

Municipality/Organization: SPENCER, MASSACHUSETTS
EPA NPDES Permit Number: MAR041162
MassDEP Transmittal Number: W- X251610
Annual Report Number & Reporting Period: Year 9
April 1, 2011 – March 31, 2012

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2012)

Part I. General Information

Contact Person: Steven J. Tyler, P.E. **Title:** Superintendent
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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, 2012

Part II. Self-Assessment

Spencer is continually improving our Public Education and Outreach methods and audiences.

Our Hazardous Household Waste Collection day was held on September 26, 2011 in association with the Town of North Brookfield.

Catch Basin Stenciling in the Central Business District and Town wide has been completed.

Illicit Discharge Detection and Elimination has been coordinated with the U&F Department and included in the November 2011 adopted Stormwater Regulations.

Public service announcements and public education efforts continue.

Storm drain mapping in the Central Business District continues.

A Stormwater Bylaw Committee was formed and voters approved a Stormwater Bylaw at the May 7, 2009 Town Meeting.

More detailed Stormwater Regulations have since been developed and reviewed through the public process. The Stormwater Regulations have been finalized and were put into full effect by the Planning Board as of November 2011.

In preparation for the new NPDES permit requirements we are excited to inform the EPA that the Town of Spencer along with 12 other adjoining or nearby Towns pursued and were awarded a regionalization grant to address common priorities as it relates to municipal Stormwater Management and develop a regional approach to address the priority of protecting water quality for current users and future generations. We believe that this regional Stormwater Management initiative will benefit each of our towns and provide a framework and the tools for a sustainable effort on this critical issue. The purpose of our 13-town (Auburn, Charlton, Dudley, Holden, Leicester, Millbury, Oxford, Paxton, Shrewsbury, Spencer, Sturbridge, Webster, and West Boylston) grant initiative is to address common priorities as it relates to municipal Stormwater Management and develop a regional approach to address the priority of protecting water quality for current users and future generations. This joint effort is designed to achieve service efficiencies and realize cost savings through the collaboration of education and training, sharing a common data base management system, and the standardization of policies and procedures. Five objectives were established as a means to move toward the stated goal; (1) establish a line of communication with peers in the other towns, (2) exchange information on a regular basis, (3) identify resources that may be accessed both by individual towns as well as regionally, (4) prepare for alternative scenarios, and (5) identify town and region strengths, weaknesses, opportunities and threats.

Overall, Spencer's awareness level of stormwater issues has risen due to new staff, in-house education efforts, participation in the various stormwater bylaw / regulation development committees, compliance efforts and other related improvements.

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
Revised	Household Hazardous Waste (HHHW) Day	U/F Dept. Deb Graves	Annual Event	HHHW day took place Sept. 26, 2011.	Spencer electronics collection days scheduled for May 12 and October 13, 2012. 2012 HHHW collection date TBD.
Revised	Water Body Restoration	U/F Dept. Steven Tyler	On-going Annual Events	Muzzy Pond, Sugden Lake and Lake Whittemore annual pond/lake lowering for weed control and cleanup completed.	Continue Muzzy Pond, Sugden Lake and Lake Whittemore annual pond/lake lowering for weed control and cleanup. Additional shoreline cleanup performed as part of Spencer Pride Day, April 14, 2012.
Revised	Catch Basin Stenciling Program	Highway Dept. Eben Butler	Complete Urbanized Area Stenciled	Urbanized area completed. (Refreshing performed where needed on previously stenciled catch basins)	Continue rural outlying areas. (Maintain refreshing existing basins)
Revised	Public Service Announcements	U/F Dept. Deb Graves	Develop Announcements	Prepare new and improve upon existing Public Service Announcements	Continue full implementation. Update and develop new outreach approaches/audiences.
Revised	Public Awareness	U/F Dept. Steven Tyler	Awards & Participation	Held Second annual National Drinking Water Week Poster Contest & Open House at Water Treatment Plant	Continue National Drinking Water Week Poster Contest & Open House at Water Treatment Plant and other Public Awareness Programs.
Revised	Stream Name Signs	Highway Dept. Eben Butler	New signs installed	Raise awareness of our valuable water resources at high traffic areas.	Fund the project and install signs at fifteen locations around Town.

