

**Municipality/Organization:** Town of Paxton

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**EPA NPDES Permit Number:**

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**MassDEP Transmittal Number:** W-MAR0418

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

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

### **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*

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Printed Name: Carol L. Riches

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Title: Town Administrator

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Date: April 21, 2015

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## Part II. Self-Assessment

### CMRSWC CIC Grant FY2014 Summary of Activities Year 12: April 1, 2014 – March 31, 2015

In Year 12, the Town of Paxton continued to be an active participant in the Central Massachusetts Regional Stormwater Coalition (the Coalition). The Coalition's work in Year 12 was funded by a \$80,000 fiscal year 2014 (FY2014) Community Innovation Challenge (CIC) grant from the Massachusetts Executive Office of Administration and Finance. This grant was supplemented by a contribution of approximately \$4,000 from each of the 28 participating Towns, including Paxton.

#### *Overview of the Coalition*

The FY2014 Coalition included 28 towns: Auburn, Boylston, Charlton, Dudley, Grafton, Hardwick, Holden, Hopkinton, Leicester, Millbury, Monson, Northbridge, Northborough, Oxford, Palmer, Paxton, Rutland, Shrewsbury, Southbridge, Spencer, Sturbridge, Upton, Uxbridge, Ware, Webster, West Boylston, Westborough, and Wilbraham.

The Coalition was officially formed in FY2012 with 13 members, expanding to 30 in FY2013. Its FY2014 work expanded efforts initiated in previous years to comply with requirements anticipated in the new Massachusetts MS4 Permit when it becomes final, which is expected sometime in 2016 or 2017. The Coalition's FY2014 efforts were facilitated by the consulting firms of Tata & Howard, Inc., and Verdant Water, supported by vendor PeopleGIS. However, the Coalition members themselves continue to be responsible for putting the tools developed by the Coalition to use.

The Coalition was honored as a recipient of the first Annual "Best Stormwater Idea in New England", also known as a STORMY Award (*see image below*). This honor was bestowed by the New England Stormwater Collaborative, a joint effort of the New England Water Environment Association (NEWEA), the New England Chapter of the American Public Works Association (APWA), and the New England Water Works Association (NEWWA). A representative from the Town of Uxbridge accepted this honor at a ceremony in Worcester, MA on April 1, 2015.



Figure 1: CMRSWC's "STORMY Award" for Collaborative Efforts in Stormwater Management

### ***The Coalition's Partnerships in Central Massachusetts***

The Coalition 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)

Additional organizations and entities are mentioned elsewhere throughout this Annual Report, reflecting the wide network of knowledge and experience that the Coalition has tapped into.

#### *Massachusetts Department of Environmental Protection (MassDEP)*

The Coalition continued its partnership with the MassDEP in FY2014, 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). Kickoff for this partnership began in September 2014 with a meeting at MassDEP's office in Worcester, MA. The IQP completed in fall 2014 was the fourth such project the Coalition has done in conjunction with MassDEP and WPI.

This IQP included activities that will benefit all Coalition towns, especially Holden, Millbury, and Southbridge, all of which volunteered for an intensive evaluation. Representatives from these three towns worked with the WPI students to compile a detailed summary of the full cost of their stormwater programs. The cost evaluation was developed in conjunction with the Coalition's consultants, and included not just line items budgeted by public works (or highway) departments, but also staff labor, operations and maintenance tasks, waste disposal fees, reprographics and media, legal counsel, site plan reviews, construction and post-construction inspections, and other tasks. Some of these activities are core components of a town's stormwater program, but may be managed or budgeted by planning departments, conservation commissions, boards of health, code enforcement, or other entities and therefore not generally included in assessments.

The comprehensive report prepared by the WPI IQP students was presented to their university sponsors in December 2014 and can be downloaded at: [www.centralmastormwater.org/pages/CRSC\\_documents/Attachment B\\_WPI Cost Analysis of the 2014 MA MS4 DraftPer.pdf](http://www.centralmastormwater.org/pages/CRSC_documents/Attachment_B_WPI_Cost_Analysis_of_the_2014_MA_MS4_DraftPer.pdf). The findings of this report were also presented by the students to the 495/MetroWest Partnership in spring 2015. The framework used by the WPI students for the cost evaluation features into the ongoing stormwater program cost task discussed under *Coalition Activities in Year 13* (located at the end of this narrative.)

