

TOWN OF SPENCER
Office of Utilities & Facilities

Steven J. Tyler, P.E.
Superintendent
styler@spencerma.gov



3 Old Meadow Road
Spencer, MA 01562
Phone: 508-885-7515
Fax: 508-885-9416

April 30, 2013

Ms. Glenda Velez
US EPA New England Headquarters
5 Post Office Square - Suite 100
Mail Code OEP06-1
Boston, MA 02109-3912

RE: EPA NPDES PERMIT NO. MAR041162
SPENCER, MA –NPDES PII SMALL MS4 GENERAL PERMIT 2013 (YEAR 10) REPORT

Dear Ms. Velez,

The Town of Spencer is pleased to submit the enclosed 2013 (Year 10) MS4 Report. Major accomplishments in the past year included active oversight and participation in the Central Massachusetts Regional Stormwater Coalition (the Coalition), serving as the lead community of the group. The Coalition work in FY2012 was funded by a \$310,000 Community Innovation Challenge (CIC) grant from the Massachusetts Executive Office of Administration and Finance for 13 Central Massachusetts Regional communities.

As representatives of the lead community, Spencer Town Administrator Adam Gaudette and Utilities & Facilities Superintendent Steven Tyler participated in 13 meetings or workshops, reviewed deliverables, coordinated grant funding received from the Massachusetts Executive Office of Administration and Finance, and served other key roles as described in the attached Annual Report. The work of the Coalition has have greatly improved our effectiveness in mitigation, management and regulatory compliance with respect to stormwater. See enclosed NPDES update for further information.

Thank you for your assistance with this matter. Please feel free to call me at (508) 885-7525 if you have questions regarding this information.

Sincerely,


Steven J. Tyler, P.E., Superintendent
styler@spencerma.gov

Enclosure

Cc: Frederick T. Civian, MassDEP Stormwater Coordinator



Enter your transmittal number

X255739

Transmittal Number

Your unique Transmittal Number can be accessed online: <http://mass.gov/dep/service/online/trasmfrm.shtml>**Massachusetts Department of Environmental Protection****Transmittal Form for Permit Application and Payment**

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

**MassDEP
P.O. Box 4062
Boston, MA
02211**

*** Note:**
For BWSC Permits, enter the LSP.

A. Permit Information

MAR041162

NPDES PII (Year 10 Annual Report)

1. Permit Code: 7 or 8 character code from permit instructions

2. Name of Permit Category

Small MS4 General Permit

3. Type of Project or Activity

B. Applicant Information – Firm or Individual

Town of Spencer

1. Name of Firm - Or, if party needing this approval is an individual enter name below:

Gaudette

Adam

D.

2. **Last Name** of Individual3. **First Name** of Individual

4. MI

157 Main Street, Spencer Memorial Town Hall

5. Street Address

Spencer

MA

01562

508-885-7500

155

6. City/Town

7. State

8. Zip Code

9. Telephone #

10. Ext. #

Steven J. Tyler, P.E.

styler@spencerma.gov

11. Contact Person

12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

Town of Spencer

1. Name of Facility, Site Or Individual

157 Main Street, Spencer Memorial Town Hall

2. Street Address

Spencer

MA

01562

508-885-7525

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

8. DEP Facility Number (if Known)

9. Federal I.D. Number (if Known)

10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

Tata & Howard, Inc

1. Name of Firm Or Individual

222 St. John Street, Suite 1G

2. Address

Portland

ME

04102

207-518-9500

3. City/Town

4. State

5. Zip Code

6. Telephone #

7. Ext. #

Aubrey Strause, P.E.

8. Contact Person

9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
If yes, enter the project's EOEA file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due**Special Provisions:**

1. ☒ **Fee Exempt** (city, town or municipal housing authority)(state agency if fee is \$100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
2. ☐ **Hardship Request** - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ **Alternative Schedule Project** (according to 310 CMR 4.05 and 4.10).
4. ☐ **Homeowner** (according to 310 CMR 4.02).

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Check Number

Dollar Amount

Date

Municipality/Organization: SPENCER, MASSACHUSETTS

EPA NPDES Permit Number: MAR041162

MassDEP Transmittal Number: W-

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

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

Part I. General Information

Contact Person: Steven J. Tyler, P.E.

Title: Superintendent

Telephone #: (508) 885-7525

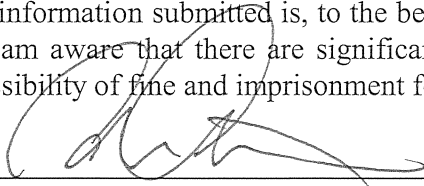
Email: styler@spencerma.gov

Mailing Address: 3 Old Meadow Road, Spencer, MA 01562

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:



Printed Name: Adam D. Gaudette, AICP

Title: Town Administrator

Date: May 1, 2013

Part II. Self-Assessment

Administrative Note: *In recent years, the Best Management Practices (BMPs) identified in the 2003 Notice of Intent to receive coverage under the MS4 Permit, and on which the Town of Spencer reported, were modified and updated. As a result, not all progress made by the Town was reflected in the reports. This Year 10 report restores the original 22 BMPs and identifies where revisions to the original BMP have been made. This Year 10 Report also shows all new tasks, actions, and progress completed since 2003 as “Additions”.*

In Year 10, the Town of Spencer was an active participant in the Central Massachusetts Regional Stormwater Coalition (the Coalition), serving as the lead community of the group. The Coalition work in FY2012 was funded by a \$310,000 Community Innovation Challenge (CIC) grant from the Massachusetts Executive Office of Administration and Finance. The 13 FY2012 Coalition communities included Auburn, Charlton, Dudley, Holden, Leicester, Millbury, Oxford, Paxton, Shrewsbury, Spencer, Sturbridge, Webster, and West Boylston.

