Municipality/Organization:	SPENCER, MASSACHUSETTS
EPA NPDES Permit Number:	MAR041162
MassDEP Transmittal Number:	**W-**
Annual Report Number & Reporting Period:	**Year 11** **April 1, 2013 – March 31, 2014**

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2014)

Part I. General Information

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

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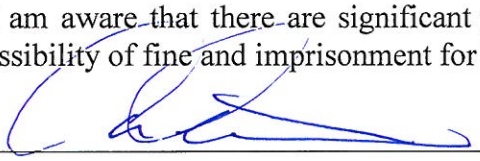
Certification:

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

Signature: 

Printed Name: Adam D. Gaudette, AICP

Title: Town Administrator

Date: April 30, 2014

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 11, the Town of Spencer continued to be an active participant in the Central Massachusetts Regional Stormwater Coalition (the Coalition). The Coalition's work in Year 11 was funded by a $115,000 fiscal year 2013 (FY2013) Community Innovation Challenge (CIC) grant from the Massachusetts Executive Office of Administration and Finance. This grant was supplemented by a contribution of approximately $2,800 from each of the 30 Towns, including Spencer. Spencer also committed additions funds, equipment and personnel resources to carry out the goals and objectives of our stormwater management program.

As representatives of the lead community, Town Administrator Adam Gaudette and Utilities & Facilities Superintendent Steven Tyler participated in eight 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.

Overview of the Coalition

The FY2013 Coalition communities included 13 communities that formed the Coalition during the previous year (Auburn, Charlton, Dudley, Holden, Leicester, Millbury, Oxford, Paxton, Shrewsbury, Spencer, Sturbridge, Webster, and West Boylston) plus 17 new "Expansion" Towns (including Boylston, Grafton, Hardwick, Hopkinton, Monson, Northbridge, Northborough, North Brookfield, Palmer, Rutland, Southbridge, Sterling, Upton, Uxbridge, Ware, Westborough, and Wilbraham).

The FY2013 work included numerous technical tasks focused on compliance with the 2003 Massachusetts MS4 Permit, although much of the Coalition's work prepares the communities to comply with requirements anticipated in the pending 2014 Massachusetts MS4 Permit. The Coalition's FY2013 efforts were facilitated by the consulting firms of Tata & Howard, Inc., and Verdant Water, supported by vendor PeopleGIS. However, the Coalition members themselves are responsible for putting the tools developed by the Coalition to use.

The FY2013 effort included monthly meetings of the Coalition Steering Committee, four formal training workshops, and other presentations. Spencer participated in four training workshops, reviewed deliverables, and served other key roles as described in this Annual Report.

The Coalition's Partnerships in Central Massachusetts
The Coalition is actively engaged with many water quality agencies and organizations and is committed to sharing the knowledge it has developed for the benefit of other communities.

The Coalition expanded its partnership with the Massachusetts Department of Environmental Protection (MassDEP) in FY2013, formally including budget in its FY2014 CIC Grant Application to support and assist in development of the stormwater-focused

Interactive Qualifying Project (IQP) with four students at the Worcester Polytechnic Institute (WPI). The IQP underway in spring 2014 is the third such project the Coalition is doing in conjunction with MassDEP and WPI.

The IQP that was completed in Fall 2013 developed two products that will be highly useful to Coalition communities:

1. A Compliance Checklist, evaluating the 2003 Massachusetts MS4 Permit and looking forward to the pending 2014 Massachusetts MS4 Permit (based on the Draft 2013 New Hampshire MS4 Permit). This serves as a tool for Coalition communities to identify their most critical priorities as in preparation of the new MS4 permit and fully compliments the Coalition's other tasks.

2. A Catchment Ranking tool, which processes user input including water quality screening data, land use and development, history of illicit discharges, and other criteria to suggest ranking into one of the four catchment categories defined in the Draft 2013 New Hampshire MS4 Permit.

Many Coalition communities are working in spring 2014 with the WPI IQP project, benefiting from the students' mapping and inspection services as well as a detailed review of municipal stormwater management programs. For the latter, the WPI IQP will quantify the actual cost of the participants' stormwater programs, which will serve as the foundation for ongoing discussions about how each community will fund future stormwater programs. The Coalition appreciates the dedication of MassDEP to work with our members so closely and collaboratively.

