Municipality/Organization: Town of Mansfield

EPA NPDES Permit Number: MAR 041126

MassDEP Transmittal Number: **W-039460**

Annual Report Number & Reporting Period: **Year 12** **April 1, 2014 – March 31, 2015**

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2015)

Part I. General Information

Contact Person: Richard C. Alves, Jr., P.E. Title: Town Engineer/Ass't DPW Dir.

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Mailing Address: Six Park Row Mansfield, MA. 02048

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: William R. Ross

Title: Town Manager

Date: April 28, 2015

Part II. Self-Assessment

The Town of Mansfield has completed the required self-assessment, and has determined that our Municipality is in substantial compliance with all permit requirements.

Mansfield drainage system has been installed and continuously upgrade throughout the years and can be reproduced as needed. The requirement of BMP's for erosion and sediment control on all projects continued during the 12th year.

The Mansfield D.P.W. uses CaCl2 (a natural salt brine that is exothermic and hygroscopic) which has reduced the accumulation of sand within its catch basins. The CaCL2 has the ability to release heat in a chemical reaction and attract moisture creating an effective anti-freeze that helps speed up the de-icing process).
During this 12th year, we continued with the established programs and implemented our by-laws and regulations. We are utilizing our contacts with volunteer advisory groups to enlist their input and support for storm water improvement projects. Continued funding and improvements to the Towns drainage system will be required for the development of the next 5-year plan and hopes to continue with improvement of its storm water management program.

Lara Thomas, Regional Administrator, Southeastern Regional Services Group (SERSG) developed Professional Engineering Services for the Community Innovation Challenge Grant Final Report.

The Southeastern Massachusetts Stormwater Collaborative (SEMSWC) is comprised of nineteen communities achieved three important goals.

Goal 1: The communities were trained in the basics of the NPDES Small MS4 Stormwater Permit to understand compliance requirements.

Goal 2: Developed a common website for all communities, www.SEMAstormwater.org., for public education and outreach.

Goal 3: developed a mapping, inspection, and screening of outfalls services

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1-1	Identify existing programs to be included in SMP	Engineering	Identify number of existing programs	Completed: See Report No. 1	
1-2	Develop NPDES materials for homeowner education	Engineering	Materials Posted and distributed	See above, Goals 1, 2, & 3 www.SEMAstormwater.org.	Mansfield will continue to use the website to keep the public aware of the need for good storm water management. **See above Goals 1 through 3.**
1-3	Distribute materials to identified programs	Engineering/ DPW	All identified programs receive materials	Completed: See Report No. 4.	
1-4	Implement Catch Basin Stenciling Program	DPW	Percentage of catch basins stenciled/ year	The Town uses the Highway Department to continue the installation of Almetek "No dumping" (fish symbol) 4" stainless, storm drain markers. We continue to investigate these permanent markers, damaged or missing logo's, and replace on an as needed basis.	The Town will continue to investigate these permanent markers, damaged or missing logo's, and replace on an as needed basis. Install these markers on roadways that we are doing full depth construction along with any new subdivision roadway being constructed.
1-5	List of Department names on Website	Town Administrator	Communicate with residents	The Town has maintained an updated list of Department head names , contact numbers, and email addresses	Continue to maintain and update list as necessary, and add contact information for specific storm water issues.

1a. Additions

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2-1	Sponsor Hazardous Waste Collection Day	Health	Reduce illegal dumping of hazardous material	The Health Department had hazardous waste collection day on April 5, 2013.	The Health Department host a hazardous waste collection day every other year and is planned to have the next collection day in 2016
2-2	Sponsor Recycle Center	DPW	Funding passed Recycle Center available	The Recycle Center/Compost Area is open Saturdays and Mondays for collections. The center is advertised on the Town and E-CALL website.	
2-3	Identify existing volunteer environmental groups	Engineering	Number of groups identified	We worked with the Keep Mansfield Beautiful Committee on several projects	Continue to meet with the Keep Mansfield Beautiful Committee to beautify areas in the Town of Mansfield.
2-4	Stream Cleanup Day	Engineering/DPW		Worked with Mansfield Scouts, Conservation, & D.P.W. on stream cleaning. We were successful in cleaning several rivers and streams.	Continue to work with Mansfield Scouts on Storm education and outreach efforts surrounding storm water pollution and prevention.
2-5	Implementation and Review	Engineering	Number of notices	Continued to perform field GPS to locate additional outfalls, and updated the information. Updated the Town website on the Storm water Phase II Program.	Update Town's website detailing the 12th Year's Annual Report and the development of the 2nd 5-year Storm water Plan. Awaiting EPA/DEP Guidelines.