As representatives of the lead community, Town Administrator Adam Gaudette and Utilities & Facilities Superintendent Steven Tyler participated in 13 meetings or workshops, reviewed deliverables, coordinated grant funding received from the Massachusetts Executive Office of Administration and Finance, and served other key roles as described in this Annual Report.

In November 2012, with Spencer again taking the lead on the grant application, the Coalition applied for \$200,000 in additional funding from the CIC Grant program to continue the regional stormwater program in Fiscal Year 2013, which would allow 17 additional communities to join the Coalition. The 17 communities identified in the FY2013 proposal include Boylston, Grafton, Hardwick, Monson, New Braintree, Northbridge, Northborough, North Brookfield, Palmer, Princeton, Rutland, Southbridge, Sterling, Upton, Ware, Westborough, and Wilbraham. The Coalition received an award of \$115,000 in FY2013 grant funds, and is currently working to confirm which of the 30 (total) communities are willing and able to make a small financial contribution to fund the gap between scope of work and the grant amount. It is expected that most of the 30 communities will make this commitment.

The work includes numerous technical tasks completed by the member communities, as facilitated by the consulting firm of Tata & Howard, Inc., as well as a number of purchases funded with the grant monies. The FY2012 effort included 13 meetings of the Coalition Steering Committee, four training sessions, and a presentation by Thelma Murphy (USEPA Region 1) on February 6, 2013. Two members of the Coalition Steering Committee (from Charlton and Millbury) presented the work of the project at the January 2013 Annual Meeting of the New England Water Environment Associations. The group is actively engaged with other water quality organizations and is committed to sharing the knowledge it has developed for the benefit of other communities.

In the following sections, descriptions of the technical tasks and purchases made possible by the CIC grant funding have been separated into sections that mirror the six Minimum Control Measures (MCM's) in the 2003 Massachusetts Small MS4 Permit. Other specific tasks have been incorporated into the tables in Part III of this Annual Report (beginning on Page 8).

One of the more innovative tools developed by the Coalition in Year 10 supports many MCM's and has been noted separately: an integrated online mapping and inspection database. The database is cloud-based, and can be accessed by all 13 member communities through a desktop or tablet computer. Existing mapping completed by the 13 member communities was converted to a project standard format and uploaded to a single online map, so that the communities can see each other's system. This tool represents the

essence of the Coalition project's message, which is that stormwater is regional- it doesn't stop at a community boundary. All mapped infrastructure is connected to inspection reports that mirror hard-copy forms developed in the 15 Standard Operating Procedures discussed under MCM 1, below: for example, outfall and catch basin inspections. The developed integrated mapping and inspection system is so comprehensive and flexible that does not fit into just one of the MCM's. It aids communities with public education and outreach (MCM 1), as surveying is a highly-visible activity that will generate questions, and would make an engaging demonstration to school groups). The integrated mapping and inspection database documents evidence of potential illicit discharges or the absence thereof (MCM 3), aids construction site stormwater control (MCM 4) by allowing for data evaluation of how much sediment is contained in a sump, and makes good housekeeping (MCM 6) easier by collecting data on how often catch basins are cleaned. Other tasks and tools of the project connect to the integrated mapping and inspection database, which was designed to serve the needs of the Coalition communities well beyond the 2003 Massachusetts Small MS4 Permit.

Minimum Control Measure 1: Public Education and Outreach

The Coalition developed a DVD to be distributed to each member community. The DVD contained a number of materials appropriate for public education and outreach, with materials on a variety of topics. The topics included illicit discharge detection and elimination, management of pet wastes, and appropriate use of fertilizer, among others. The benefit of this delivery format is that the group members can print materials on demand. The Coalition also developed a presentation on stormwater management, with content focused on educating the general public and volunteer groups.

The Coalition purchased 13 copies of the Pennsylvania State University documentary "Liquid Assets", and distributed a copy to each member community. Most of the Coalition communities intend to play this video on their local cable access channels and at appropriate community events in 2013.

The Coalition purchased 100 water quality monitoring kits from the World Water Monitoring Challenge program (www.worldwatermonitoringday.org), which "builds public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies". Several communities have already worked with teachers in their local school department or district to do outreach to elementary and middle-school aged students. The kits are being stored in Spencer and Shrewsbury for distribution to the Coalition members.

The Coalition purchased an Enviroscope table focused on non-point source pollution education (<http://www.enviroscopes.com/nonpoint-source.html>). This tool is a hands-on, visual trainer to demonstrate the importance of good housekeeping and low-impact development for pollution prevention, with the objective of maintaining water quality in our communities. Two communities have done demonstrations for local schools using this tool, and many additional communities plan to use it at local Earth Day or other community fairs in spring and summer 2013.

The Coalition developed an educational website, www.CentralMAStormwater.org, focused on providing information about the project to a number of audiences, including the general public, educators, and kids. Five members of the Coalition Steering Committee received training on how to update the website's content.

Minimum Control Measure 2: Public Involvement and Participation

The Coalition developed a presentation on stormwater management, with content focused on educating elected officials and municipal department heads about the requirements of the 2003 Small MS4 Program, changes likely in the anticipated new Small MS4 Permit, and the financial impact these potential changes may have on Massachusetts communities.

Minimum Control Measure 3: Illicit Discharge Detection and Elimination

The Coalition developed SOP 10, “Locating Illicit Discharges”, intended to define the types of illicit discharges that may be observed in the Coalition communities and provide guidance on tools that can be used to identify each. SOP 10 includes an Illicit Discharge Incident Tracking Sheet.

The Coalition also developed the Illicit Discharge Detection and Elimination (IDDE) Documentation Packet, which specifies how illicit discharges are detected and what department or person is responsible for eliminating them. Identifying and removing illicit discharges, and ensuring that they are not reconnected, remains a substantial challenge to many MS4 communities. Without documentation of the entity responsible for this task for a variety of types of illicit discharge, communities may not satisfy the requirements of the 2003 Massachusetts Small MS4 Permit and may be unprepared for increased IDDE compliance in the new Small MS4 Permit. This deliverable clarified USEPA’s minimum IDDE requirements and incorporated appropriate existing IDDE Plans and materials by reference. More importantly, the task provides a framework for people in multiple departments to understand each person’s responsibilities, encourage cooperation and communication toward a single objective, and provide templates for documenting observations, actions, and compliance.

