Municipality/Organization:	Town of Upton, MA
EPA NPDES Permit Number:	MAR041165
MassDEP Transmittal Number:	X270586
Annual Report Number & Reporting Period:	**Year 13** **April 1, 2015 – March 31, 2016**

NPDES PII Small MS4 General Permit Annual Report
(Due: May 1, 2016)

Part I. General Information

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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:

Printed Name: Blythe C. Robinson

Title: Town Manager, Town of Upton

Date: April 29, 2016

Part II. Self-Assessment

In Year 13, the Town of Upton continued to be an active participant in the Central Massachusetts Regional Stormwater Coalition (the Coalition). The Coalition's work in Year 13 (which overlaps municipal fiscal years 2014 and 2015) was funded entirely by contributions of approximately $4,000 from each of the 28 participating Towns, including Upton.

Overview of the Coalition
The FY2014/2015 Coalition included 28 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, and Wilbraham. The Coalition was officially formed in FY2012 with 13 members, expanding to 30 in FY2013. The FY2016 Coalition will be comprised of 31 towns with the recent additions of Framingham, Lunenburg, and Marlborough.

The Year 13 work of the Coalition focused on implementation and preparation.

- The implementation aspects included eight hours of one-on-one time, in which each member was provided with dedicated time from consultants that could be used for whatever was most needed. Many towns asked for a review and update of their Illicit Discharge Detection and Elimination (IDDE) Plans, while others chose to have a "Field Day" training, where they received refresher training on the use of the field screening kits and/or the online mapping and inspection system.

- The preparation aspects included work to both understand the technical components of the pending (at the time) Massachusetts MS4 Permit as well as how they will continue to afford the new Permit.
    - The group hosted a September 3, 2015 workshop by Keith Readling of Raftelis Financial Consultants, who has assisted more communities develop a stream of dedicated funding for stormwater management than anyone else. The objective was not to force the concept of a "stormwater utility", but to get community leaders thinking of stormwater funding as an enterprise, similar to how many already manage sanitary sewer funds.
    - The Coalition continues work on a Stormwater Program cost assessment for member towns, with most already being delivered. This task looks at what the community is actually spending on stormwater management, including staff labor (across many departments and positions), operations and maintenance, equipment costs (rental and depreciation), and third party vendors and consultants.

On April 15, 2015, a meeting of all member communities was held in Charlton, MA to develop a potential scope for FY2016 and determine how the group would be funded and administered going forward.

An update for all member communities was also presented at a meeting on September 3, 2015 prior to the stormwater funding workshop.

Coalition members themselves continue to be responsible for putting to use the tools developed by the Coalition.

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 FY2014/2015, most recently announcing the receipt of a $50,000 Stormwater Technical Assistance grant from the department. This grant will be used to develop training elements and outreach tools that target new or expanded elements in the new permit, and that can be used by communities across the Commonwealth.

MassDEP staff continue to attend CMRSWC Steering Committee events and make themselves available for technical assistance. The Coalition appreciates the ongoing dedication of MassDEP to work with our members so closely and collaboratively.

In FY2016, the CMRSWC hopes to develop another Interactive Qualifying Project (IQP) with students from the Worcester Polytechnic Institute (WPI). One potential concept for a FY2016 project is to work with MassDEP stormwater and solid waste staff to develop a streamlined method to determine appropriate beneficial reuse of street sweepings and/or grit from catch basin cleaning activities, thereby turning a material that can be costly to dispose into a source of revenue to our members.

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. We appreciate the support of these agency staff, and

believe this positive communication resulted in some modifications to the new MA MS4 permit (released on April 4, 2016) that make it more reasonable while still benefiting and protecting water quality.

Other Massachusetts Stormwater Coalitions
The Coalition continues to coordinate with "sister" groups with a similar stormwater focus. These include:

- The Merrimack Valley Stormwater Collaborative (coordinated by the Merrimack Valley Regional Planning Commission);
- The Neponset Stormwater Partnership (coordinated by the Metropolitan Area Planning Council and the Neponset River Watershed Association);
- The Northern Middlesex Stormwater Collaborative (coordinated by the Northern Middlesex Council of Governments);
- The Connecticut River Stormwater Committee (through the Pioneer Valley Planning Commission); and
- The Southeastern Massachusetts Stormwater Collaborative (coordinated by the Southeastern Regional Services Group)

Many members of these groups were invited to attend the September 2015 stormwater funding workshop, and the facilitators of these different collaboratives have made the effort to inform the other groups of events they're hosting.

Importantly, these separate regional groups met twice in Year 13- on June 23, 2015 and September 17, 2015- to compare notes on activities in progress and share ideas on future collaborations. This statewide partnership will be expanding in Year 14.

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 is the Chair of 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.

