</tr>
</tbody>
</table>

Reduction (since beginning of permit coverage) in application on public land of:

<table>
<thead>
<tr>
<th>(“N/A” = never used; “100%” = elimination)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fertilizers (lbs. or %)</td>
</tr>
<tr>
<td>• Herbicides (lbs. or %)</td>
</tr>
<tr>
<td>• Pesticides (lbs. or %)</td>
</tr>
</tbody>
</table>

**Integrated Pest Management (IPM) Practices Implemented**

<table>
<thead>
<tr>
<th>(y/n)</th>
<th>Y</th>
</tr>
</thead>
</table>

**Average Ratio of Anti-/De-Icing products used**

(Also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)

<table>
<thead>
<tr>
<th>Preferred Units</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>% NaCl</td>
<td>0%</td>
</tr>
<tr>
<td>% CaCl₂</td>
<td>0%</td>
</tr>
<tr>
<td>% MgCl₂</td>
<td>25%±</td>
</tr>
<tr>
<td>% CMA</td>
<td>0%</td>
</tr>
<tr>
<td>% Kac</td>
<td>0%</td>
</tr>
<tr>
<td>% KCl</td>
<td>0%</td>
</tr>
<tr>
<td>% Sand</td>
<td>50%±</td>
</tr>
<tr>
<td>% BCS</td>
<td>25%±</td>
</tr>
</tbody>
</table>

**Pre-wetting techniques utilized**

<table>
<thead>
<tr>
<th>(y/n or %)</th>
<th>Y</th>
</tr>
</thead>
</table>

**Manual control spreaders used**

<table>
<thead>
<tr>
<th>(y/n or %)</th>
<th>Y</th>
</tr>
</thead>
</table>

**Zero-velocity spreaders used**

<table>
<thead>
<tr>
<th>(y/n or %)</th>
<th>N</th>
</tr>
</thead>
</table>

**Estimated net reduction or increase in typical year salt/chemical application rate**

| (±lbs/ln mi. or %) | None |

**Note:** A mixture of sand and the proprietary product “Ice Ban 50/50” was used for de-icing during the previous permit year. Ice Ban 50/50 is a mixture of 50% of magnesium chloride and a proprietary blend of brewer’s condensed solubles (BCS) - a by-product of the domestic brewing industry.
### Estimated net reduction or increase in typical year sand application rate **

<table>
<thead>
<tr>
<th></th>
<th>(±lbs/ln mi. or %)</th>
<th>20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of salt/chemical pile(s) covered in storage shed(s)</td>
<td>(%)</td>
<td>100%</td>
</tr>
<tr>
<td>Storage shed(s) in design or under construction</td>
<td>(y/n or #)</td>
<td>N</td>
</tr>
<tr>
<td>100% of salt/chemical pile(s) covered in storage shed(s) by May 2008</td>
<td>(y/n)</td>
<td>Y</td>
</tr>
</tbody>
</table>

### Water Supply Protection

<table>
<thead>
<tr>
<th></th>
<th># or y/n</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storm water outfalls to public water supplies eliminated or relocated</td>
<td># or y/n</td>
<td>N</td>
</tr>
<tr>
<td>Installed or planned treatment BMPs for public drinking water supplies and their protection areas</td>
<td># or y/n</td>
<td>N</td>
</tr>
<tr>
<td>- Treatment units induce infiltration within 500-feet of a wellhead protection area</td>
<td># or y/n</td>
<td>N</td>
</tr>
</tbody>
</table>