Further documentation of the Coalition's dedication to stormwater management is evidenced by its coordinating with several other groups with a similar stormwater focus- some existing and some just developing- that are also funded at least in part by CIC Grants. These include:

- The Merrimack Valley Stormwater Collaborative (coordinated by the Merrimack Valley Regional Planning Commission);
- The Neponset Valley Regional Stormwater Collaborative (coordinated by the Metropolitan Area Planning Council);
- The Northern Middlesex Stormwater Collaborative Expansion (coordinated by the Northern Middlesex Council of Governments);
- The Southeastern Massachusetts Regional Stormwater group (just forming, coordinated by the Southeast Regional Services Group); and
- The North Suburban Planning Council (also coordinated by the Metropolitan Area Planning Council).

The benefits of collaboration between these groups include:

1. Sharing the tools that the Coalition developed in FY2012 and FY2013 with other groups, honoring the goal of the CIC Grant Program that projects produce deliverables that can be shared regionally;

2. The ability to utilize organic, innovative projects being developed and implemented by those groups that focus on additional stormwater management or education opportunities that the Coalition had not specifically addressed; and

3. Reducing redundancy or scope overlap in projects funded by the CIC Grant Program.

In Year 11, the Coalition began to coordinate with the Massachusetts Coalition for Water Resources Stewardship, and will present on its work at its 5th Annual Water Resources Strategies Symposium, to be held on Friday, May 16, 2014.

Finally, the Coalition has initiated conversations with technical assistance staff in USEPA Region 1, with the goal of benefiting from knowledge and experience of the agency's staff and from its network. An example of this outreach to the agency is the March 26, 2014 presentation by USEPA Region 1's Josh Secunda, which the Coalition hosted at MassDEP's Central Office in Worcester. Mr. Secunda's presentation focused on the critical role of engaging community stakeholders in the evaluation and decision-making processes that are part of developing a sustainable stormwater funding program. Representatives from many of the other stormwater groups listed previously also attended this meeting. When the actual municipal stormwater program budgets quantified by the WPI IQP student project are evaluated through the lens of Mr. Secunda's presentation, the Coalition believes the result will be a new motivation for many communities to review their current funding approach.

In March 2014, the Coalition met with representatives of USEPA Region 1, encouraging the agency to take an active role in sharing the materials produced by the Coalition (and similar groups) across the state, for the benefit of all MS4 communities. We are supported in this goal by the Massachusetts Municipal Association.

The Coalition intends to submit formal comments to USEPA when the 2014 Draft Massachusetts MS4 Permit is issued.

Representatives of the Coalition presented its work at the following other events in Year 11:

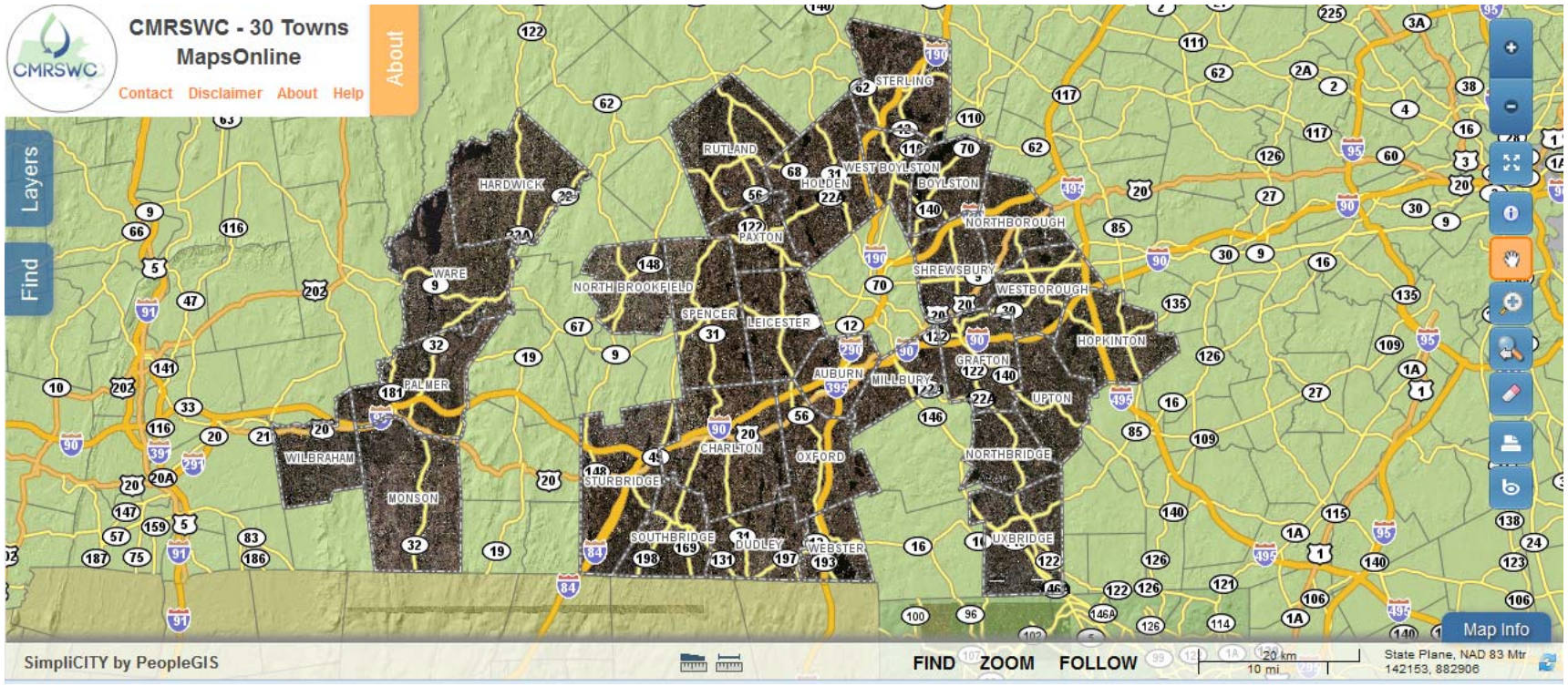
- "Doing More With Less: The Benefits of Stormwater Regionalization Within Your Watershed", in Woonsocket, RI on September 30, 2013, at a workshop sponsored by MassDEP and Rhode Island's Department of Environmental Management;
- "Managing Stormwater for Water Supply Protection", in Worcester, MA on December 3, 2013, at a Drinking Water Source Protection seminar sponsored by USEPA Region 1.