Tasks Included in this Annual Report
In the following sections, descriptions of the technical tasks and resources performed by the CMRSWC in Year 13 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.

In Year 13, we observed that Coalition members expanded use of this resource, primarily by beginning the process of mapping linear infrastructure (like pipes and culverts) and doing more catch basin inspections using the tools. Both of these tasks are key to preparing to increase mapping and to perform the catchment evaluation process included in the 2016 MA MS4 Permit.

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.

Minimum Control Measure 1: Public Education and Outreach

Year 13 activities included routine meetings of the Coalition's Steering Committee.

In Year 13, the Coalition purchased copies of the "Water Blues, Green Solutions" documentary (http://waterblues.org/about) for each member town, on DVD.

An exciting tool for public education continues to be the Coalition's Twitter account, @MAStormH2O. As of the date of this report, the Coalition's account has 96 followers, including other stormwater coalitions around the country. Information tweeted (or retweeted) by the Coalition in Year 13 addressed such water quality topics and issues as:

- Stormwater infrastructure funding
- Nutrient credits and trading
- Sharing public service announcements (PSA's) developed by our member communities and partners
- Impact of leaking sanitary sewers on stormwater and water quality
- Low Impact Development (LID) workshops and training courses held by partners in or near our member communities

Many of our member communities and regional agencies follow @MAStormH2O and retweet our information, greatly expanding the audience reached by the message. We anticipate using this tool in the future to quantify the size of the audience reached by each message, and evaluating the success of the message.

In Year 13, 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:

- On May 12, 2015, Robin Craver (Charlton, MA) presented at the 6th Annual Water Resources Strategies Symposium, hosted by the Massachusetts Coalition for Water Resources Stewardship, sharing information on stormwater program costs and ways to create regional efficiencies.
- On May 15, 2015, a Coalition consultant did a presentation to the New England Interstate Water Pollution Control Commission (NEIWPCC) at its Board meeting in Bolton, MA.
- On June 26, 2015, Robin Craver (Charlton, MA) and a Coalition consultant did a presentation to the Central Massachusetts Regional Planning Commission at its Summer Legislative Breakfast, in Worcester, MA.
- On July 13, 2015, a Coalition consultant did a presentation to the National Association of Clean Water Agencies at its Summer Conference in Providence, Rhode Island.
- On November 18, 2015, Robin Craver (Charlton, MA) and a Coalition consultant did a presentation at the "*Community Stormwater Solutions*" conference, hosted at Worcester Polytechnic Institute by the Massachusetts Watershed Coalition.

Several Coalition members chose to use some of their "one-on-one" to expand their efforts on this MCM. Updates will be provided in future Annual Reports.

In Year 13, Upton continued to utilize water quality monitoring kits from the World Water Monitoring Challenge program (www.worldwatermonitoringday.org), purchased by the Coalition in Year 10. These kits "build public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies". Several communities used this in Year 13 to work with teachers in their local school department or district to do outreach to elementary and middle-school aged students. The kits continue to be stored in Spencer and Shrewsbury for distribution to the Coalition members.

Upton continued to utilize the two Enviroscape models focused on non-point source pollution education (http://www.enviroscapes.com/nonpoint-source.html). One model was purchased by the Coalition in Year 10 and the second was purchased in Year 13 with a grant from NEWEA. These tools are hands-on, visual trainers to demonstrate the importance of good housekeeping and low-impact development for pollution prevention, with the objective of maintaining water quality in our communities. These tools are shared with our statewide partners, upon request.

The Coalition continued to expand its educational website, www.CentralMAStormwater.org, focused on providing information about the project to a number of audiences, including the general public, educators, and kids.

Minimum Control Measure 3: Illicit Discharge, Detection and Elimination

Several Coalition members chose to use some of their "one-on-one" time to expand their efforts on this MCM. Updates will be provided

in future Annual Reports.

In Year 13, Upton 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. 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.

Minimum Control Measure 4: Construction Site Stormwater Runoff Control

Several Coalition members chose to use some of their "one-on-one" time to expand their efforts on this MCM. Updates will be provided in future Annual Reports.

Minimum Control Measure 5: Post-Construction Stormwater Management in New Development and Redevelopment

Several Coalition members chose to use some of their "one-on-one" time to expand their efforts on this MCM. Updates will be provided in future Annual Reports.

Minimum Control Measure 6: Pollution Prevention and Good Housekeeping in Municipal Operations

Several Coalition members chose to use some of their "one-on-one" time to expand their efforts on this MCM. Updates will be provided in future Annual Reports.