The Coalition purchased two Leica surveying devices that can be used to map new structures with very high accuracy, using connection to a military-grade Real Time Kinematic (RTK) satellite network. The Coalition also purchased 13 tablet computers, one for each member community. Both of these tools can be used to directly access the online mapping and inspection system: the Leica will be most valuable for mapping outfalls, catch basins, pipe, drain manholes, BMPs, and other components of the MS4, while the tablet computers will be most valuable for ongoing inspection of the structures. These two activities serve as the foundation of IDDE. The Coalition purchased portable wireless devices (MiFi) for each of the 13 member communities so that both Leica and tablet computers can be used in the field. Members of all Coalition communities received training on both the Leica devices and the tablet computers during Year 10.

The Coalition purchased several water quality field kits and meters, most of which are focused on identifying illicit discharges and aligned with the field screening parameters expected to be listed in the pending Massachusetts Small MS4 permit. A summary of the water quality tools purchased is below. These tools are available to all 13 member communities.

Analyte or Parameter	Manufacturer	Number Purchased	Product Type*
Ammonia	CHEMetrics	1	Colorimeter
	Hach	3	Field
Surfactants (detergents)	CHEMetrics	1	Colorimeter
	Hach	2	Colorimeter
	CHEMetrics	4	Field Kit
	Hach	3	Field Kit

Fluoride	CHEMetrics	2	Colorimeter
	Hach	1	Colorimeter
Hardness	Hach	2	Colorimeter
pH	CHEMetrics	1	Meter
	Hach	2	Colorimeter
	Hach	2	Meter
	Extech	4	Meter
Chlorine	CHEMetrics	1	Colorimeter
	CHEMetrics	4	Field Kit
Turbidity	CHEMetrics	2	Meter
Total Dissolved Solids	Hach	2	Meter
	Extech	4	Meter
Conductivity	Hach	2	Meter
	Extech	4	Meter
Salinity	Hach	2	Meter
	Extech	4	Meter
Temperature	Extech	4	Meter

*- Some meters, such as the colorimeters and Extech meter, can be used for multiple parameters.

In February 2013, the Coalition began an evaluation of options to serve as a regional stormwater laboratory. It summarizes the estimated capital costs to retrofit an existing laboratory at the Town of Millbury's unused wastewater treatment facility, as well as annual certification, calibration, and labor costs that would be associated with operating that facility. If retrofitted, the laboratory at this site has the potential to serve as a regional stormwater laboratory that may benefit the Coalition and other adjacent communities once the new Massachusetts Small MS4 Permit is finalized, particularly as the new permits will have an increased focus on IDDE. The Cost/Benefit Analysis calculates the approximate fee the regional laboratory would need to charge for services in order to cover the capital and annual cost(s) of maintaining the laboratory. This deliverable compares the potential Millbury regional laboratory with alternatives in the area, including commercial laboratories and the laboratory at the Upper Blackstone Water Pollution Abatement District. This report is presently being finalized.

The Coalition developed a Request for Proposals (RFP) for a third-party firm to perform many of the field or inspection services defined in the 15 SOP's, including outfall inspection (dry weather and/or wet weather), water quality monitoring, catch basin inspection, and other related tasks. These services are all vital to the effort to identify illicit discharges in the Coalition communities. The work of the RFP will be funded using FY2013 CIC monies. The scope of the RFP will be reviewed and compared to the requirements of the proposed or final Massachusetts Small MS4 Permit in effect at that time.

Minimum Control Measure 4: Construction Site Stormwater Runoff Control

The Coalition developed SOP 6, "Erosion and Sedimentation Control", intended to help communities minimize discharges from land-disturbing activities. The SOP addresses design, planning, construction, and inspection tools and activities that can serve as BMPs. The SOP also outlines inspection requirements for a variety constructed BMPs that need to serve a long-term purpose for protecting surface waters from discharge of sediments.

Minimum Control Measure 5: Post-Construction Stormwater Management in New Development and Redevelopment

The Coalition developed a Stormwater Best Management Practices (BMP) Toolbox, compiling the stormwater post-development tools currently permitted and encouraged for small development or redevelopment, specifically single-family homes and limited commercial renovations that have a small development footprint. The Stormwater BMP Toolbox provides technical data, design factors, and construction limitations with these BMPs in non-technical language. The objective was to provide the average property owner with easy-to-understand information that encourages them to select low-impact stormwater management tools for their properties, construct them safely, and maintain them for long-term benefit. The BMPs in the Toolbox are consistent with the requirements of the current Small MS4 Permit, the Massachusetts Stormwater Handbook (February 2008), and other current guidance documents.

Minimum Control Measure 6: Pollution Prevention and Good Housekeeping in Municipal Operations

The Coalition developed a Stormwater Pollution Prevention Plan (SWPPP) template in the form of a word processing document. The template addresses elements common to all SWPPPs, including storage of materials, site inspection practices, water sampling, training, spill prevention and cleanup, Standard Operating Procedures for a number of activities, and other sections. SWPPP template covers many types of municipal properties. This includes highway department garages and public works yards, where salt is stored and vehicle maintenance or storage is completed, as well as parks, golf courses, and cemeteries, where fertilizers and pesticides may be applied and lawn mowing activities may result in small spills. The SWPPP template includes built-in instructions to make it as simple as possible for each community to develop a SWPPP for a property, simply by deleting text that doesn't apply. Each community also received at least one detailed Site Plan that shows the location of materials storage, vehicle maintenance and other SWPPP-specific activities at a municipal facility, as well as the locations of structures that discharge to the MS4 and the direction of stormwater flow.

