

APR 28 2014

Municipality/Organization: Shrewsbury, Massachusetts
EPA NPDES Permit Number: MAR041158
MassDEP Transmittal Number: W-036325
Annual Report Number & Reporting Period: Year 11
April 1, 2013 – March 31, 2014

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

Part I. General Information

Contact Person: Jeff Howland **Title:** Town Engineer
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Mailing Address: Richard D. Carney Municipal Office Building, 100 Maple Avenue,
Shrewsbury, MA 01545

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: Daniel Morgado

Title: Town Manager

Date: 4/23/2014

Part II. Self-Assessment

The Town has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions.

Current State of the Phase II Program in Shrewsbury:

The Town in the past has budgeted \$5,000 per year for the Phase II Program. This cost does not include money for catch basin cleaning and street sweeping, which is currently budgeted separately with the Town Highway Department. It also does not include funds used for reviews, inspections, research, and reporting for compliance with the permit conditions. Those funds are part of the Engineering Department budget. Occasionally funds have been made available for the Phase II Program from other sources within town budget areas as well.

Town budgets as a whole have been greatly reduced in recent years, and the stormwater program has suffered due to the lack of available funding. Catch basin cleaning is one example in town. Just prior to the issuance of the Phase II Permit, the Town was cleaning 100% of the catch basins within public roadways annually. With each passing year there has been a steady decrease in the amount of catch basins the Town has been able to maintain. During Year One of the permit, the Town was able to clean 60% of the catch basins. By Year Six the Town cleaned 30% of the catch basins annually, and during Permit Year Eight, the Town was only able to clean 4% of the catch basins. During Year 11 the Town was fortunate to be able to clean approximately 45% of the catch basins in town.

While it's clear that an additional funding source is needed to simply maintain the status quo in town, the Town has also been reviewing the potential fiscal impact of the next Phase II Permit. It is apparent that the projected costs cannot be covered within the existing Town budget, and a new revenue source such as a stormwater utility fee will be needed. The Town is strongly considering creating a stormwater utility. A final course of action will be decided once the new permit is issued and the impacts are fully understood. In the meantime, the Town continues to be proactive and continues to work with a consulting firm to develop a stormwater utility for the Town, and to also evaluate the future stormwater program and assess annual program costs. We estimate spending approximately \$33,000 to complete these tasks, which we continue to find difficult to complete without having the new permit from EPA.

This past year Shrewsbury was pleased to take part again in the Central Massachusetts Regional Stormwater Coalition group. The group has expanded and now consists of 30 communities in Central Massachusetts that received funding from the Community Innovation Challenge Grant awarded by the Massachusetts Executive Office of Administration and Finance. Shrewsbury and other communities contributed \$2,833 each to cover a funding gap to keep the group viable this year. Attached is a summary of the Coalition's achievements.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

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

1a. Additions

	Pamphlet Mailings	Water & Sewer	# Pamphlets Mailed	Two pamphlets mailed to approximately 11,000 subscribers of municipal water/sewer utilities.
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2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
04	Water Monitoring & Sampling	Health Dept.	Sample Data	Samples for E. Coli & Total Coliform bacteria were taken on a weekly basis during the bathing season in Lake Quinsigamond.	
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
05 Revised	Local Ordinance	Engineering Dept.	Bylaw Adopted	Local Bylaw adopted at Annual Town Meeting in May 2007.	
06 Revised	Storm Sewer Map	Engineering Dept.	GIS Map	GIS Map under production to show additional drainage utility components such as catch basins and manholes.	
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