In Year 13, Upton continued to utilize the Stormwater Pollution Prevention Plan (SWPPP) template in the form of a word processing document. This document was developed in Year 10 and addresses elements common to all SWPPPs, including storage of materials, site inspection practices, water sampling, training, spill prevention and cleanup, Standard Operating Procedures for a number of activities, and other sections. The SWPPP template covers many types of municipal properties. This includes highway department garages and public works yards- where salt is stored and vehicle maintenance or storage is completed- as well as parks, golf courses, and cemeteries, where fertilizers and pesticides may be applied and lawn mowing activities may result in small spills. The SWPPP template includes built-in instructions to make it as simple as possible for each community to develop a SWPPP for a property, simply by deleting text that doesn't apply.

In Year 13, Upton continued to utilize the 15 Standard Operating Procedures (SOP's) developed by the Coalition in Year 10, and intended to provide guidance on activities required or encouraged by the 2003 Massachusetts Small MS4 Permit. These SOPs addressed such diverse activities or needs as outfall inspection (both dry weather and wet weather), catch basin cleaning, erosion and sedimentation control, oil/water separator maintenance, use and storage of pesticides and fertilizers, and many more. The group developed standard

forms and methodologies for these procedures, many of which were incorporated into the Integrated Online Mapping and Inspection System, described in following paragraphs.

Coalition Activities in Year 14 (April 1, 2016 – March 31, 2017)

The following are some, but not all, of the work presently underway by the Coalition in Year 14:

- *Administration.* The long-term goal of the Coalition has always been to be self-sustaining, and this was made a reality in Year 13. The Coalition's Steering Committee drafted a bylaw in Year 13 that will govern how the group makes future decisions. The group will add three new communities in Year 14, continuing to be fully self-funded. The Coalition's leadership is committed to keeping the momentum developed in recent years, and sharing the resources for the improvement of water quality in New England.

- *Funding.* The Coalition maintains a strong network of partners, and will continue to evaluate funding sources that become available, including competitive USEPA grants dedicated to MS4 communities as well as 319 and 604(b) grants appropriate for community-wide water quality projects.

- *Public Outreach and Education.* We are implementing development of training and outreach tools, made possible through a $50,000 MassDEP Stormwater Technical Assistance grant. We are also considering developing of Coalition-specific outreach materials using FY2016 funding. Finally, the Coalition plans to increase its use of Twitter as a measurable outreach tool.

- *IDDE.* The Coalition is developing competitive pricing for its members that wish to use Environmental Canine Services to perform IDDE screening-level assessments. The catchment delineation tool initially developed during the WPI IQP Fall 2013 project will be revised, modified, finalized, and distributed for use by Coalition towns. The Request for Proposals (RFP) developed in Year 10 (for a third-party firm to perform many of the field or inspection services defined in the 15 SOP's, including outfall inspection (dry weather and/or wet weather), water quality monitoring, catch basin inspection, and other related tasks) will be re-evaluated in Year 14 to match the 2016 MA MS4 Permit. Improving the knowledge of IDDE components by many town departments will likely be a substantial component of FY2016 work.

- *Good Housekeeping.* The Coalition may coordinate an on-site demonstration of calibrating deicing equipment at a member community's highway facility. This active demonstration will provide a real-life example of the benchmarking process developed in Year 10 and encourage members to calibrate their own equipment, with a goal of reducing pounds of chloride per lane mile. The Coalition is in the initial phases of developing an IQP project with Worcester Polytechnic Institute and MassDEP to develop a pilot project for beneficial reuse of catch basin cleaning materials.

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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1	Develop & distribute brochures to residents.	Upton DPW	Distribution of brochures.	*Note: BMP #1 was revised in Permit Year 11 to reflect that outreach opportunities have expanded beyond stated "brochure" format.* Continued brochure distribution to residents. Brochures included as mail stuffers for water bills. Also available at Town Hall & Code Enforcement office. In Permit Year 13, the DPW began designing a Town-specific flyer about its Stormwater Management Program and one to be used as a bill stuffer for residential areas on spring yard maintenance. The latter addresses pet waste management, respecting Stormwater BMPs, good fertilizer application practices, and household hazardous waste management. The Upton DPW recognized public interest while completing mapping and inspection activities in Permit Year 13 and is developing an article for publication to highlight these activities.	Review different brochures, provide additional information and continue distribution. Consider CMRSWC brochures and pamphlets for distribution. In Permit Year 14, all new outreach and educational materials, including flyers and articles, will be placed on new DPW "Stormwater and Consumer Confidence Report. Information" section of the Town website. Materials will also be placed on Upton's local cable access channel.
Revised	Develop & distribute educational materials to residents.	Upton DPW	Distribution of information using multiple media formats.		