The Coalition developed 15 Standard Operating Procedures (SOP's) intended to provide guidance on activities required or encouraged by the 2003 Massachusetts Small MS4 Permit. These SOPs addressed such diverse activities or needs as outfall inspection (both dry weather and wet weather), catch basin cleaning, erosion and sedimentation control, oil/water separator maintenance, use and storage of pesticides and fertilizers, and many more. The group developed standard forms and methodologies for these procedures, many of which were incorporated into the Integrated Online Mapping and Inspection System, described in following paragraphs.

The Coalition developed two presentations on pollution prevention in stormwater management, with content focused on educating employees of public works, engineering, conservation, planning, highway, and other similar municipal departments on the requirements of the 2003 Small MS4 Program. This includes a training presentation on the SWPPP Template and the responsibilities of municipal personnel to implement requirements of the SWPPP. A second training presentation provides explanation and insight on the 15 SOP's described previously.

The Coalition developed a Sump Pump Discharge Policy that provides a framework for the member communities to respond to needs to remove sump pumps from the sanitary sewer system without causing property damage or creating a hazardous condition for the public. The Policy discusses considerations related to potential contamination and reduction in capacity of the storm drain system when sump pumps are permitted to connect to the drainage system, and lays out a situational approach to provide flexibility in administering a policy. The Policy includes guidance for when such a connection should be considered, what information the municipality can request from a residential or commercial property to guide in its decision, and outlines the responsibilities of the property owner.

The Coalition developed a Salt/Sand Benchmarking tool to guide member communities in determining the present loading rate of chloride (per lane-mile) presently applied by its salt trucks and other municipal vehicles, regardless of the compound (e.g.: sodium chloride, green salt, calcium chloride) or form (e.g., solid or liquid, mixed with sand), and in evaluating alternative application methods and materials to current practices. The deliverable guides communities through an equipment calibration process and suggests a target reduction rate that is coupled to and appropriate for the benchmarked loading rate. The objective of this task is to reduce the overall loading of chlorides to surface waters in the region while maintaining safe conditions on roadways.

MISCELLANEOUS

The Sump Pump Policy as well as a Private Drainage Connection SOP (SOP 15) documents both include technical criteria for a member community to evaluate when considering granting approval to residential and/or commercial users to connect such private drainage into engineered storm drain systems within the MS4. However, this approach is not effective in areas where no engineered storm drain system exists. In February 2013, the Coalition began to develop a process to connect pieces of data managed by multiple departments within a community for the benefit of all departments. Specifically, the task merges knowledge of areas where high inflow (i.e., sump pumps and drainage connections) to the sanitary sewer has been identified but where no engineered storm drain system exists. This knowledge includes drainage Capital Improvement Plan (CIP) categories and fields to prioritize the extension of the engineered drain system, within the parameters of the Sump Pump Policy and the Private Drainage Standard Operating Procedure, to reduce inflow to the sanitary sewer while protecting surface water quality. This report is presently being finalized.

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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
PE-1	Flyer Distribution		Get participation in a Household Hazardous Waste collection event	A HHHW collection event took place December 29, 2012. 41 residents participated in this event.	A HHHW collection date is scheduled for September 28, 2013. The Town intends to host two electronics collection events in Year 11, as well.
Revised	Household Hazardous Waste (HHHW) Day	U/F Dept. Deb Graves	Annual Household Hazardous Waste Day Event	Electronics collection events took place on May 12 and October 13, 2012.	
PE-2	Informational Mailings	U/F Dept. Steven Tyler	Implement at houses adjacent to outfalls.	This BMP was expanded to include educating residents beyond those immediately adjacent to the outfall locations, and to use more visible tools to raise awareness of our valuable water resources in high traffic areas.	Fund the stream name signage project and install signs at as many locations as possible around Town.
Revised	Stream Name Signs	Highway Dept. Eben Butler	New signs installed		
PE-3	Community Group Meetings	U/F Dept. Steven Tyler	Awards & Participation	This BMP was expanded to include education and outreach efforts beyond formal meetings, such as coordination with the local school district. The highway department supported Spencer's Pride Day (trash and debris cleanup town wide) on April 27, 2013. In Year 10, the U/F Department Superintendent assisted with mentoring students from David Prouty High School as they prepared for the Envirothon Team. The focus of the 2012 Envirothon was stormwater, so the work was an especially effective fit with the Town's involvement in the CMRSWC.	The Town will explore options for participating in 2013 and 2014 community Earth Day events, Spencer's Pride Day in April 2014, and other community festivals, such as by staffing a booth. The town will utilize education and outreach materials, such as using the CMRSWC nonpoint source pollution Enviroscope table to demonstrate the value of stormwater management at these events. The Town will link its website to the CMRSWC website, www.CentralMAStormwater.org.
Revised	Public Awareness				

PE-3 (cont)	Community Group Meetings (continued)			A student from David Prouty High School participated in “job shadowing” a highway department employee, including involvement in duties related to stormwater.	The Town is interested in exploring new options for integrating stormwater education into the science program of the school department, such as by demonstrating World Water Monitoring Day Challenge water quality test kits, and distributing kits to interested teachers.
Revised	Public Awareness			In Year 10, the U/F Department Superintendent met with the School Superintendent to discuss potential for the department to sponsor prizes for excellence in environmental science.	The Town does not anticipate participating with the National Drinking Water Week Poster Contest in Year 11. The Town intends to host an Open House at the Highway Department Garage and Maintenance Facility. The Town intends to make the U/F Department Superintendent or Highway Foreman available for a “job shadowing” experience for a high school student in Year 11.
PE-4	Public Service Announcements	U/F Dept. Deb Graves	Develop Announcements	This BMP has expanded from using the local cable access channel to advertise events. Thanks to its strong participation with the CMRSWC in Year 10, the Town has access to education and outreach materials that address a variety of topics in the MS4 Permit. Most of these materials are appropriate to put on the local cable access channel.	Continue full implementation. Make new materials available on the local cable access program, including the Liquid Assets DVD, the presentation on stormwater management (content focused on educating the general public and volunteer groups), and other videos. Advertise the U/F Department’s participation at events, such as Earth Day, HHHW collection events, and electronics collection events.
Revised					

PE-5	Stream Restoration	U/F Dept. Steven Tyler	Clean around 1 stream per year	This BMP expanded to focus not just on streams, but other water bodies within the community.	Continue Muzzy Pond, Sugden Lake and Lake Whittemore annual pond/lake lowering for weed control and cleanup.
Revised	Water Body Restoration		On-going Annual Events	Muzzy Pond, Sugden Lake and Lake Whittemore annual pond/lake lowering for weed control and cleanup completed. Additional shoreline cleanup was performed as part of Spencer Pride Day, April 27, 2012.	