In addition to the stormwater program cost component, the Fall 2014 WPI students performed water quality monitoring in Coalition Communities.

Earlier in Year 12, a different team of WPI IQP students did inspection and mapping work in several Coalition towns, including Upton, MA, shown below, under the supervision of the Towns and consultants. Data from these activities was entered directly into the online mapping and inspection system.



*Figure 2: The Coalition's Spring 2014 WPI IQP Student Team Inspecting and Mapping Stormwater Infrastructure in Upton, MA*

The Coalition appreciates the ongoing dedication of MassDEP to work with our members so closely and collaboratively.

#### *United States Environmental Protection Agency*

The Coalition continued collaboration 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.

Many members of the Coalition attended the USEPA's October 2014 workshops on the 2014 Draft Massachusetts MS4 Permit, and several attended the formal public hearing on this draft permit on November 19, 2014 at the Leominster Public Library. At this public hearing, Coalition members spoke about the need for the final Permit to focus on provisions that maintain (and improve) water quality, not those that cause administrative burden without demonstrated benefits. Our comments at this hearing also requested USEPA's assistance in educating community leaders, such as selectmen and Town Administrators, about the increased need for multiple town departments and staff members to work together to comply with expanded provisions, such as illicit discharge detection and elimination (IDDE) and good housekeeping. The Coalition submitted formal comments on the 2014 Draft Massachusetts MS4 Permit, which can be found at [http://www.centralmastormwater.org/pages/CRSC\\_documents/MS4PermitComments](http://www.centralmastormwater.org/pages/CRSC_documents/MS4PermitComments).

The Coalition reached out to USEPA's Newton Tedder to suggest ways to present the drivers of expanded stormwater management to town leaders and decision makers at the "Roofs, Roads, Runoffs and Regulations: New Standards for Treating Stormwater and Drinking Water" session of the Massachusetts Municipal Association's Annual Conference in Boston on January 23, 2015. The approach resulted in an effective update to these leaders (who may be concerned about the scope and financial impacts of the proposed permit)- one that empowered them to serve as stormwater outreach resources in their own communities.

The Coalition continued to communicate with USEPA Region 1's Kyra Jacobs and Gina Snyder during Year 12. Ms. Jacobs is a connection to agency staff who work to protect water resources, and has been a positive advocate of the importance of stormwater management in accomplishing this goal. We will continue to engage with Ms. Jacobs as competitive grants for regional MS4 compliance work may become available from the agency in the near future. Ms. Snyder has served as an ongoing resource for the Coalition and its consultants about agency resources, most recently the approval of easy-to-use field kits for ammonia, which we purchased and distributed in Year 12. We appreciate the support of these agency staff.

#### *Other Massachusetts Stormwater Coalitions*

The Coalition continues to coordinate with “sister” groups with a similar stormwater focus 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); and
- The Northern Middlesex Stormwater Collaborative (coordinated by the Northern Middlesex Council of Governments)

Administrators from each of these groups are invited to attend Coalition Steering Committee meetings. Further, the Coalition coordinated with each of these “sister” coalitions during preparation of its comments on the 2014 Draft Massachusetts Small Municipal Separate Storm Sewer (MS4) Permit to ensure consistency in suggestions and revisions submitted to the US EPA.

Members of the Coalition were invited to attend training sessions the Merrimack Valley Stormwater Coalition hosted in March and April 2015. We shared digital versions of the Coalition’s stormwater inspection forms with both the Neponset Valley Regional Stormwater Collaborative and the Northern Middlesex Stormwater Collaborative, and the latter has also benefitted from the structure of the online mapping and inspection system we developed and implemented in Years 10 and 11.

#### *New England Water Environment Association (NEWEA)*

The Coalition was pleased to receive a \$2,000 competitive grant from the NEWEA Humanitarian Assistance & Grants Committee in September 2014. This grant was used to purchase a second Nonpoint Source hands-on educational EnviroScape model ([www.envirosapes.com/nonpoint-source.html](http://www.envirosapes.com/nonpoint-source.html)) for use by Coalition members (the first was purchased in Year 10 with funds from the first CIC Grant).

The photo below was taken at the Coalition’s October 7, 2014 training workshop for CMRSWC communities, and shows Todd Girard (Conservation Agent in Charlton, MA) demonstrating to other members how the EnviroScape table can be used as an education tool for kids of all ages, as well as adults. This train-the-trainer format increases confidence of our members to do outreach on the topic of stormwater pollution prevention in their own communities.