2 Revised	Develop & distribute brochures to businesses.	Upton DPW	Distribution of brochures.	Continued brochure distribution to businesses. Brochures included as mail stuffers for water bills. Also available at Town Hall & Code Enforcement office.	Review different brochures, provide additional information and continue distribution. Consider CMRSWC brochures and pamphlets for distribution. Brochures will be placed on new DPW "Stormwater Information" section of the Town's website.
3 Revised	Install watershed signage.	Upton DPW	Installation of watershed signs.	In Permit Year 11, the Town designed a sign that reads "Help Upton Keep the Blackstone River Watershed Clean", and includes the Town seal and the CMRSWC logo. Ten were installed in Year 13. These signs are being placed on well-traveled roadways so that they are visible to people entering Upton or when entering the Blackstone River Watershed from another watershed.	Maintain signs that have already been posted
4 Revised	Develop collection program for household hazardous waste.	Upton DPW / Board of Health	Conduct collection program.	One Household Hazardous Waste (HHW) Collection day event was hosted in Permit Year 13, on May 2, 2015.	A similar HHW Collection Day event, "Spring Cleanup", will be held on June 4, 2016. Flyer attached.
5 Revised	Develop school curricula & and distribute to schools.	Upton DPW / Board of Health	Implementation of curricula.	No program has been developed yet. In previous years, discussed several alternatives within school administration to include awareness/ education into existing curricula.	Focus on incorporating CMRSWC teaching materials, such as Enviroscape table and World Water Monitoring Day kits into curricula.

1a. Additions

(None)

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6	Public meeting to discuss Stormwater management plan.	Upton DPW/Board of Selectmen	Conduct a public meeting to discuss goals of the Stormwater management plan.	Upton's Stormwater Committee was not active in Permit Year 13, since compliance with critical components of the MS4 Permit- ones that rely on public involvement and discussion- had been fully implemented in previous Permit Years.	The Stormwater Committee may convene in Permit Year 14 to host a multi-departmental refresher training workshop on illicit discharge detection and elimination, based on an approach developed by the CMRSWC. Coordinate with cable access personnel on televising pertinent material on local cable access.
Revised					
7	Public Hearing to discuss water quality data of beach.	Board of Health/Board of Selectmen	Conduct a public discussion of goals and results of water testing.	No public hearings were held in Permit Year 13 as this was not necessary: no pathogens were detected in weekly sampling of Pratt Pond. Upton DPW continue to perform regular cleanups of waterfowl feces and litter at Pratt Pond.	Similar to above, utilize local cable access programming to notify public of water quality results. A public hearing will be conducted if pathogens in Pratt Pond are detected above allowed limits. Continue to perform regular cleanups at Pratt Pond.
Revised		Board of Health/Upton DPW			
8	Develop and implement composting program.	Board of Health	Implementation of composting program.	A composting program has not been implemented due to lack of a proper location.	Currently, the Town is not planning to implement a composting program.
Revised					
9	Coordinate & implement beach cleanup program.	Board of Health/Board of Selectmen	Conduct a beach clean-up.	The Upton DPW staff routinely performs regular cleanups of waterfowl feces and litter at this location. "Don't feed waterfowl" signs have been installed at the beach.	Encourage and continue similar efforts annually, including coordination with local volunteer groups. Continue to perform regular cleanups at Pratt Pond.
Revised		Board of Health/Upton DPW			

10	Form citizen watch groups to identify polluters to waterways.	Board of Health / Board of Selectmen	Creation of watch group.	No public advertisement or meetings have been held. Community citizens are very vigilant about reporting pollution.	Generate to generate public interest by using additional media to explain and demonstrate the Town's stormwater management responsibilities and activities.
Revised					

2a. Additions

(None)

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
11	Develop Stormwater system map.	Upton DPW	Creation of system map.	Progress toward this goal was completed in previous Permit years but this task is ongoing, by its nature. In Permit Year 13, Upton DPW continued efforts to map portions throughout of the community as well as mapping stormwater infrastructure beyond outfalls. Mapping and inspections completed in Year 13 fully utilized the CMRSWC online platform and equipment.	Continue to inspect outfalls and map new outfalls as they are constructed and that are in Urbanized Area. Mapping efforts will focus on catch basins, drain manholes, and pipe infrastructure, consistent with anticipated requirements in pending MA MS4 Permit. The stormwater system map will continue to be revised as necessary to reflect actual conditions.
Revised					
12	Identify illicit discharges.	Upton DPW	Create a list of illicit discharges.	Efforts to detect illicit discharges are ongoing. In Permit Year 13, outfall	Continue to investigate illicit discharges in Town through