1a. Additions

PE-6	Public Awareness	U/F Dept. Steven Tyler	Public Access TV	U/F Superintendent and Conservation Commission met to discuss this possibility, and intend to move forward in Year 11.	Discuss Stormwater on Talk of the Town, local cable access program
PE-7	Public Awareness	U/F Dept. Steven Tyler	Public Access TV	Continue to air “Liquid Assets” on local cable access	Make new materials available on the local cable access program, including the Liquid Assets DVD.
PE-8	Catch Basin Stenciling Program	Highway Dept. Eben Butler	Complete Urbanized Area Stenciled	All catch basins in the MS4 Urbanized Area were stenciled in previous years, using a frog logo and the phrase “Protect ‘R’ Water”. The Town has refreshed this effort where needed to maintain previously stenciled catch basins.	Continue this effort to catch basins in rural areas outside the MS4 Urbanized Area. Continue to refresh stencils at previously-stenciled catch basins.
PE-9	Seek grants for non- point source pollution evaluation	U/F Dept. Steven Tyler	Seek and apply for grants from local, State, and Federal programs.	In Year 10, the Town applied for a 604(b) grant to address potential nonpoint source pollution from areas outside the MS4.	If 604(b) funds are awarded, this project will involve public meetings and outreach during Year 11 that will benefit residents and property owners/operators within the MS4 as well as the project focus area.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
PP-1	Storm Drain Stenciling		Stenciling Areas of immediate concern	This BMP was redundant with BMP PE-8, discussed previously, as it focused on public education and outreach.	Continue to support BMP PE-8, to use stencils as an effective and visible tool to educate the public about stormwater infrastructure.
Revised				As with most MS4 communities, Town volunteers are not utilized for catch basin stenciling due to safety issues.	As with most MS4 communities, Town volunteers will not be utilized for catch basin stenciling due to safety issues.
PP-2	Hazardous Waste Day		Resident Participation at this once per year event	This BMP is redundant with BMP PE-1 and PE-4, discussed previously, which educate the public about household hazardous waste collection events.	Continue to support BMP PE-1 and PE-4 by hosting and advertising household hazardous waste collection events.
Revised	Household Hazardous Waste Collection Day Events	U&F Dept. Steven Tyler	Collect HHHW Materials	A HHHW collection event took place December 29, 2012. 41 residents participated in this event. Electronics collection events took place on May 12 and October 13, 2012. Town volunteers are not utilized at household hazardous waste collection events due to safety issues.	A HHHW collection date is scheduled for September 28, 2013. The Town intends to host two electronics collection events in Year 11, as well. Town volunteers are not utilized at household hazardous waste collection events due to safety issues.
PP-3	Volunteer Monitoring Efforts		Annually	This BMP was not specific and has been replaced by PP-5 through PP-8.	N/A
Revised					
PP-4	SWMP Volunteer Monitoring		Annually	The public continues to have the opportunity to comment on the Town's Stormwater Management Plan.	The Town will continue to announce all meetings and presentations related to stormwater, and encourage public attendance.
Revised				U/F Superintendent participated in several meetings with the Conservation Commission under MCM 4 and MCM 5.	

2a. Additions

PP-5	Cable viewers	N/A	Local “Talk of the Town” program	As noted in BMP PE-6, the Town has made progress toward having the stormwater topic featured on this local cable access program.	If possible we will encourage Town residents to call in to Talk of the Town with questions about stormwater, or send questions via social media.
Revised					
PP-6	Adopt Stormwater Regulations	Planning Michelle Buck	Adopt Stormwater Regulations	Stormwater Regulations were adopted in November 2011.	Continue to implement November 2011 Stormwater Regulations. Consider and evaluate suggestions and revisions into 2011 Stormwater Regulations as part of a public process, and as USEPA publishes a new MA MS4 Permit.
PP-7	Establish Stormwater Committee	U/F Dept. Steven Tyler	Solicit feedback on stormwater program from Town and residents	A Stormwater Committee was formed for the development of Stormwater Regulations. Since their implementation no new formal Stormwater Committee has been formed, to date.	The Town is exploring options to establish a formal Stormwater Committee, based on groups active in surrounding communities. The Committee may include representation from the following among its members: Planning Board, Conservation Committee, general public; the school department; additional interested parties.
Revised					
PP-8	Public attendees at draft bylaw presentations and hearings	N/A	Feedback on Draft Stormwater Bylaw Regulations	Stormwater Regulations were adopted in November 2011, which involved a number of public hearings.	Continue to consider and evaluate suggestions and revisions into 2011 Stormwater Regulations as part of a public process, and as USEPA publishes a new MA MS4 Permit .
Revised					

