Municipality/Organization: Town of Paxton

EPA NPDES Permit Number:

MassDEP Transmittal Number: **W-MAR0418**

Annual Report Number & Reporting Period: **Year 14** **April 1, 2016 – March 31, 2017**

NPDES PII Small MS4 General Permit Annual Report
(Due: May 1, 2017)

Part I. General Information

Contact Person: Carol L. Riches Title: Town Administrator

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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: Carol L. Riches

Printed Name: Carol L. Riches

Title: Town Administrator

Date: April 26, 2017

Part II. Self-Assessment

CMRSWC CIC Grant FY2014 Summary of Activities
Year 14: April 1, 2016 – March 31, 2017

In Year 14, the Town of Paxton continued to be an active participant in the Central Massachusetts Regional Stormwater Coalition (CMRSWC). The work of CMRSWC in Year 14 (which overlaps municipal fiscal years 2015 and 2016) was funded entirely by contributions of approximately $4,000 from each of the 28 participating Towns, including Paxton. CMRSWC is a MS4 resource for all member communities.

Overview of CMRSWC
In 2017 the CMRSWC reached 31 member towns: Auburn, Boylston, Charlton, Dudley, Grafton, Hardwick,
Holden, Hopkinton, Leicester, Millbury, Northborough, Northbridge, Oxford, Palmer, Paxton, Rutland, Shrewsbury, Southbridge, Spencer, Sterling, Sturbridge, Upton, Uxbridge, Ware, Webster, West Boylston, Westborough, Wilbraham, Framingham, Lunenburg, and Marlborough.

CMRSWC was officially formed in FY2012 with 13 members, expanding to 31 FY2016. Its FY2014 work expanded efforts initiated in previous years to comply with requirements anticipated in the new Massachusetts MS4 Permit. CMRSWC's FY2015 efforts were facilitated by the consulting firms of Tata & Howard, Inc., and Verdant Water, supported by vendor PeopleGIS. However, CMRSWC members themselves continue to be responsible for putting the tools developed by the Coalition to use.

CMRSWC's Partnerships in Central Massachusetts
CMRSWC continues to be 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. These efforts are discussed in following sections as they relate to the following organizations:

- Massachusetts Department of Environmental Protection (MassDEP)
- United States Environmental Protection Agency (USEPA)
- Other Massachusetts Stormwater Coalitions
- New England Water Environment Association (NEWEA)
- Massachusetts Municipal Association (MMA)

In December 2016, CMRSWC created four standing sub-committees to allow members to focus efforts on specific issues important to the Coalition. These sub-committees are:

- Education Sub-Committee: responsible for developing and promoting outreach and educational materials for audiences targeted in the 2016-MS4 permit. The committee is the primary liaison to the WPI Project Centers and other university partnerships.

- Program Sub-Committee: responsible for planning and scheduling Annual Meeting, Steering Committee Meetings, educational workshops, and other forums for discussion of MS4 topics.
- Technical Sub-Committee: responsible for managing Coalition's website and shared equipment resources; advising members on relevant technical issues including GIS system maintenance and upgrades.
- Legislative Sub-Committee: serves as the liaison to the Massachusetts Statewide Stormwater Collaborative; responsible for tracking MS4 related legislation and regulations and keeping the legislature and regulatory agencies informed of the concerns of member communities.

- The CMRSWC Steering Committee held four meetings during this 12 month reporting cycle. The CMRSWC Annual Meeting was held on September 20, 2016 in Holden. CMRSWC's Needham MS4 Technical Training Workshop and Stormwater Video were featured at the Annual Meeting of the Statewide Collaborative on September 27, 2016 at the Massachusetts Department of Environmental Protection central region office in Worcester. Members of CMRSWC attended and actively participated in the Massachusetts Statewide Stormwater Collaborative meetings.

Worcester Polytech Institute Worcester Community Project Center (Minimum Control Measures 1 and 2)

From September 27, 2016 Statewide Stormwater Collaborative Minutes: Andrea Briggs of DEP provided a review of WPI Student projects, and an overview of the program. Andrea facilitates the program. In 2012 WPI and DEP approached the CMRSWC to pair students with communities who need assistance. Since that time WPI has created a new center called the Water Research Outreach Center (WROC), which is a Worcester Project Center. They also have a Boston Project Center. There are three ways through WPI that students can help cities and towns. WPI project timeline is structured in 4 quarters. A, B, C and D term. During the A term they prepare to work (e.g. learning the permit); during the B term the students are available full time to the communities. This past summer the student group looked at cost estimates for municipalities and created a permit summary. Andrea showed 5-minute educational video on stormwater and the connection to local resources, which is posted on the town of Holden webpage. WPI students in attendance introduced themselves and the projects they have been working on. Project #1 involves developing a methodology to help communities estimate cost and hopefully to compare to EPA's cost estimators. Project #2 involves developing an education and outreach campaign to educate municipalities and looking to conduct education and outreach to communities. Andrea described how the partnership between the state and WPI has been very beneficial. Holden has had at least 3 projects now.