Revised		Upton DPW/ Code Enforcement		inspection and catch basin mapping and inspection by the Upton DPW did not indicate the presence of any illicit discharges. In addition, foundation inspections of new buildings were performed by Code Enforcement staff to ensure there were no cross connections or other illicit connections. No illicit discharges were identified in Permit Year 13.	additional dry weather and wet weather monitoring and sampling on an as-needed basis. Use of the CMRSWC integrated mapping database, inspection forms, field water quality monitoring test kits will be used to help identify illicit discharges. The Upton DPW is currently evaluating closed-circuit television (CCTV) inspection hardware and software that can be used as a tool to document condition and assist in illicit discharge detection, when needed.
13	Commence with elimination of identified illicit discharges.	Upton DPW	Removal of all identified illicit discharges.	No illicit discharges were identified during Permit Year 13.	Continue monitoring discharges as funding allows. Follow up on discharges within schedule identified.
Revised					
14	Review & implement ordinances.	Board of Selectmen	Adoption of additional bylaws & regulations.	Prior to Permit Year 13, Final Regulations based on the SMB were put in place. These continue to be implemented.	Continue to implement activities regulated by the SMB.
Revised					
15	Develop employee training program to identify discharges.	Upton DPW	Implementation of training program.	In Permit Year 13, Upton DPW staff members received training at CMRSWC workshops. Topics	The Stormwater Committee may convene in Permit Year 14 to host a multi-departmental refresher

Revised				addressed included practical illicit discharge detection and elimination tools, and using the Coalition's water quality field kits and meters, among other things.	training workshop on illicit discharge detection and elimination, based on an approach developed by the CMRSWC. The Town will use CMRSWC tools including the IDDE Documentation and Communication program to update its IDDE program. The Town will use online mapping and inspection platform and field water quality monitoring and test kits as much as possible in Permit Year 14.

3a. Additions

(None)

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
16	Develop procedures to inform public of upcoming projects.	Planning Board/ Conservation Commission/ Upton DPW	Advertise to the pubic of upcoming activities. Develop and implement review process.	The SMB includes review by the Conservation Commission of upcoming construction projects. Upcoming projects are placed on the meeting agenda allowing public notification. Meeting minutes also allow public viewing of upcoming projects and conservation commission decisions.	Continued review of projects as required by the SMB. Develop and consider further mediums for notifying public of upcoming projects.
Revised					
17	Develop & implement site plan review process for sites.	Planning Board/ Conservation Commission/ Upton DPW	Develop and implement review process.	The approved SMB includes a site plan review process. Reviews are completed in accordance with the SMB. The SMB continues to be	Continue to review site plans in accordance with the SMB, and consider any amendments to the SMB that may be necessary.

Revised				considered adequate to fully comply with permit requirements. In Permit Year 13, one proposed site plan was reviewed by the Planning Board in conjunction with the Conservation Commission.	Continue to utilize Checklist for a Stormwater Management Operation & Maintenance Plan, Stormwater Management Plan Application, Construction Notification Form and Checklist, and the Erosion and Sediment Control Plan Application and Checklist.
18	Develop & implement erosion & sediment control ordinances.	Planning Board/ Conservation Commission	Develop and implement control ordinances.	The SMB addresses erosion and sedimentation, including an Erosion and Sediment Control Plan Application and Checklist, and a Construction Notification Form and Checklist for qualifying projects. The SMB continues to be considered adequate to fully comply with permit requirements. Site plans are being reviewed in accordance with the SMB. Fines are categorized in the SMB based on the severity of the violation.	Continue to review site plans in accordance with the SMB, and consider any amendments to the SMB that may be necessary. Continue to utilize Checklist for a Stormwater Management Operation & Maintenance Plan, Stormwater Management Plan Application, Construction Notification Form and Checklist, and the Erosion and Sediment Control Plan Application and Checklist.
Revised					
19	Develop construction inspection program.	Planning Board/ Conservation Commission	Implementation of inspection program.	The Town developed a successful construction inspection program in previous Permit Years and has continued to implement that program, which is adequate to comply with permit requirements.	Continue performing inspections of active construction projects. Consider any necessary changes to the SMB inspection procedure based upon new state or federal regulations.
Revised					
20	Implement construction inspection program with fines for violations.	Planning Board / Conservation Commission	Implementation of inspection program and fine schedule.	The SMB addresses enforcement of construction erosion and sediment controls. The SMB delineates a fine schedule based on the severity of the	Continue inspection program in accordance with the SMB and state regulations.

Revised				violation. The SMB continues to be considered adequate to fully comply with permit requirements. In Permit Year 13, the Conservation Commission regularly inspected the Crosswinds development and the JR Estates development. No violations were detected, no "stop work" orders were issued, and no fines were assessed.	Consider changes to inspection procedures based on new state or federal regulations.