1a. Additions

	Public Awareness	ConCom Margaret Washburn	Public Access TV	Discuss Stormwater on Talk of the Town, cable access program	Discuss Stormwater on Talk of the Town, cable access program
	Public Awareness	U/F Dept. Steven Tyler	Public Access TV	Continue to air “Liquid Assets” on local cable access	Continue to air “Liquid Assets” on local cable access

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
	Cable viewers	N/A	Talk around Town	Discuss Stormwater on Talk of the Town, cable access program	Continue to discuss Stormwater issues on Talk of the Town, cable access program
Revised					
	Haz waste collections	U&F Dept. Steven Tyler	Collect HHHW Materials	HHHW day took place Sept. 26, 2011.	Spencer electronics collection days scheduled for May 12 and October 13, 2012. 2012 HHHW collection date TBD.
Revised					
	Establish Stormwater Committee	Planning Michelle Buck	Adopt Stormwater Bylaw Regulations	Adopted new Stormwater Regulations in November 2011.	Implementation of new stormwater regulations and IDDE program.
Revised					
	Public attendees at draft bylaw presentations and hearings	N/A	Feedback on Draft Stormwater Bylaw Regulations	Incorporate feedback and public comments into newly adopted Stormwater Regulations in November 2011.	Implementation of new stormwater regulations and IDDE program.
Revised					
Revised					
Revised					

2a. Additions

	Adopt Stormwater Regulations	Planning Michelle Buck	Adopt Stormwater Regulations	Adopted new Stormwater Regulations in November 2011.	Implementation of new stormwater regulations and IDDE program.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
Revised	Identify and map outfalls in urban area	U/F Dept. Steven Tyler	Develop storm sewer map (ongoing w/ GIS)	Mapping in progress with catch basin cleaning	Continue mapping of new or newly found drainage structures, confluences and outfalls.
Revised	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.	Implementation of new stormwater regulations and IDDE program.
Revised	Screening of Urban outfalls	Highway Dept. Eben Butler	Trace system outfalls in urban area (TV)	Complete urban areas	Identify and begin screening outlying areas
Revised	Smoke Testing Sewer Mains	Sewer Dept. Mark Robidoux	IDDE Investigation and Elimination	Additional lines tested as part of programmed roadway improvements	Additional lines to be tested as part of programmed roadway improvements
Revised	Smoke Testing of Urban Outfalls	Highway Dept. Eben Butler	IDDE Investigation and Elimination	Trace illegal sewer connections in urban area & locate unknown outfalls. Smoked Grove Street, Elm Street, North Brookfield Road, Northwest Road, and Maple Street locations	Additional lines to be tested as part of programmed roadway improvements.
Revised					

3a. Additions

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
Revised	Develop Construction Site Stormwater Runoff Control 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.	Implementation of new stormwater regulations and IDDE program.
Revised	Site Inspections	ConCom Margaret Washburn	Identifying and Tracking Violations	Violations identified and tracked until resolved	Continue Identifying and Tracking Violations
Revised					
Revised					
Revised					
Revised					
Revised					

4a. Additions

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
	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.	Implementation of new stormwater regulations and IDDE program.
Revised					
	Site Inspections	ConCom Margaret Washburn	Identifying and Tracking Violations	Violations identified and tracked until resolved	Continue Identifying and Tracking Violations
Revised					
Revised					
Revised					
Revised					
Revised					

5a. Additions

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
	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	Ongoing Program
Revised					
	Street Sweeping	HWY Dept. Eben Butler Kevin Simonovitch	Main Street weekly; urban area monthly; complete town annually	Completed annual street sweeping program	Ongoing Program
Revised					
	Minimize salt and sand use & exposure	Highway Dept. Eben Butler	Monitor salt and sand use – cover pile off season	Developing expectations & train staff; cover pile in the off season	Maintain expectations & continue training; investigate adding a new salt shed
Revised					
	Close police firing range at Town well site	U/F Dept. Steven Tyler	Keep Range Closed	Keep Range Closed	Keep Range Closed
Revised					
Revised					
Revised					

6a. Additions

	Water Dept. Environmental Management System (EMS) Implementation	U/F Dept. Steven Tyler	Finalize EMS	Completed final site walk and final draft EMS document.	Finish and implements EMS.
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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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 10
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

Some storm drain systems have been TV'd to establish information prior to replacement (Grove Street, Maple Street, Highland Street, and Wilson Street)

Sewer main (Elm Street) was smoke tested; illicit connections were identified and have been disconnected. Video inspections of sewer mains on Maple Street, Main Street and Pleasant Street were completed. Required infiltration mitigation repairs were identified and corrected. Likewise any IDDE connections observed have been removed.

Catch basin maintenance records updated and added to were appropriate.

Outfall mapping updated. GIS/CADD conversion of storm drain info planned to be continued for 2012.

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, 2009 through March 31, 2010)

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 %)	24

▪ 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	(%)	80%
Estimated or actual number of outfalls	(#)	100
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	75%
Mapping method(s)		
▪ Paper/Mylar	(%)	90%
▪ CADD	(%)	5%
▪ GIS	(%)	5%
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 %)	9
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	25% 75%
Pre-wetting techniques utilized **	(y/n or %)	Yes
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/l _n mi. or %)	5% increase
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l _n 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

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