*Figure 3: CMRSWC Members Learn How to Demonstrate Stormwater Pollution*

With the purchase of this second model, the CMRSWC can make this popular resource more readily available across the substantial geographic spread of our 28 municipal members. The presence of second unit also allows towns to easily demonstrate the impacts of stormwater pollution and ways to prevent it, showing the resulting differences in water quality when Best Management Practices (BMPs) are installed on one unit, but not on the other unit. One model is stored in Charlton, MA, and the other stored in Shrewsbury, MA to facilitate any member town having easy access to the tool.

The NEWEA grant award exceeded the Coalition's application, so remaining funds will be used to replenish the consumable materials used in the demonstration, including food coloring, baking soda, clay, and sponges.

*Massachusetts Municipal Association (MMA)*

Members of the Coalition have been active in the MMA for years, including Robin Craver, Town Administrator for Charlton, MA and an active Coalition leader, who serves on MMA's Policy Committee on Energy and the Environment. This Committee formulates policy related to stormwater, water quality, water supply, wetlands, coastal areas, and other related environmental issues and represents a way for the Coalition to learn from (and share) ideas around the Commonwealth.

In Year 12, the Coalition participated on the "*Underwater: Financing New Regulations*" session at MMA's Annual Conference in Boston on January 24, 2015, discussing how regionalization can be appropriate for stormwater management.

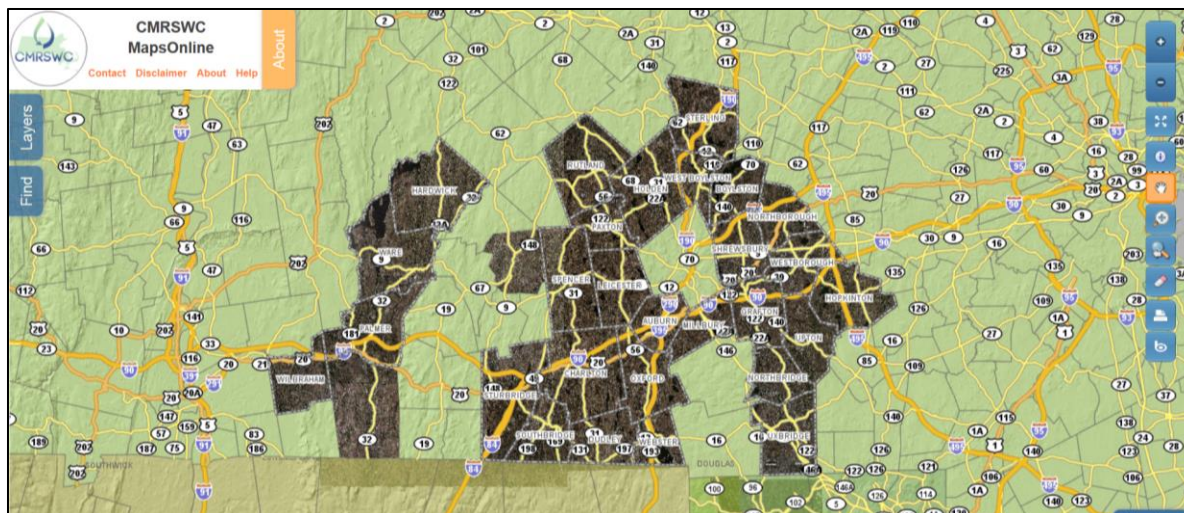
Finally, the Coalition coordinated with MMA during preparation of its comments on the 2014 Draft Massachusetts Small Municipal Separate Storm Sewer (MS4) Permit to ensure consistency in suggestions and revisions submitted to the US EPA.

*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- one that spans across multiple MCM's- is the integrated online mapping and inspection database, hosted by PeopleGIS. The database is cloud-based, and can be accessed by all 28 member communities through a desktop or tablet computer. Below is a screen shot of the platform showing the extent of the 28 Coalition communities.





*Figure 4: CMRSWC's Online Mapping and Inspection Platform*

We were pleased to see the increased use in Year 12 by Coalition members of this resource, both in terms of inspections of existing infrastructure (such as outfalls) and mapping additional infrastructure, such as catch basins and pipe (a linear feature added in Year 11). Newer Coalition communities (those that joined in FY2013) continue to upload GIS shapefiles to the platform, managing their stormwater system infrastructure information in one location.