4a. Additions

(None)

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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
21	Review existing nonstructural BMPs.	Planning Board/ Conservation Commission/ Upton DPW	Development and addition of any necessary amendments and/or bylaws.	Progress toward this goal was completed in previous Permit years, including development of Good Housekeeping Practices in the Stormwater Pollution Prevention Plan for the Upton DPW Garage. Street sweeping and catch basin cleaning are completed once a year.	Review existing non-structural BMPs as necessary and recommend improvements.
Revised					
22	Review of existing structural BMPs.	Conservation Commission/ Planning Board/ Upton DPW	Development and addition of any necessary amendments and/or bylaws.	Prior to Permit Year 13, the SMB was approved which provides reasonable guidance for the regulation of development and post-development stormwater runoff for protecting local water resources from degradation. The SMB continues to be considered adequate to fully comply with permit requirements. The Conservation Commission is available to review any existing structural BMPs at the Upton DPW's request.	Review existing structural BMPs as necessary and recommend improvements.
Revised					
23	Require O&M manuals for newly installed BMPs.	Conservation Commission/ Upton DPW	Catalogue and review of all new structural BMPs.	No new BMPs were installed in Permit Year 13.	As part of the SMB, operation and maintenance plan is required for qualifying projects and will be enforced going forward.
Revised					
24	Develop inspection program of newly installed BMPs.	Conservation Commission/ Upton DPW	Implement new BMP inspection program.	The Town has a successful inspection program for newly installed BMPs. However, no inspections were required in Permit Year 13 as no new BMPs were constructed.	Continue to enforce BMP Operations and Maintenance Plans that are submitted by applicants as part of meeting the SMB.
Revised					

25	Conduct inspections of BMPs within 1st year of operation.	Conservation Commission / Upton DPW	Conduct Inspections.	Upton DPW and Conservation Commission conducted inspections as necessary and as part of routine maintenance.	Maintenance of BMPs is a challenge that will continue to be addressed in future permit years. Rehabilitate BMPs that were noted as requiring maintenance when inspected.
Revised					

5a. Additions

(None)

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 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
26	Inspection of Town - owned sand/salt storage areas.	Upton DPW	Conduct inspections, make recommendations, and review procedures.	The Stormwater Pollution Prevention Plan and SPCC for the Upton DPW Garage, developed and implemented prior to Permit Year 12, continue to be reviewed regularly. Refresher training on the importance of SWPPPs was provided in Permit Year 13.	Continue inspection and good housekeeping efforts. Review existing stockpile locations and implement any appropriate improvements.
Revised					
27	Review snow removal & street sweeping procedures.	Upton DPW	Review procedures and make recommendations	Review of procedures continues. Town contracts Lloyd Truax for catch	Continue catch basin cleaning, street sweeping, and sidewalk sweeping.

Revised				basin cleaning, and Dan Amarillo for street sweeping. Street sweeping and catch basins cleaning were conducted once a year.	Moving forward, the DPW plans to document how full catch basins are when they are cleaned (using CMRSWC online inspection system) and document structures that may require more than one cleaning per year. Town will use CMRSWC Salt/Sand Application Benchmarking Tool to review deicing operations. Town will use CMRSWC integrated mapping and inspection forms to conduct catch basin inspection and cleaning operations.
28	Develop & implement maintenance schedules – BMPs.	Upton DPW	Implement annual BMP maintenance program.	Upton DPW and Conservation Commission have been active in addressing private BMP neglect.	Maintenance of BMPs by Upton DPW and coordination with Conservation Commission are challenges that will be continue to be reviewed in Year 14.
Revised		Upton DPW/ Conservation Commission			
29	Develop & implement employee training program.	Upton DPW	Implement training program.	In Permit Year 13, numerous Upton DPW staff members received training at CMRSWC workshops. Topics addressed included calibrating deicing equipment, stormwater pollution prevention, practical illicit discharge detection and elimination tools, and using the Coalition's water quality field kits and meters, among other things. DPW staff also attended a Baystate Roads course on calibrating deicing equipment.	Continue to increase employee awareness and aid in IDDE, catch basin inspection, chloride application reduction, and water quality monitoring using CMRSWC Tools. Implement additional CMRSWC tools in employee training programs.
Revised					

30	Review & Update Town's recycling program.	Upton DPW/ Board of Health/ Board of Selectmen	Review existing program and make recommendations.	Curbside, single-stream recycling was introduced in previous Permit Years.	Continue existing program, reviewing as needed.
Revised					

6a. Additions

(None)

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 13** (Reliance on non-municipal partners indicated, if any)	**Planned Activities**
	Not Applicable	Not Applicable	Not Applicable	The following Upton water bodies are considered impaired (per the *Final*	Evaluate any TMDLs developed for Upton impaired waters.

Revised				*Massachusetts Year 2012 Integrated List of Waters* (CWA Sections 303d and 305b): Mill River: Category 5- Requires a TMDL (Aquatic Plants, Non-Native Aquatic Plants, PCB in Fish Tissue) West River: Category 5- Requires a TMDL (Non-Native Aquatic Plants, low pH, Cadmium, Chloride, Copper, Lead, and Nutrient/ Eutrophication Biological Indicators) Mill Pond: Category 4C: no TMDL required (Non-Native Aquatic Plants) Pratt Pond: Category 4C: no TMDL required (Non-Native Aquatic Plants) Taft Pond: Category 4C: no TMDL required (Non-Native Aquatic Plants) However, final TMDLs have not been developed for any of these water bodies.	