The Coalition has already given additional presentations in Year 12 to other organizations, with more planned.

Tasks Included in this Annual Report

In the following sections, descriptions of the technical tasks and resources 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.

One of the more innovative tools- developed by the Coalition in Year 10 and expanded in Year 11- 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 30 member communities through a desktop or tablet computer. Below is a screen shot of the platform showing the extent of Coalition communities.



In Year 11, the online mapping and inspection system was expanded for all 30 communities to include the ability to add pipe between structures, and gather data related to that pipe. Prior to Year 11, the system managed only point geometry, such as outfall, catch basin, drain manhole, and Best Management Practice infrastructure. All 30 Coalition communities will benefit from this new linear infrastructure feature, which is consistent with the requirements anticipated in the pending 2014 Massachusetts MS4 Permit based on what is included in the Draft 2013 New Hampshire MS4 Permit. All 30 communities can see each other's infrastructure, but each maintains full control over their asset information and water quality data. 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.

Mapped infrastructure is connected to inspection reports that mirror hard-copy forms developed in Year 10 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.

Each of the online forms is fluid- many were updated in Year 11 and will continue to be revised, as needed, to meet the goals of the Coalition members and the Massachusetts MS4 Permit requirements.

Minimum Control Measure 1: Public Education and Outreach

In Year 11, Spencer continued to utilize materials appropriate for public education and outreach, with materials on a variety of topics, which were compiled or developed by the Coalition in Year 10. The topics included illicit discharge detection and elimination, management of pet wastes, and appropriate use of fertilizer, among others. These materials are all available on the Coalition's website, www.CentralMAStormwater.org. The benefit of this delivery format is that the group members can print materials on demand. Spencer also has access to presentations on stormwater management, with content focused on educating the general public, elected officials, and volunteer groups.

In Year 11, Spencer continued to utilize water quality monitoring kits from the World Water Monitoring Challenge program (www.worldwatermonitoringday.org), purchased by the Coalition in Year 10. These kits "build 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 used this in Year 11 to work 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.

Spencer continued to utilize the Enviroscape table focused on non-point source pollution education (http://www.enviroscapes.com/nonpoint-source.html), purchased by the Coalition in Year 10. 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.

The Coalition continued to expand its educational website, www.CentralMAStormwater.org, focused on providing information about the project to a number of audiences, including the general public, educators, and kids. In Year 11, a members-only area was created within this website to share materials for communities to review.