An investment in Year 12 intended to increase use of the online mapping and inspection platform was the purchase of new Samsung tablet devices for each community that are faster, allowing data to load more quickly than the ASUS tablets purchased in FY2012. We believe that the mapping and inspection tool will be used increasingly as town staff members become comfortable with the platform, realize how easy it is to use, and see how it facilitates compliance and documentation.

As noted in last year's report, this platform 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 is 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 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- they will continue to be revised, as needed, to meet the goals of the Coalition members and future Massachusetts MS4 Permit requirements.

### 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 8 (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					
Revised					

#### 1a. Additions



	<p>Year 12 activities included routine meetings of the Coalition's Steering Committee, a day-long refresher training workshop (and FY2014 Kickoff Meeting) on October 7, 2014, and a workshop on November 12, 2014 to educate members about the 2014 Draft Massachusetts Small Municipal Separate Storm Sewer (MS4) Permit and identify concerns. The Town of Paxton participated in training workshops, reviewed deliverables, and served other key roles as described in this Annual Report.</p> <p>An exciting tool for public education that was rolled out in Year 12 is the Coalition's Twitter account, <a href="#">@MAStormH2O</a>. As of the date of this report, the Coalition's account has 67 followers, including other stormwater coalitions around the country. Information tweeted (or retweeted) by the Coalition in Year 12 addressed such water quality topics and issues as:</p> <ul style="list-style-type: none"> <li>• Sustainable infrastructure resources</li> <li>• APWA's Public Works Week outreach activities</li> <li>• Pet waste</li> </ul>	DPW Superintendent Town Administrator			<p>Continue as a member of the Coalition and attend workshops and educational forums</p> <p>Promote as necessary on Facebook and Website</p>
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	<p>management</p> <ul style="list-style-type: none"> <li>• Available webinars and training events</li> <li>• Erosion control practices</li> <li>• Green infrastructure</li> <li>• Appropriate fertilizer application</li> <li>• Environmentally-friendly best management practices for snow and ice control</li> <li>• Drought and innovative water recycling/reclamation efforts</li> <li>• Proposed changes to definition of Waters of the US</li> <li>• USEPA's "WaterSense" program</li> <li>• The role of public education in developing successful stormwater funding programs.</li> </ul>				
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	<p>In Year 12, the Coalition expanded its efforts to educate the public and other communities about its work. This includes the following presentations and events, listed in chronological order:</p> <ul style="list-style-type: none"> <li>• On May 16, 2014, Robert McNeil from Millbury, MA and a consultant presented on the Coalition's work at the 5th Annual Water Resources Strategies Symposium, hosted by the Massachusetts Coalition for Water Resources Stewardship in Marlborough, MA, with a presentation entitled <i>"30 Towns Collaborating for Cost Savings, Efficiency in MS4 Compliance and Water Quality"</i>.</li> <li>• On August 7, 2015, the Coalition's outreach to other stormwater</li> </ul>				
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	<p>coalitions was demonstrated in a presentation entitled <i>“CMRSWC: Resources to Get the Most out of Your CIC Grant Funding”</i>, given at the Community Innovation Challenge (CIC) Stormwater Symposium. We were invited by the Massachusetts Executive Office of Administration and Finance to present at this event, which it hosted in Worcester, MA.</p> <ul style="list-style-type: none"> <li>• On September 19, 2015, John Woodsmall from Holden, MA gave a presentation called <i>“MA MS4 Permits: A Municipal Perspective – Implementing Stormwater Programs”</i> at the Environmental Business Council’s</li> </ul>				
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	<p>Water Resource Management Program.</p> <ul style="list-style-type: none"> <li>On September 22, 2014, representatives from the Coalition (including Hopkinton, Shrewsbury, and a consultant) attended the Local Government Advisory Committee's "Protecting America's Waters" Workgroup, held in Worcester, MA, and commented on the record about the importance of encouraging appropriate long-term maintenance of stormwater Best Management Practices. The Coalition submitted formal comments to the USEPA on its Proposed Rule to clarify the definition of Waters of the United States (WOTUS) in the</li> </ul>				
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	<p>Clean Water Act.</p> <ul style="list-style-type: none"> <li>On January 24, 2015, the Coalition participated on a panel session entitled <i>"Underwater: Financing New Regulations"</i> at MMA's Annual Meeting in Boston. This session focused on new and established financing tools to ensure compliance with these requirements through means such as property surcharges, stormwater utilities, low-interest loans, principal forgiveness and regional stormwater opportunities.</li> <li>On January 26, 2015, the Coalition presented its work in a session entitled <i>"MS4 Compliance: Common Threads (and opportunities) in New England Permits"</i> at NEWEA's Annual Meeting in</li> </ul>				
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	<p>Boston, MA. This session, which was well-attended, highlighted the tools developed by the Coalition (and other groups) that can be used to provide cost-effective solutions to regional stormwater management challenges.</p>				