3a. Additions

15	Kings Brook IDDE Study	Engineering Dept.	Completed Study Report	A study of Kings Brook was performed, including sampling and TV inspections in Year 10. The report was generated this year and is attached.	
14	Grease Trap Inspection Program	Water & Sewer Dept.	# Grease Traps Inspected	Inspections of grease traps began in the Fall of 2009.	Continue inspections.
17	Survey, Sampling and Monitoring Equipment	Engineering Dept.	Equipment Purchased	The Town spent \$11,584.03 on sampling and monitoring equipment, more than last year's estimate.	Replenish supplies as needed.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
05 Revised	Local Ordinance	Engineering Dept.	Bylaw Adopted	Local Bylaw adopted at Annual Town Meeting in May 2007. Continuing to discuss regulations to supplement bylaw.	
08 Revised	Mass Stormwater Policy	Engineering Dept.	# Projects Reviewed	9 Projects submitted to the Conservation Commission and/or Planning Board were reviewed.	Continue to review new applications.
09 Revised	Site Plan Reviews	Engineering Dept.	Bylaw Adopted	Reviewed 10 construction projects with >1 acre disturbance.	Continue to review projects.
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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
05 Revised	Local Ordinance	Engineering Dept.	Bylaw Adopted	Local Bylaw adopted at Annual Town Meeting in May 2007. Continue to discuss regulations to supplement bylaw.	
08 Revised	Mass. Stormwater Policy	Engineering Dept.	# Projects Reviewed	9 projects submitted to the Conservation Commission and Planning Board were reviewed.	Continue to review new applications.
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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
10 Revised	Catch Basin Cleaning	Highway Dept.	Catch Basins Cleaned	A total of 2,188 catch basins cleaned, approximately 45% of all catch basins.	Continue to clean catch basins.
11 Revised	Street Sweeping	Highway Dept.	Streets Swept	All public streets were swept.	Continue to sweep streets.
Revised					
Revised					
Revised					
Revised					
Revised					

6a. Additions

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 11 (Reliance on non-municipal partners indicated, if any)	Planned Activities
05 Revised	Local Ordinance	Engineering Dept.	Bylaw Adopted	Local Bylaw adopted at Annual Town Meeting in May 2007.	
08 Revised	Mass Stormwater Policy	Engineering Dept.	# Projects Reviewed	9 submitted to the Conservation Commission and Planning Board were reviewed.	Continue to review new applications.
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

During Year 12 – The Town is waiting for the new Phase II Permit to be issued and will make plans at that time.

Part IV. Summary of Information Collected and Analyzed

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, 2010 through March 31, 2011)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	
Annual program budget/expenditures **	(\$)	
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
<ul style="list-style-type: none"> ▪ days sponsored ** ▪ community participation ** ▪ material collected ** 	(#)	
School curricula implemented	(# or %)	
	(tons or gal)	
	(y/n)	

Legal/Regulatory

Regulatory Mechanism Status (indicate with "X")	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
<ul style="list-style-type: none"> ▪ Illicit Discharge Detection & Elimination ▪ Erosion & Sediment Control ▪ Post-Development Stormwater Management 					
Accompanying Regulation Status (indicate with "X")					
<ul style="list-style-type: none"> ▪ Illicit Discharge Detection & Elimination ▪ Erosion & Sediment Control ▪ Post-Development Stormwater Management 					

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(#); and (est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	
% of population on septic systems	(%)	

Construction

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

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	
Site inspections (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	
Low-impact development (LID) practices permitted and encouraged	(y/n)	

Operations and Maintenance

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

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**		(\$)
• Hourly or per basin contract rate **		(\$/hr or \$ per basin)
• Disposal cost**		(\$)
Cleaning Equipment		
• Clam shell truck(s) owned/leased		(#)
• Vacuum truck(s) owned/leased		(#)
• Vacuum trucks specified in contracts		(y/n)
• % Structures cleaned with clam shells **		(%)
• % Structures cleaned with vacator **		(%)

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or lane mile contract rate **	(\$/hr. or In mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	
• % Roads swept with vacuum sweepers **	%	

Reduction (since beginning of permit coverage) in application on public land of:
 ("N/A" = never used; "100%" = elimination)

▪ Fertilizers	(lbs. or %)
▪ Herbicides	(lbs. or %)
▪ Pesticides	(lbs. or %)
Integrated Pest Management (IPM) Practices Implemented	(y/n)

(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
Pre-wetting techniques utilized **	(y/n or %)
Manual control spreaders used **	(y/n or %)
Zero-velocity spreaders used **	(y/n or %)
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/in mi. or %)
Estimated net reduction or increase in typical year sand application rate **	(±lbs/in mi. or %)
% of salt/chemical pile(s) covered in storage shed(s)	(%)
Storage shed(s) in design or under construction	(y/n or #)
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)

Water Supply Protection

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