Minimum Control Measure 2: Public Involvement and Participation

In Year 11, Spencer continued to utilize several presentations 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 2014 Massachusetts 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 provided training at two Year 11 workshops (September 17 and 26, 2013) on 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 provided training in Year 11 at a workshop on November 20, 2013 on the Coalition's 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 November 2013 training workshop included a comprehensive review of many types of illicit discharges, and an interactive discussion with attendees about how several examples would presently be managed in their own community.

In Year 11, Spencer continued to utilize the two Leica surveying devices (purchased by the Coalition in Year 10) that can be used to map new structures with very high accuracy, using connection to a military-grade Real Time Kinematic (RTK) satellite network. In Year 11, Spencer also continued to utilize the ASUS tablet device and portable wireless service (MiFi) that were purchased in Year 10. Together, these tools can be used to directly access the online mapping and inspection system: the Leica is the 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 Leica units rotate between the 30 Coalition communities on a schedule, with formal handoff between Towns documented.

In 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. In Year 11, the Coalition began the process of rotating these water quality kits and meters around the 30 Coalition communities, including Spencer, on a schedule that follows the use of the Leica device. The objective of this approach was that inspection and mapping activities completed with the Leica may result in a list of outfalls or structures for which screening-level monitoring should be completed. The Coalition provided training on the use of these water quality kits at the workshop on November 20, 2013; this training was professionally recorded so that Towns can review it if and when they need a refresher.

The Coalition purchased additional water quality field kits in Year 11, based on materials provided by USEPA Region 1 Technical Assistance staff that summarized products recently approved by the agency for this use. The online inspection and mapping database enables any community to add screening-level or full analytical data to any inspection form, for any type of infrastructure, in the field. The online water quality monitoring forms are pre-populated with the specific water quality field kits and meters purchased and used by the Coalition.

As noted, in Year 11, the online mapping and inspection system was expanded for all 30 communities to include the ability to add pipe between structures, and gather data related to that pipe. All 30 Coalition communities will benefit from this new linear infrastructure feature, which is consistent with the requirements anticipated in the pending 2014 Massachusetts MS4 Permit based on what is included in the Draft 2013 New Hampshire MS4 Permit.

In Year 11, the Coalition revised the 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. It was originally anticipated that the work of the RFP would be funded using FY2013 CIC monies. However, in Year 11, the Coalition Steering Committee voted to postpone putting the RFP out to bid, based on the fact that the new Massachusetts MS4 Permit has not yet been issued. This RFP will be re-evaluated in Year 12.

In Year 11, the Coalition performed a review of industrial facilities located in each of the 30 FY2013 communities, including facilities that applied for coverage under the USEPA's Multi-Sector General Permit (MSGP) program, and the compliance status of each. The objective of this activity was to connect data the two permit programs, consistent with requirements anticipated in the pending 2014 Massachusetts MS4 Permit.

Finally, the Coalition is currently planning a demonstration of Environmental Canine Services for May 2014 (in Year 12). This company uses highly-trained dogs to detect the presence of human sewage very low levels in water, and represents a quick and cost-effective screening tool for locating illicit discharges.

Minimum Control Measure 4: Construction Site Stormwater Runoff Control

Construction activities- including erosion control, stormwater pollution prevention, and appropriate management of waste materials- are covered in the Stormwater Best Management Practices (BMP) Toolbox, development of which began in Year 10 and which was finalized in Year 11. The Stormwater BMP Toolbox was written to inform the general public about the importance of managing private construction projects responsibly. The Coalition provided training on the Stormwater BMP Toolbox at two Year 11 workshops (September 17 and 26, 2013).

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

In Year 11, Spencer received access to the Stormwater Best Management Practices (BMP) Toolbox, developed in Year 10 and finalized in Year 11. This tool compiles 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 Coalition provided training on the Stormwater BMP Toolbox at two Year 11 workshops (September 17 and 26, 2013).

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

In Year 11, Spencer continued to utilize the Stormwater Pollution Prevention Plan (SWPPP) template in the form of a word processing document. This document was developed in Year 10 and 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. The Coalition provided training on the SWPPP Template at two Year 11 workshops (September 17 and 26, 2013). The 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.

In Year 11, Spencer continued to utilize the 15 Standard Operating Procedures (SOP's) developed by the Coalition in Year 10, and intended to provide guidance on activities required or encouraged by the 2003 Massachusetts Small MS4 Permit. The Coalition provided training on these SOP's at two Year 11 workshops (September 17 and 26, 2013). 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.

In Year 11, Spencer continued to utilize two presentations developed in Year 10 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. The Coalition provided training on how to use these presentations to educate staff at two Year 11 workshops (September 17 and 26, 2013). One presentation is focused on using the SWPPP Template and the responsibilities of municipal personnel to implement requirements of the SWPPP, and the second training presentation provides explanation and insight on the 15 SOP's described previously.