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3-1	Create GIS Base Map	Engineering/ MIS	Storm Water map created	Completed: See Report No.1. Supports many future activities.	Mansfield's GIS Map will be continually maintained and upgraded as new data becomes available from new subdivisions and Site Plans.
3-2	Inspect outfalls, catch basins, and manholes	Engineering/ DPW	Field data entered into GIS database	Completed. See Report No. 2. Inspected and incorporated storm water structure into the GIS database.	The Engineering Division will continue to update new outfalls installed and investigate assumed outfalls to determine exact location.
3-3	Draft by-law prohibiting discharges into system	Engineering/ Health	Present draft at Town Meeting for approval	Completed: See Report No. 4. Proposed by-law was accepted at the 5/23/06 session of the 4/11/06 Annual Town Meeting.	
3-4	Develop plan to identify non-storm water discharges	Engineering/ DPW	Implement plan in Permit Year 6	Continued with plan to identify non-storm water discharges, including illegal dumping, by periodically reviewing the identified problem sites and cleaning the sites as necessary. No new illegal dumpsites identified.	Continue with plan implementation.
3-5	Dry weather screening (identify illicit discharges)	Engineering/ DPW	Percent of outfalls screened	Due to lack of funding and man power, the Town has halted additional efforts on verifying unknown outfalls which remain. Advised DPW that further investigation is needed to locate the remaining outfalls.	The Town will continue to make periodic visits to outfalls entering streams and rivers as part of its stream monitoring program.

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4-1	Review existing Planning Board Regulations	Engineering/ Planning/ ConCom	Complete review within one year	Completed: See Report No. 1	
4-2 --- Revised (In Report No. 2)	Present recommended changes to existing regulations --- Comprehensive Storm-Water Management By-Law	Engineering/ Planning/ ConCom ---	Changes on Public Hearing Agenda --- Revised By-Law for Town Meeting Warrant	Completed: See Report No. 4. Proposed Storm Water Management By-Law was accepted at the 5/23/06 session of the 4/11/06 Annual Town Meeting.	
4-3 --- Revised (In Report No. 2)	Review Site Plan By-Laws vs. EPA model ---	Engineering/ Building/ ConCom ---	Site Plan By-Laws reviewed within one year --- See 4-2	Completed: See Report No. 4. The Storm Water Management By-Law was accepted at the 5/23/06 session of the 4/11/06 Annual Town Meeting.	
4-4 --- Revised (In Report No. 2)	Site Plan By-Law change ---	Engineering/ Building/ ConCom ---	Draft developed for presentation at Town Meeting (Year 6) --- See 4-2	Completed: See Report No. 4. The Storm Water Management By-Law was accepted at the 5/23/06 session of the 4/11/06 Annual Town Meeting, and implemented. The Conservation Commission approved Regulations for a "Land Disturbance Permit" application, and processed 3 permits to date.	Conservation Commission to continue with review of permit Application for Land Disturbance in accordance with the Stormwater Management By-Law.
4-5	Develop control measures at construction sites	Planning/ Building/ ConCom/Engineering	Site inspections conducted to assure compliance	The Conservation agent, Building Inspector, and Engineering Division inspect all construction sites as required to assure compliance with any permits.	Construction sites will continue to be inspected by the Conservation agent, Building Inspector, and Engineering Division or their representative.

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5-1	Review existing by-laws, ordinances and regulations	Engineering	Review completed within one year	Completed: See Report No.1.	
5-2 --------- Revised (In Report No. 2)	Draft changes to regulations for runoff controls ----------	Engineering/ Planning ----------	Draft changes developed ---------- See 4-2	Completed: The Storm Water By-Law was accepted at the 5/23/06 session of the 4/11/06 Annual Town Meeting.	
5-3	Select appropriate BMP's to be used by planners	Engineering/ Planning	Incorporate BMP's into Planning Board Regulations	Completed: See Report No. 4. Post Construction run-off control was included in the Comprehensive Storm Water Management By-Law, accepted on 5/23/06 at the Annual Town Meeting.	
5-4 --------- Revised (In Report No. 2)	Draft changes to by-laws for runoff control ----------	Engineering/ Planning ----------	Develop draft by-law and present at Town Meeting ---------- See 4-2	Completed: The Storm Water By-Law was accepted at the 5/23/06 session of the 4/11/06 Annual Town Meeting.	Enforcement of State, EPA, and Local regulations will continue
5-5	Develop O&M manual for BMPs	Engineering/ DPW	Creation of O&M manual	The Engineering Division and the Conservation agent developing O&M procedures	Implement O&M procedures
5-6	Multi-Department Reviews	Planning and Building	Multi-Department reviews are conducted on all site plans and subdivision projects	The Conservation Commission, Planning Board, Building, Engineering, and Fire and Police Departments review all aspects of projects which affect their departments	All projects will continue to undergo multi-department reviews