WPI students developed a stormwater toolkit featuring an activity book and stickers for children. The activity book includes opportunities for parents to participate and ask questions. The students participated in a craft fair at Union Station in Worcester where they surveyed attendees on logo schemes for their stormwater project branding.

Member Needs Survey

In September 2016, CMRSWC developed a technical needs survey that measured the concerns of member communities with respect to the issuance of the 2016-MS4 General Permit for Stormwater Discharges. The survey also asked members to rank certain programs and tasks that CMRSWC could support to assist members in complying with the MS4 Permit.

Coalition members ranked their needs as follows:

1. Provide Comprehensive Training Programs
2. Continue Standardization of Templates and Forms
3. Provide Web-Based Tools That Support GIS Mapping

Coalition members ranked their compliance concerns as follows:

1. Funding
2. Preparation of NOI and SWMP
3. Designing and Constructing BMP Retrofits
4. Performing Outfall Inspections
5. Performing Outfall Inventory Ranking
6. Developing a Written IDDE Program
7. Meeting TMDL Requirements
8. Developing Written Catchment Investigation Procedures
9. Identifying and Removing Illicit/Illegal Discharges
10. Developing and Maintaining SWPPPs

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	Develop and distribute educational brochures	DPW Superintendent		Provided information on stormwater issues, stenciling program, etc. on the Town's website and at the Library	Continue with program
Revised					
2	Create a Town Website	Town Administrator	Create a Town Website and keep it current	Continue to place information on the website, direct people to the site and to the Coalition's site	Continue with this program
Revised					
3	Educate restaurants about grease traps etc.	Board of Health	Quarterly reports required on grease trap maintenance, cleaning and grease disposal	Reports submitted and reviewed by the Board of Health	Continue to monitor through this program
Revised					
4	Stenciling Storm Drains	DPW Superintendent	Stencil drains	Reports received and reviewed	Continue with program
Revised					
	Erect Tributary signage	DPW Superintendent	Tributary signage	Tributary signage in place	Continue with signage
Revised					
					Continue as a member of the Coalition and attend workshops and educational forums Promote as necessary on Facebook and Website
Revised					

1a. Additions **Year 14 activities included meetings of the Coalition's Steering Committee,**

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
1	Stormwater Control Bylaw adopted May 2006	Town Administrator	Stormwater Control Bylaw updated 2012	Permitting taking place through the Planning Board. Developers & Contractors apply for stormwater permit	Continue to hold hearings
Revised					
2					
Revised					
Revised					
Revised					
Revised					
Revised					

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1.	Storm water system map	DPW Superintendent	Map completed	Map in use as a maintenance and inspection aid	Continue program
Revised					
2.	Regulatory mechanism prohibiting stormwater discharges into storm drains`	DPW Superintendent	Adopted regulations	Educate public Stormwater Bylaw and regulations including IDDE	
Revised					
3	Education of Town employees, businesses and the public on the hazards of illegal discharges and improper waste disposal	DPW Superintendent Board of Health		Discussions and training held with the DPW working throughout the year Stormwater and Coalition workshops attended	Continue Program and outreach
Revised					
Revised					
Revised					
Revised					

3 ,4, 5 & 6 Additions

MS4 Workshops and Technical Training (Minimum Control Measures 3, 4, 5, and 6)

Municipal Stormwater Technical Assistant Project

The CMRSWC was awarded a $50,000 Municipal Stormwater Technical Assistance Contract Grant from the Massachusetts Department of Environmental Protection to provide technical assistance support and materials designed to help regulated communities in Massachusetts begin to cost-effectively comply with the requirements of the 2016 MS4 Permit. The grant funded the Needham MS4 training workshop, educational and training videos, and stormwater templates.

Needham Workshop

On June 29, 2016, CMRSWC and the Fuss & O'Neill project team held an MS4 training workshop at the Needham Public Services Administration Building. This site was selected because it contains several features that provided participants hands-on training and exposure to actual operations and conditions affected by the new MS4 permit requirements. These features include new SWPPP regulated activities, outfalls discharging to an on-site stream, vegetated swales, infiltration basins, catchbasin and manholes, gravel surface parking area, and more.

The program targeted new or inexperienced public works professionals, stormwater coordinators, and other municipal staff responsible for their community's NPDES Phase II Stormwater Permit Minimum Control Measures 3, 4, 5, and 6. The program included classroom presentation, site visits, and hands-on experience on the following MS4 topics:

- Outfall inspections and water quality sampling – safety, tools, protocols, hits
- Mapping stormwater system attributes – paper versus GIS
- Stormwater BMPs and LID – construction, operations, and maintenance
- SWPPPs – site characteristics

Millbury Workshop

CMRSWC held a second workshop for Coalition members on October 28, 2016 at the Millbury Public Works Facility. The program targeted public works professionals, stormwater coordinators, and other municipal staff responsible for the NPDES Phase II Stormwater Permit Minimum Control Measures 3, 4, 5, and 6.