PP-9	Lead Central Massachusetts Regional Stormwater Coalition	Town Administrator Adam Gaudette U/F Dept. Steven Tyler	Lead development of a regional stormwater management project.	The Town of Spencer served as the lead community on the Coalition efforts in Year 10. This involved participation in 13 meetings or workshops, review of deliverables, and coordinating grant funding received from the Massachusetts Executive Office of Administration and Finance. The U/F Superintendent serves as the manager of two Leica GPS devices purchased as part of the Coalition project.	The Town of Spencer will continue to lead this effort in Year 11, moving the project forward to 17 additional communities.
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3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
ID-1	Visual Inspection		All outfalls quarterly	There is no regulatory mandate to inspect outfalls quarterly. This BMP did not provide benefit to the stormwater management program, and was replaced with BMPs ID-6, ID-7, and ID-8, which address the specific tools that will be used to identify illicit discharges.	N/A
Revised					
ID-2	Laboratory Analysis	U/F Dept. Steven Tyler	When pollution is evident	No water quality screening was completed in Year 10.	Utilize Coalition field test kits and meters, when appropriate, to provide screening analysis at outfalls.
Revised					Utilize full laboratory analysis when field screening parameters exceed benchmarks, as appropriate.
ID-3	Identify and map outfalls		Map and identify all outfalls in UA	All known outfalls and water bodies in the UA were located and mapped prior to Year 10. In Year 10, all outfalls were imported to GIS and uploaded to the Coalition's integrated mapping system. The Town has received training on how to inspect structures in the stormwater system using the integrated mapping system.	Continue mapping of new or newly found drainage structures, confluences and outfalls.
Revised	Identify and map outfalls in urban area	U/F Dept. Steven Tyler	Develop storm sewer map (ongoing w/ GIS)		Map catch basin and drain manhole structures and pipe and culvert infrastructure, in conjunction with catch basin cleaning events, utilizing Coalition tools.

ID-4	Remove source of contamination		When pollution is evident	In Year 10, the Town of Spencer was called on to defend, in a court of law, actions it took in previous years to remove an illicit discharge.	Continue to enforce the permanent removal of illicit discharges.
Revised	Enforce removal of illicit discharge	U/F Dept. Steven Tyler Town Administrator Adam Gaudette	Ensure permanent elimination of illicit discharge.	The ID remains permanently disconnected. This represents the Town's commitment to IDDE.	

3a. Additions

ID-5	Develop Discharge Regulations	Stormwater Committee & Planning Board	Adopt Stormwater Regulations	Adopted new Stormwater Bylaw at May 7, 2009 Town Meeting.	Continue to consider and evaluate suggestions and revisions into 2009 Stormwater Bylaw and 2011 Stormwater Regulations as part of a public process, and as USEPA publishes a new MA MS4 Permit.
Revised				Adopted new Stormwater Regulations in November 2011.	
ID-6	Screening of urban outfalls	Highway Dept. Eben Butler	Trace system outfalls in urban area using CCTV	In Year 10, CCTV of stormwater and sanitary sewer systems included Pleasant Street and Lincoln Street as part of a road reconstruction project. One illicit discharge was identified and eliminated by the reconstruction project. This project restored sewer capacity and reduced exfiltration.	Identify and begin screening outlying areas.
Revised				The Town replaced the storm drain and nine catch basins on Thompson Road. New catch basins have deep sump design to improve collection of sediments.	The Town is presently evaluating the purchase of its own CCTV camera, rig, and system for use in inspecting the storm drain and sewer systems and identifying illicit discharges for elimination. The Town will incorporate inspection tools developed as part of the Coalition project into its catch basin cleaning program, especially those related to IDDE.

ID-7	Smoke Testing Sewer Mains	Sewer Dept. Mark Robidoux	IDDE Investigation and Elimination	One illicit discharge in the Pleasant Street/Lincoln Street project was identified and eliminated by the reconstruction project. This project restored sewer capacity and reduced exfiltration.	Additional sanitary sewer and storm drain lines will be tested as part of programmed roadway improvements. In 2013, the Town will perform smoke testing of the downtown quadrant, which may identify additional illicit discharges. This includes MacDonald, Chestnut, and Elm Streets and the Old Railroad Yard.
Revised					
ID-8	Smoke Testing of Urban Outfalls	Highway Dept. Eben Butler	IDDE Investigation and Elimination	In Year 10, smoke testing of storm drain systems included Pleasant Street and Lincoln Street as part of a road reconstruction project. One illicit discharge was identified and eliminated by the reconstruction project. This project restored sewer capacity and reduced exfiltration.	Additional sanitary sewer and storm drain lines will be tested as part of programmed roadway improvements. In 2013, the Town will perform smoke testing of the downtown quadrant, which may identify additional illicit discharges. This includes MacDonald, Chestnut, and Elm Streets and the Old Railroad Yard.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
CS-1	Develop Bylaws	Stormwater Committee & Planning Board	By the end of permit Year 2.	Adopted Stormwater Bylaw at May 7, 2009 Town Meeting.	Continue to consider and evaluate suggestions and revisions into 2009 Stormwater Bylaw and 2011 Stormwater Regulations as part of a public process, and as USEPA publishes a new MA MS4 Permit.
Revised	Develop Construction Site Stormwater Runoff Control Bylaw and Regulations		Adopt Stormwater Regulations	Adopted Stormwater Regulations in November 2011.	
CS-2	Pre-Construction Informational Meetings	ConCom Margaret Washburn	Each construction project after bylaws are in place.	In Year 10, the Conservation Commission completed an inspection of 67 projects under construction. Of these, stop work orders or notices of violations were issued for 3. Violations identified and tracked until resolved	Continue performing inspections of projects under construction.
Revised	Site Inspections	ConCom Margaret Washburn	Identifying and Tracking Violations		Continue identifying and tracking violations

4a. Additions

CS-3	Review of Major Proposed Projects for Erosion & Sedimentation Control	U/F Dept. Steven Tyler	Review projects for erosion and sedimentation controls.	In Year 10, the U/F Superintendent completed a review of ten proposed major projects as part of the preliminary technical review committee.	The U/F Superintendent will continue to review projects submitted for approval, with a focus on erosion and sedimentation controls as well as overall site stormwater design.
CS-4	Increase awareness of sedimentation and erosion requirements.	U/F Dept. Steven Tyler	Make information available at more locations		In Year 11, the Town will make erosion and sedimentation information available at more locations within town, including providing materials when a resident or contractor applies for a road opening permit, building permit, or prepares to submit a Notice of Intent.