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6-1	Identify and map sensitive receptors within municipality	Engineering	Map created	Completed: See Report No. 1. Supports future activities.	
6-2	Review and modify current street sweeping program	DPW	Review and program modifications completed	Completed: See Report No. 4.	
6-3	Develop a CIP for equipment needs	DPW	Capital Improvements Program (CIP) created	Completed: See Report No. 4.	
6-4	Develop policies for snow removal and disposal	DPW	Inventory of possible disposal areas	Completed. See Report No. 2. Established a written policy for snow removal and disposal, with consideration given to environmental impacts.	
6-5	Conduct employee training for vehicle washing practices	DPW	Written policy for vehicle washing	Completed: A written policy for vehicle washing had previously been established. See Report No. 2. The new truck wash facility, in a new water treatment facility adjacent to the Highway Garage, became fully operational; and the written policy to support full operation of the new vehicle wash facility was finalized.	The DPW workforce will continue to practice and implement good housekeeping practices during their daily activities
6-6	Program for storm water system maintenance	DPW	Written Plan	Completed. See Report No. 2. Established a written policy and schedule for catch basin cleaning. **The Mansfield D.P.W. uses CaCl2 (a natural salt brine that is exothermic and hygroscopic) which has reduced the accumulation of sand within the catch basins. We have inspected multiple structures and found very little build up in sumps.**	Continue with catch basin cleaning and remove and replace structures as necessary to maintain 4' sumps with Full Depth Construction of Roadways

6-7	Develop plan for illegal dumping control	DPW	Number of signs posted	Completed. Established a written inventory of significant (illegal) dumping sites, and posted 28 signs to date. In Year 3, prepared an Illicit Discharge By-Law within the proposed Comprehensive Storm water By-Law. The Storm water By-Law was accepted at the 5/23/06 Annual Town Meeting.	

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
7-1	Install new drainage structures	DPW	Eliminate TSS	The DPW replaced/installed over 8 substandard catch basins with new deep sump catch basins	Install deep sump catch basins as needed and incorporate new basins into existing roadway reconstruction projects as needed.

7a. Additions

7b. WLA Assessment

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 **	($)	
Total program expenditures since beginning of permit coverage	($)	$1,200,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		Borrowed

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	Unknown
Stormwater management committee established	(y/n)	N
Stream teams established or supported (Canoe River Aquifer Advisory Committee)	(# or y/n)	Y
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		
▪ days sponsored **	(#)	1
▪ community participation **	(# or %)	Unknown
▪ material collected **	(tons or gal)	Unknown
School curricula implemented	(y/n)	N

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	(%)	95%
Estimated or actual number of outfalls(waiting response from EPA)	(#)	389
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	95%
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100%
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 **	(%)	100%
Site inspections completed **	(# or %)	100%
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and $)	0
Complaints/concerns received from public **	(#)	unknown

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)	2(as needed)
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	2(as needed)
Qty of structures cleaned **	(#)	50%/yr
Qty. of storm drain cleaned **	(%, LF or mi.)	As needed
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	unknown
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	(#)	1/owned
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	38%
• % Structures cleaned with vactor **	(%)	12%

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	Full Spring
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	unknown
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 ln mi.)	
• Disposal cost**	($)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	2
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	0
• % Roads swept with rotary brush sweepers **	%	100%
• % Roads swept with vacuum sweepers **	%	N/A

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	0

▪ Herbicides	(lbs. or %)	0
▪ Pesticides	(lbs. or %)	0
Integrated Pest Management (IPM) Practices Implemented	(y/n)	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	100% Future Future 0%
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/ln mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	N/A
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
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)	Y

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	