In Year 11, Spencer continued to utilize a Sump Pump Discharge Policy developed in Year 10 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 Coalition provided training on the Sump Pump Discharge Policy at two Year 11 workshops (September 17 and 26, 2013). 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 administrating 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.

In Year 11, Spencer continued to utilize a Salt/Sand Benchmarking tool developed in Year 10 to guide member communities in calibrating deicing equipment. The Coalition provided training on the calibration approaches and spreadsheets at two Year 11 workshops (September 17 and 26, 2013). The Benchmarking tool calculates 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 Benchmarking tool deliverable guides communities through two different equipment calibration processes 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 Discharge Policy and the 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 Year 11, the Coalition finalized an approach 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. In Year 11, the Coalition provided training on the Drainage Extension Approach at the November 20, 2013 training workshop.

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 September 28, 2013. 37 Spencer residents participated in this event. Electronics collection events took place in May and October, 2013.	A HHHW collection date is scheduled for September 27, 2014. The Town intends to host two electronics collection events in Year 11, as well on 5/31/14 and 10/18/14.
Revised	Household Hazardous Waste (HHHW) Day	U/F Dept. Deb Graves	Annual Household Hazardous Waste Day Event		
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 groups. The highway department supported Spencer's Pride Day (trash and debris cleanup town wide) on April 26, 2014. In Year 11, the U/F Department Superintendent assisted with mentoring students from WPI School as they prepared for the stormwater projects.	The Town will explore options for participating in 2014 and 2015 community Earth Day events, Spencer's Pride Day in April 2015, 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 Enviroscape 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) Revised	*Community Group Meetings (continued)* *Public Awareness*			A student from David Prouty High School participated in "seasonal summer work" as 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. Despite repeating efforts the local school district and school superintendent has been unresponsive to working with the Town on any school outreach or education efforts. 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 12.
PE-4 Revised	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 11, 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.

PE-5 Revised	Stream Restoration Water Body Restoration	U/F Dept. Steven Tyler	Clean around 1 stream per year On-going Annual Events	This BMP expanded to focus not just on streams, but other water bodies within the community. 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 26, 2014.	Continue Muzzy Pond, Sugden Lake and Lake Whittemore annual pond/lake lowering for weed control and cleanup.

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 12.	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 11, the Town applied for a FEMA HMGP grant to address flooding on N. Spencer Road (Route 31).	In addition to alleviating a reoccurring flooding problem this project will improve stormwater treatment and reduce erosion due to the inherent BMPs added to the stormwater treatment train (i.e., water quality swale, deep sump catch basins and sedimentation forebay at outfall).

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. As with most MS4 communities, Town volunteers are not utilized for catch basin stenciling due to safety issues.	Continue to support BMP PE-8, to use stencils as an effective and visible tool to educate the public about stormwater infrastructure. As with most MS4 communities, Town volunteers will not be utilized for catch basin stenciling due to safety issues.
Revised					
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. A HHHW collection event took place September 28, 2013. 37 Spencer residents participated in this event. Electronics collection events took place in May and October, 2013. Town volunteers are not utilized at household hazardous waste collection events due to safety issues.	Continue to support BMP PE-1 and PE-4 by hosting and advertising household hazardous waste collection events. A HHHW collection date is scheduled for September 27, 2014. The Town intends to host two electronics collection events in Year 11, as well on 5/31/14 and 10/18/14.
Revised	Household Hazardous Waste Collection Day Events	U&F Dept. Steven Tyler	Collect HHHW Materials		
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. U/F Superintendent participated in several meetings with the Conservation Commission under MCM 4 and MCM 5.	The Town will continue to announce all meetings and presentations related to stormwater, and encourage public attendance.
Revised					

2a. Additions

PP-5 Revised	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.
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 Revised	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.
PP-8 Revised	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 .

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 11. This involved participation in 4 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 12, moving the project forward to 32 communities in total as members of the Coalition.