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

N/A

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, 2014 through March 31, 2015)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures **	($)	$15,000
Total program expenditures since beginning of permit coverage	($)	$180,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	75%
Stormwater management committee established	(y/n)	Y
Stream teams established or supported	(# or y/n)	N
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	Y
Shoreline cleaned since beginning of permit coverage	(mi.)	0.1
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1
▪ community participation **	(# or %)	21%
▪ material collected **	(tons or gal)	510 lbs. and 24 DF
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	(%)	106
Estimated or actual number of outfalls	(#)	106
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	60
Mapping method(s)		
▪ Paper/Mylar	(%)	20%
▪ CADD	(%)	0
▪ GIS	(%)	100
Outfalls inspected/screened **	(# or %)	32
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	106
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	0
% of population on sewer	(%)	30

% of population on septic systems	(%)	70

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	0
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 **	(#)	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 %)	20%
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
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1
Qty of structures cleaned **	(#)	778
Qty. of storm drain cleaned **	(%, LF or mi.)	100%
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	100%
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	($)	$20,000
• Hourly or per basin contract rate **	($/hr or $ per basin)	
• Disposal cost**	($)	12,000
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	0
• % 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)	1
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	1
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	($)	$20,000
• Hourly or lane mile contract rate **	($/hr. or ln mi.)	
• Disposal cost**	($)	$10,000
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	0
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	N
• % 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 %)	2,500 lbs.
▪ Herbicides	(lbs. or %)	None
▪ Pesticides	(lbs. or %)	None
Integrated Pest Management (IPM) Practices Implemented	(y/n)	Yes

	(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	85 - - - - - 15
Pre-wetting techniques utilized **	(y/n or %)	Y 4,320 gal CaCl2
Manual control spreaders used **	(y/n or %)	N
Zero-velocity spreaders used **	(y/n or %)	N
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	1,019.29 tons/yr
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln 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)	Y

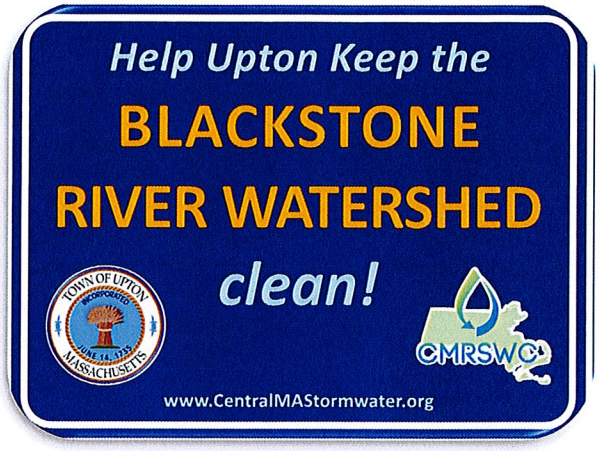
Water Supply Protection

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/A

Attachment- MCM 1: Public Education and Outreach

Help Upton Keep the Blackstone River Watershed Clean!

We hope that you've seen the new signs posted around Upton asking for your help to keep the Blackstone River Watershed clean. It may have surprised you to see the Blackstone River's name shown on the sign, since it1's miles away. It's true, though: with the exception of the northernmost edge of Town, any drop of rain that lands in Upton is going to flow toward the Blackstone River. The challenge for the Blackstone River is that it receives stormwater from 28 other Massachusetts communities in addition to Upton- from Paxton to Plainville- and ten more in Rhode Island, and treated wastewater from several facilities, too. The watershed draining to the Blackstone River covers a whopping 640 square miles, 60% of which is here in Massachusetts!



With a watershed that large, how can an individual resident possibly do anything to keep it clean?

Well, we can start by not treating our stormwater systems like trash cans. Our drainage systems- which include pipe, ditches, catch basins, drain manholes, rain gardens, and more- are designed to move water safely away from roadways during storm events. Catch basins can remove some sand, salt, rocks, gravel and other debris present in that stormwater (as long as they're cleaned out regularly), and some structures can remove oil, metals, and some nutrients, like nitrogen and phosphorus. However, stormwater is NOT treated by a facility like the one that treats Upton's wastewater. When motor oil is dumped (or a bag of pet waste is flung) into a catch basin, those pollutants enter the surface water body. Grass clippings dumped into a ditch or stream don't become *habitat*- they *decompose*, removing dissolved oxygen from water and stressing fish and other aquatic life. Leaves and dirt swept from a sidewalk into a catch basin don't *disappear*- they enter a steam, if they don't clog the pipe first!