## 2. Public Involvement and Participation

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	Stormwater Control Bylaw adopted May 2006	Town Administrator	Stormwater Control Bylaw updated 2012	Permitting taking place through the Planning Board	Continue to hold hearings
Revised					
2	Introduce “Adopt a Stream” Program	Town Administrator		No progress	
Revised					
Revised					
Revised					
Revised					
Revised					

## 2a. Additions

	In Year 12, The Town of Paxton 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.	Town Administrator		Information provided on live telecast Board of Selectmen's meeting	Continue to provide information

### 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					

#### 3a. Additions

	<p>The Coalition provided training at a workshop on October 7, 2014 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. At this same workshop, training was provided 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. The October 2014 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</p>	<p>Town Administrator DPW Superintendent</p>		<p>This is a continual challenge</p>	<p>Continue to monitor</p>
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	<p>managed in their own community. Many Coalition communities began this inter-community discussion in Year 12, with others planning it for Year 13.</p>				
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	<p>In Year 12, the Town of Paxton 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 12, The Town of Paxton received a new tablet device. The Leica and tablets 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 28 Coalition communities on a schedule, with formal handoff between Towns documented.</p> <p>In Year 12, the Coalition purchased</p>	DPW Superintendent		These devices have been utilized to the utmost and have been very valuable	Continue to utilize within the program
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	<p>new ammonia field kits (CHEMetrics K-1510 kits) and provided two kits to each member community. These were approved by USEPA in Year 11 for stormwater outfall monitoring and are easier to use than ammonia monitoring tools purchased in Year 10. In Year 11, the Coalition began the process of rotating two full sets of water quality kits and meters around the 28 Coalition communities, including the Town of Paxton, on a schedule that follows the use of two Leica devices; this rotating schedule continued in Year 12. 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.</p> <p>In Year 12, the Coalition finalized a review of industrial facilities located in each member community, including facilities that</p>				
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	<p>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 from the two permit programs, consistent with the anticipated 2014 Massachusetts MS4 Permit.</p>				
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#### 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	Hearing held with developers. DCR inspected two site the past year 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 two sites in 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					

#### 4a. Additions

	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 this topic at a workshop on October 7, 2014.			The Town of Paxton has not had too much new construction in recent years but is aware that these measures need to be in place and have the additional assistance of the DCR.	Continue

## 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 2015	Continue with program
Revised					
Revised					
Revised					
Revised					
Revised					



## 5a. Additions

	<p>In Year 12, the Town of Paxton continued to use the Stormwater Best Management Practices (BMP) Toolbox, developed as a Draft 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.</p> <p>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</p>				
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	<p>BMPs in the Toolbox are consistent with the requirements of the current Small MS4 Permit, the Massachusetts Stormwater Handbook, and other current guidance documents. The Coalition provided training on this topic at a workshop on October 7, 2014.</p>				

## 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

	<p>In Year 12, the Town of Paxton continued to utilize a Salt/Sand Benchmarking tool developed in Year 10 to guide member communities in calibrating deicing equipment. 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.</p>	DPW Superintendent			Continue with program

**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					

**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)	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 **	(#)	250
Qty. of storm drain cleaned **	(%, LF or mi.)	25 %
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	50 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Compost

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$6,000.
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	\$21.42 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 vacuor **	(%)	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)	80 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Mooreland Cemetery
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$6,000
• 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 <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	50% MgCl <sub>2</sub>      50%
Pre-wetting techniques utilized **	(y/n or %)	N
Manual control spreaders used **	(y/n or %)	Y 80%
Zero-velocity spreaders used **	(y/n or %)	Y 20%
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/l <sub>n</sub> mi. or %)	-50%
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l <sub>n</sub> mi. or %)	+50%
% 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
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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