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 11.	Utilize Coalition field test kits and meters, when appropriate, to provide screening analysis at outfalls. Utilize full laboratory analysis when field screening parameters exceed benchmarks, as appropriate.
Revised					
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 11.	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)	In Year 11, 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.	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 11, the Town of Spencer conducted stormwater and sewer smoke testing in the South Side Neighborhood in an effort to identify potential illicit discharges. In year 11, the Town of Spencer publically bid the purchase of a new pipe inspection robot for approximately $65,000.00. This represents the Town's commitment to IDDE.	Continue to enforce the permanent removal of illicit discharges. Use the new pipe inspection robot to investigate and identify issues or concerns with damage, infiltration, illicit connections, etc.
Revised	Enforce removal of illicit discharge	U/F Dept. Steven Tyler Town Administrator Adam Gaudette	Ensure permanent elimination of illicit discharge.		

3a. Additions

ID-5	Develop Discharge 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					
ID-6	Screening of urban outfalls	Highway Dept. Eben Butler	Trace system outfalls in urban area using CCTV	In Year 11, CCTV of stormwater and sanitary sewer systems included Mechanic Street and Chestnut Street as	Identify and begin screening outlying areas.

Revised				part of advance road reconstruction project planning. No illicit discharge was identified within the project limits. The Town replaced the storm drain and six catch basins on Water Street. New catch basins have **deep** sump design to improve collection of sediments.	In year 11, the Town of Spencer completed the bid for the purchase of a new pipe inspection robot for approximately $65,000.00. This 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 11, the Town of Spencer conducted stormwater and sewer smoke testing in the South Side Neighborhood in an effort to identify potential illicit discharges.	Additional sanitary sewer and storm drain lines will be tested as part of programmed roadway improvements. In 2014, the Town will perform smoke testing of the downtown quadrant, which may identify additional illicit discharges.
Revised					
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. Adopted 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	Develop Construction Site Stormwater Runoff Control Bylaw and Regulations		Adopt Stormwater Regulations		
CS-2	Pre-Construction Informational Meetings	ConCom Margaret Washburn	Each construction project after bylaws are in place.	In Year 11, the Conservation Commission completed an inspection of 72 projects under construction. Of these, stop work orders or notices of violations were issued for 5. Violations identified and tracked until resolved	Continue performing inspections of projects under construction. Continue identifying and tracking violations
Revised	Site Inspections	ConCom Margaret Washburn	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 11, the U/F Superintendent completed a review of twelve 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 12, the Town will make erosion and sedimentation information available at more locations within town, including providing materials when a resident on 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. With the exception of the Water Street project no stormwater treatment or infiltration BMPs were constructed as part of Town-owned or Town – operated projects in Year 11.	Continue identifying and tracking violations 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	Site Inspections	ConCom Margaret Washburn	Identifying and Tracking Violations		
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 11, the U/F Superintendent completed a review of twelve 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 11, several U/F staff members received training. U/F Superintendent Steven Tyler received training on stormwater related equipment or systems. 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 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. The Town will continue to train staff internally on procedures necessary to implement the Environmental Management System.
Revised			Provide training to appropriate employees based on nature of activities.		
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 11, the Coalition continued development and input into our 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 finalized and adopted 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 11, 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 Environmental Management System (EMS) policy and procedures, as necessary.

GH-6 Revised	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 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 continue its program of cleaning catch basins at least once. 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 Revised	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.
GH-8	Minimize salt and sand use & exposure	Highway Dept. Eben Butler	Monitor salt and sand use – cover pile off season	In Year 11, the Highway Department continued efforts to set best practices benchmarks for salt and sand use and reduce the quantity of materials used. Staff re-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 Revised	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.
GH-10 Revised	Implement pollution prevention practices at Town properties	U/F Dept. Steven Tyler	Implement pollution prevention practices at Crash Derby	In Year 11, the U/F Superintendent refined and 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 factory fuel tanks and 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.

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, 2013 through March 31, 2014)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Yes (Committee)
Annual program budget/expenditures **	($)	±$20,000
Total program expenditures since beginning of permit coverage	($)	±$160,000
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.)	6 mi.
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1
▪ community participation **	(# or %)	37
▪ material collected **	(tons or gal)	11.5 gals
School curricula implemented	(y/n)	No (No cooperation by school district)

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)	(%)	90%
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 **	(#)	1
Illicit discharges identified (Since beginning of permit coverage)	(#)	4
Illicit connections removed **	(#); and (est. gpd)	1; (gpd unknown)
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	4; (gpd unknown)
% of population on sewer	(%)	50%
% of population on septic systems	(%)	50%

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	4
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	93
Tickets/Stop work orders issued **	(# or %)	8
Fines collected **	(# and $)	N/A
Complaints/concerns received from public **	(#)	6

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 %)	14
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 vactor **	(%)	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/ln mi. or %)	5% increase
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln 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