Thinking about connectivity of the drainage system to surface water can go a long way to reducing pollution.

Preventing water pollution can include some other simple changes in everyday behavior. Before deciding if fertilizer would improve your yard, test your soil with a kit commonly available at home improvement centers: it may be that your soil would not be improved by the addition of nitrogen, phosphorus, or potassium present in most fertilizers. If you chose to use fertilizer, follow the application instructions on the package, including the time of year to apply it. The "more is better" approach to lawn care has been proven ineffective: applying twice the recommended weight per square foot won't make the grass twice as green. When applied in excess, nitrogen and phosphorus run off lawns during rain and enter surface waters, where they create algae blooms and remove dissolved oxygen from the water. Don't apply fertilizer right before a large storm, and take care to prevent spreading it on your driveway, paved walk, or other impervious surfaces where it will run off with the rain. Removal of piles of pet waste from your lawn will prevent bacteria and more nutrients from washing into streams.

In the next few months, we'll share more information about how the Upton's Department of Public Works (DPW), Conservation Commission, and Planning Board are working together to protect our local water resources- part of helping keep the Blackstone River Watershed clean. This will involve a new page on the current DPW website, www.upton.ma.us/Pages/UptonMA_DPW/index, that's dedicated to sharing information on how our daily activities- like catch basin cleaning and street sweeping- help reduce stormwater pollution.

Until then, you can learn more by visiting the Central Massachusetts Regional Stormwater Coalition website- Upton is one of 30 members!- at www.CentralMAStormwater.org, or the Blackstone River Watershed Association page at www.thebrwa.org.

Upton's Annual Hazardous Waste Day

SATURDAY – May 2nd
8:00 a.m to 12:00 Noon
at the
Department of Public Works (DPW)
100 Pleasant Street, adjacent to Nipmuc Reg. High School
UPTON RESIDENTS ONLY. PROOF OF RESIDENCY WILL BE REQUIRED.

HAZARDOUS WASTE

Upton residents are allowed to bring up to 10 gallons or 10 lbs. of hazardous waste free of charge. **Anything over the 10 lbs. or 10 gallons will be charged per item.** Latex paint will not be accepted; it is not considered hazardous waste. For information on how to properly dispose of latex, contact the Board of Health office.

- ***Acceptable Items:*** Consolidated Paint (non-latex), flammable liquids/solvents, lab pack chemicals, pesticides, herbicides, consolidated waste oil, small cans resins/adhesives, flammable resins/adhesives, antifreeze, aerosols, lead acid batteries, NiCad or lithium batteries, and fluorescent bulbs.
- ***Home use syringes can be brought to the event to be disposed of at no cost. The sharps must be in a puncture proof container.***

- ***Non-Acceptable Items:*** PCB's, mercury wastes, explosives, biological/medical waste, pressurized gas cylinders, commercially or industrially generated hazardous waste, radioactives, propane tanks (see metal items below for disposal) fire extinguishers, ammunition, and latex paint.

RECYCLE ITEMS – Cash only

- ***Freon Items*** - *Refrigerators - $10.00 each, Dehumidifiers and Air Conditioners - $5.00 each*
- ***Other Appliances*** – *Washers, dryers and stoves - $ 10.00 each, microwaves - $5.00 each*
- ***Electronic Equipment*** – *Televisions (all sizes), Computer monitors - $10.00 each. Computers, keyboards, cd players, VCR's etc. - free of charge*
- ***Tires*** *will be accepted at $3.00 per car tire and $8.00 per truck tire. No tires larger than 24" will be accepted*
- ***Propane tanks*** – *All tanks including 1 lb. - $1.00 each (sorry – no tanks over 60 lbs.)*
- ***Styrofoam*** - *Clean Styrofoam; produce and meat trays, take out containers, hot cups, and packing blocks, will be accepted at no charge. All peanuts and bubble wrap must be bagged separately. No soft foam, colored insulation boards or foam sheets will be accepted.*
- ***Car Batteries*** – *No charge*

- ***Metal Items*** – *Most residential items $5.00(cash only) for each item (e.g. push mower, gas grill (without propane tank), swing sets - disassembled and cut to 5' lengths, etc.). Items must not contain materials that burn (e.g. wood, cushions, padding, etc.). Items that can be cut must not be longer than 5'. Extra large items will cost more and smaller items may cost less at the discretion of the vendor.*

BULK TRASH

Items too large to fit into your weekly trash bags will be accepted. Charges will depend on the size and weight of the item. Couch's, chairs, mattress's, box spring's, etc. - $5.00 ea. Metal Items will not be accepted as bulk trash. They can be brought to the metal recycling area for a fee (see above)

Contact the Board of Health at 508-529-6813 or dtiernan@uptonma.gov with questions.