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
PC-1	Visual Monitoring	ConCom Margaret Washburn	Minimum of one time after completion	Violations identified and tracked until resolved.	Continue identifying and tracking violations
Revised	Site Inspections	ConCom Margaret Washburn	Identifying and Tracking Violations	No stormwater treatment or infiltration BMPs were constructed as part of Town-owned or Town –operated projects in Year 10. The Town accepted two retention basins in Year 10, both of which were inspected prior to acceptance.	Look for ways to incorporate stormwater treatment or infiltration BMPs into Town-owned or Town – operated projects. Inspect all stormwater treatment or infiltration BMPs before they are accepted by the Town.
Revised					

5a. Additions

PC-2	Develop Post-Construction Stormwater Management Regulations	Stormwater Committee & Planning Board	Adopt Stormwater Regulations	Adopted new Stormwater Bylaw at May 7, 2009 Town Meeting. Adopted new Stormwater Regulations in November 2011.	Continue to consider and evaluate suggestions and revisions into 2009 Stormwater Bylaw and 2011 Stormwater Regulations as part of a public process, and as USEPA publishes a new MA MS4 Permit.
Revised					
PC-3	Review of Major Proposed Projects for Erosion & Sedimentation Control	U/F Dept. Steven Tyler	Review projects to evaluate pre-and post-development runoff, and whether use of infiltration BMPs on site may be appropriate.	In Year 10, the U/F Superintendent completed a review of ten proposed major projects as part of the preliminary technical review committee.	The U/F Superintendent will continue to review projects submitted for approval, with a focus on post-construction stormwater management.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
GH-1	Employee Training	U/F Dept. Steven Tyler	Annual training meeting	In Year 10, several U/F staff members received training. U/F Superintendent Steven Tyler received training on the Leica GPS device on December 18, 2012. Town staff members Kevin Simonovitch, Ryan Pontbriand, Patrick Horgan, Ray Holmes, and Steven Tyler received training on the tablet device and integrated mapping and inspection system on March 12, 2013.	The Town will continue to take advantage of training opportunities that are presented as part of the Coalition work and from the Worcester County Highway Association, MassDOT and other training resources.
Revised			Provide training to appropriate employees based on nature of activities.	In Year 10, the U/F department sent nine staff members to the Worcester County Highway Association stormwater session, which included training on using salt and deicing materials and best management practices to reduce pollution potential. The U/F department hosts a number of internal training events, reaching seven staff members, related to the need to implement Emergency Response procedures consistent with the town's Environmental Management System. All of these have objectives consistent with the MS4.	The Town will continue to train staff internally on procedures necessary to implement the Environmental Management System.
GH-2	Develop Operation and Maintenance Schedule		Develop within first year.	This BMP was vague and did not reflect on the specific maintenance activities completed within the Town's system. It has been replaced with BMPs GH-6, GH-7, and GH-8.	N/A
Revised					

GH-3 Revised	Implement Operation and Maintenance Schedule		Implement during Permit Years 2 through 5.	This BMP was vague and did not reflect on the specific maintenance activities completed within the Town's system. It has been replaced with BMPs GH-6, GH-7, and GH-8.	N/A
GH-4 Revised	Recordkeeping		For each BMP employed	During Year 10, the Coalition developed an integrated online mapping and inspection system that documents all inspections and provides the opportunity to produce a report of actions. This includes inspections of BMPs as well as many other common tasks associated with the MS4 Permit. The Coalition also developed 15 Standard Operating Procedures for many stormwater-related activities, such as dry- and wet-weather outfall inspection, catch basin inspection. These SOPs define the consistent approach that serves as the foundation for effective recordkeeping.	Continue to implement the SOPs and the online mapping and inspection system.

6a. Additions

GH-5	Water Dept. Environmental Management System (EMS) Implementation	U/F Dept. Steven Tyler	Finalize EMS	The Town revised its original EMS program in Year 10, incorporating new inspections and action items into the existing report. This EMS includes Town resources associated with water, highway, sewer, police, fire, and transfer station facilities and operations.	Continue to update and revise the EMS, as necessary.
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GH-6	Catch basin and outfall cleaning	HWY Dept. Eben Butler Ray Holmes	Clean each structure twice a year (min.); maintain log of conditions, etc.	Completed annual catch basin program; updated maps and records.	The Town will continue its program of cleaning catch basins at least once.
Revised				The Town has invested in its own “clamshell” catch basin cleaning device. All catch basins are cleaned in spring, with selected basins cleaned a second time, in fall, based on staff knowledge of basin conditions. Having this device “in house” will facilitate multiple cleanings in the future.	The Town will incorporate inspection tools developed as part of the Coalition project into its catch basin cleaning program, especially those related to IDDE.
GH-7	Street Sweeping	HWY Dept. Eben Butler Kevin Simonovitch	Main Street weekly; urban area monthly; complete town annually	All streets and sidewalks within the urbanized area are swept in spring. Some streets and sidewalks are swept a second time in fall, based on U/F knowledge of debris and grit. The Town uses its own mechanical sweeper to complete this task.	Continue sweeping streets and sidewalks in the urbanized area at least once a year.
Revised					
GH-8	Minimize salt and sand use & exposure	Highway Dept. Eben Butler	Monitor salt and sand use – cover pile off season	In Year 10, the Highway Department implemented a focused effort to benchmark salt and sand use and reduce the quantity of materials used. Staff calibrated all spreading equipment to determine how much each component was delivering. The Town has also switched to “treated” salt, which consists of standard salt treated with magnesium chloride. Use of this material has allowed the Town to use less sand, reducing how frequently catch basins fill up, and applying fewer pounds of chloride per lane mile. The Town presently calculates its chloride application at approximately 540 pounds of chloride per lane-mile.	Maintain expectations & continue training on equipment calibration. Attempt to procure funding to add a new salt shed. The Town will continue to reduce its application rate of salt, ensuring that the public safety is not jeopardized.