The MS4 Training Workshop emphasized hands-on training on the following topics:

- IDDE – review of CMRSWC IDDE template and inspection form
- BMPs and LID–BMP retrofits; BMP & LID construction, O&M
- SWPPPs – using CMRSWC template to develop a facility-specific SWPPP

The Workshop included a Vendor Fair with products and services that support MS4 compliance. There were scheduled presentations by Environmental K9 Services, People GIS, and Civil View drone services.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1.	Bylaw requiring implementation of BMP on construction site	Town Administrator & Planning Board	Adoption of Stormwater Bylaw and permitting process	Hearings held with developers. DCR inspected sites and no problems reported	Continue with procedures that are in place and appear to be working well
Revised					
2.	Establish procedures for site inspections	Town Administrator Planning Board	Inspections	DCR inspected during dry and wet events and reported no significant problems and minor remedial activities completed	Continue with procedures that are in place and appear to be working well
Revised					
Revised					
Revised					
Revised					
Revised					

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1.	Post Construction controls included in Stormwater Management Bylaw	Planning Board	Controls in place and working	Site inspections by DCR	Continue with program
Revised					
2.	Review Open Space Plan for BMP Strategies	Open Space Committee	BMP's adopted	New plan completed and adopted	Continue with program
Revised					
Revised					
Revised					
Revised					
Revised					

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1.	Procedures and documentation for scheduled maintenance of catch basins, detention basins and other drainage structures	Town Administrator DPW Superintendent	Adopt procedures	Catch basin program in place	Continue yearly maintenance
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

6a. Additions

Videos and Templates (Minimum Control Measures 1, 3, 4, 5, 6)

In addition to the Needham training workshop, the Municipal Stormwater Technical Assistance Contract Grant funded the following stormwater videos, new templates, updates of existing CMRSWC templates, and referenced additional online resources associated with various stormwater management topics to assist regulated communities.

Underscoring the value of the videos and templates developed by CMRSWC, in advance of the Millbury Technical Training Workshop participants were asked to review the MS4 training videos on CMRSWC's website. These videos provided background on the permit requirements, which facilitated the field training component of this workshop. CMRSWC MS4 templates were used and referenced for the SWPPP and IDDE program elements.

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

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, 2016 through March 31, 2017)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures **	($)	$4,000
Total program expenditures since beginning of permit coverage	($)	**$192,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		CIC
**One of thirty communities receiving a total of $80,000 CIC Grant money		

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	80%
Stormwater management committee established	(y/n)	*N
Stream teams established or supported	(# or y/n)	N
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	N/A
Shoreline cleaned since beginning of permit coverage	(mi.)	N/A
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	147
▪ community participation **	(# or %)	262 families
▪ material collected **	(tons or gal)	7,700 gallons
School curricula implemented	(y/n)	N
Paxton is in partnership with six other communities known as Wachusett Earthday Recycling Center		

*** Currently being administered through the DPW Superintendent and Town Administrator**

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	(%)	100%
Estimated or actual number of outfalls	(#)	115
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	100%
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	10%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	10%
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	0
Illicit connections removed **	(#); and (est. gpd)	0

Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	0
% of population on sewer	(%)	.04%
% of population on septic systems	(%)	99.96%

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	2
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	2
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and $)	$0
Complaints/concerns received from public **	(#)	0

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 %)	2
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	Y
Low-impact development (LID) practices permitted and encouraged	(y/n)	Y

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	1/Yearly
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1/Yearly
Qty of structures cleaned **	(#)	150

Qty. of storm drain cleaned **	(%, LF or mi.)	25 %
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	30 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Compost

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	($)	$4000.00
• Hourly or per basin contract rate **	($/hr or $ per basin)	$23.00 per hour non contract
• Disposal cost**	($)	$0
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)	Yearly
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	Yearly
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	40 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Mooreland Cemetery
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	($)	$5,000
• Hourly or lane mile contract rate **	($/hr. or ln mi.)	N/A
• Disposal cost**	($)	$0
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 %)	50%
▪ 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	90%$MgCl_2$ 10%
Pre-wetting techniques utilized **	(y/n or %)	N
Manual control spreaders used **	(y/n or %)	Y 60%
Zero-velocity spreaders used **	(y/n or %)	Y 40%
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	+90%
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln mi. or %)	-90%
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100%
Storage shed(s) in design or under construction	(y/n or #)	N
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	100%

Water Supply Protection

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

Conclusion

More than 40 representatives, including CMRSWC members, from MS4 communities participated in the MS4 Workshop in Needham. More than 35 CMRSWC members participated in the Millbury Workshop. The production of 16 videos targeting specific MS4 topics and training opportunities expands the learning opportunities to anyone with access to the web.

The enhanced MS4 templates and information sources on developing IDDE plans, SWPPPs, bylaw review, and LID, which are accessible on the Coalition's website, provide relevant tools to communities implementing their MS4 program with local staff and resources. They are just as relevant to MS4 communities choosing to partner with associations or consultants in the implementation of their MS4 requirements.

CMRSWC members receive ongoing value from the Coalition's workshops, field training, video library, and templates. CMRSWC membership provides consistency to an MS4 constituency subject to routine staff changes, questionable access to funding, and ongoing regulatory demands.