GH-9	Close police firing range at Town well site	U/F Dept. Steven Tyler	Keep Range Closed	The range was closed in previous Permit Years.	Keep the range closed in order to prevent stormwater pollution.
Revised					
GH-10	Implement pollution prevention practices at Town properties	U/F Dept. Steven Tyler	Implement pollution prevention practices at Crash Derby	In Year 10, the U/F Superintendent implemented a number of best management practices at the Town Fairgrounds property, site of the annual Crash Derby and located within the Zone 2 of a public water supply. These BMPs included requiring the Fire Department to be on site to respond to spills, preventing vehicles from staying on-site overnight, minimizing the amount of fuel contained in each vehicle, and prohibiting antifreeze in any vehicle. While aimed at protecting the public water supply, these BMPs also result in cleaner surface water and reduced pollution potential, overall.	Continue to monitor BMPs during the Crash Derby to prevent stormwater pollution. Implement additional BMPs if determined necessary. Continue to seek BMPs to implement at other Town properties that will prevent stormwater pollution.
Revised					

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 11
Revised					

7a. Additions

7b. WLA Assessment

Several water bodies, including Sevenmile River and Cranberry River (Category 2), are currently being assessed for one or more designated uses, which may require TMDLs in the future. Other water bodies have never been assessed (Category 3), but may require TMDLs in the future. Spencer will continue to watch for these TMDLs to be published and will evaluate published Waste Load Allocations, accordingly.

Under Category 4a (“TMDL is Completed”), Sugden Reservoir (TMDL 3633, “Nutrient/Eutrophication Biological Indicators”) is located within Spencer. Spencer will continue to evaluate its actions toward meeting Waste Load Allocations for this TMDL.

Water bodies that address plants or other non-pollutant impairments include Jones Pond (TMDL 2364, “Aquatic Plants [Macrophytes]”) and Brooks Pond, which has been assessed as having an “Impairment not Caused by a Pollutant” (Category 4c; no TMDL required). These impairments do not require actions under the MS4.

A TMDL has been completed for Browning Pond to address “Nutrient/Eutrophication Biological Indicators: Non-Native Aquatic Plants” (TMDL 3626), but this water body is not located within Spencer’s Urbanized Area. A TMDL for Lake Whittemore (Category 5; Turbidity) will be developed in the future. Spencer will continue to watch for these TMDLs to be published and will evaluate published Waste Load Allocations, accordingly.

Part IV. Summary of Information Collected and Analyzed

Since beginning of permit coverage the Town of Spencer has presented our summary of information collected and analyzed in the preceding sections. Other than the information presented in Part III, above, no additional; information was collected or analyzed. The Town of Spencer maintains that it continues to be in compliance with the 2003 Massachusetts Small MS4 Permit.

Part V. Program Outputs & Accomplishments (OPTIONAL)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2012 through March 31, 2013)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Yes (Committee)
Annual program budget/expenditures **	(\$)	±\$20,000
Total program expenditures since beginning of permit coverage	(\$)	±\$140,000
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 %)	5,000
Stormwater management committee established	(y/n)	Yes
Stream teams established or supported	(# or y/n)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	1 mi
Shoreline cleaned since beginning of permit coverage	(mi.)	5 mi.
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1
▪ community participation **	(# or %)	41
▪ material collected **	(tons or gal)	13.5 gals
School curricula implemented	(y/n)	yes

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in 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	(%)	90%
Estimated or actual number of outfalls	(#)	100
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	75%
Mapping method(s)		
▪ Paper/Mylar	(%)	<5%
▪ CADD	(%)	<5%
▪ GIS	(%)	95%
Outfalls inspected/screened **	(# or %)	50%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	100%
Illicit discharges identified **	(#)	2
Illicit discharges identified (Since beginning of permit coverage)	(#)	2
Illicit connections removed **	(#); and (est. gpd)	1; (gpd unknown)
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	2; (gpd unknown)
% of population on sewer	(%)	50%
% of population on septic systems	(%)	50%

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	3
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	81
Tickets/Stop work orders issued **	(# or %)	2
Fines collected **	(# and \$)	N/A
Complaints/concerns received from public **	(#)	3

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 %)	10
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	YES
Low-impact development (LID) practices permitted and encouraged	(y/n)	YES

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	2 times/year
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	2 times/year
Qty of structures cleaned **	(#)	±1,000
Qty. of storm drain cleaned **	(%, LF or mi.)	±1,500 lf
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	10 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$20,000
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	No
• % Structures cleaned with clam shells **	(%)	100%
• % Structures cleaned with vector **	(%)	0%

(Preferred Units) Response

Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1 time/year
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	4 times/year
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	±2,000 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	20,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	1
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	No
• % Roads swept with rotary brush sweepers **	%	100%
• % Roads swept with vacuum sweepers **	%	0%

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	100%
▪ Herbicides	(lbs. or %)	50%
▪ Pesticides	(lbs. or %)	50%
Integrated Pest Management (IPM) Practices Implemented	(y/n)	No

(Preferred Units) Response

Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	75% <25% <5%
Pre-wetting techniques utilized **	(y/n or %)	No
Manual control spreaders used **	(y/n or %)	Yes 90%
Zero-velocity spreaders used **	(y/n or %)	No
Estimated net reduction or increase in typical year salt/chemical application rate **	(±lbs/lb mi. or %)	5% increase
Estimated net reduction or increase in typical year sand application rate **	(±lbs/lb mi. or %)	5% decrease
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	No
100% of salt/chemical pile(s) covered in storage shed(s) by May 2009	(y/n)	Yes

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	0
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	Yes
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	Yes