Municipality/Organization: **Northborough, Massachusetts**

EPA NPDES Permit Number: MAR041143

MassDEP Transmittal Number: **W- 035921**

Annual Report Number & Reporting Period: **Year 15** **April 1, 2017 – March 31, 2018**

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2018)

Part I. General Information

Contact Person: Frederic E. Litchfield Title: Town Engineer

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Mailing Address: 63 Main Street, Northborough, Massachusetts 01532

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: Frederic E Litchfield

Printed Name: Frederic E. Litchfield

Title: Town Engineer

Date: April 30, 2018

Part II. Self-Assessment

The Town of Northborough has completed the required self–assessment and has determined our municipality is in compliance with all permit conditions, except for the following provisions:

- The outreach methods for BMPs 1c, 1e, 1g, and 1h were modified in permit year 12 and materials posted on the Town's website continued to be maintained in permit year 15.
- Schedule Modifications – schedules for the following BMPs have been modified:
  - BMP 3a 95% of all outfalls and receiving waters within the Town have been field verified and mapped.
  - BMP 7a 99% of all outfalls within the Town which contribute to the Assabet River have been verified and mapped.

Notable Accomplishments/Improvements in Permit Year 15:

In Year 15, the Town of Northborough continued to be an active participant in the Central Massachusetts Regional Stormwater Coalition (the Coalition). An overview of the coalition's activities is provided in Attachment A. The Coalition's work in Year 15 (which overlaps municipal fiscal years 2017 and 2018) was funded by entirely by contributions of approximately $4,000 from each of the 28 participating towns, including Northborough.

The Town's stormwater webpage was maintained and includes links to the following brochures, handouts and posters:

- After the Storm – EPA brochure
- Construction Best Practices
- Protecting Water from Urban Runoff, Solution to Pollution – EPA brochure
- Think Green with your Stormwater Habits
- Water Efficient Landscaping
- Solution to Pollution – EPA brochure (added in permit year 13)
- Central Massachusetts Regional Stormwater Coalition (added in permit year 13)

The DPW and Planning Department web pages are linked to the Engineering page which contains all Stormwater Resources.

In Permit Year 15 the Town was in the planning stages of some culvert repairs which are listed below with their current status:

- Fisher Street – Over Cold Harbor Brook design has been completed. Funding was approved at the 2018 Annual Town Meeting and construction is anticipated in the summer of 2018.
- Rice Avenue (This drainage improvement project is listed on the Town's Capital Improvement Program for FY2021).
- Hudson Street at Solomon Pond Road (This drainage improvement project is listed on the Town's Capital Improvement Program for FY2021).
- Pleasant Street culvert was completed in September of 2017.
- Church Street - Over Cold Harbor Brook was completed in July of 2017.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

Note that the "Planned Activities" column has been deleted from this Annual report. In Fiscal Year 2018, the Town of Northborough will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies and Town-wide stormwater related programs, preparation of the Notice of Intent, and Implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15
1a Revised	Distribute/Post Nonpoint Source Pollution Posters	Engineering Department	Post in all schools and Town Buildings	Posters were maintained in each of the municipal buildings (Town Hall, Library, Fire, Police and Senior Center).
1b Revised	Air Stormwater Message on Local Cable Channel	Engineering Department	Post one message every month	The following stormwater messages were alternately aired monthly on local cable channels throughout permit year 15: - "After the Storm" video and "Reigning in the Storm"

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15
1c Revised	Obtain and Distribute auto repair shop brochures Post brochures on Town Website	Engineering Department	Distribute to all impacted local businesses	Brochures were available on the Stormwater webpage, but not distributed due to budget constraints for printing and mailing.
1d Revised	Add Stormwater information to Town's website	Engineering Department and GIS Manager	Update information quarterly to address seasonal concerns	As discussed in "Notable Accomplishments," the website was maintained with links to stormwater information.
1e revised	Stormwater flyer to community residents & post flyers on Town website	Engineering Department and SuAsCo Watershed Community Council	Flyer distributed to 75% of residents and compiled and considered municipal and multi-watershed- wide "survey" results	A stormwater flyer is posted on the Town website. The Town determined this is the most feasible option at this time for flyers. Due to the manner in which bills are sent out, it is not feasible to insert flyers with sewer or water bills.
1f Revised	Stormwater Lesson Plan for Fifth Grade Students	Engineering Department and SuAsCo Watershed Community Council	Develop and distribute lesson plan to implement at the Grade 5 level, and lesson plan is taught in one or more Grade 5 classrooms in the community	The stormwater lesson plan for Fifth Grade Students was created by the SuAsCo Watershed Community Council and previously delivered to the school administrator's office. No significant progress occurred during Year 12 due to curriculum constraints.
1g Revised	Stormwater Flyer to Community Businesses Post flyers on the Town website.	Engineering Department and SuAsCo Watershed Community Council	Flyer distributed to minimum of 50% of businesses in municipality, and stormwater logo displayed by one-half of businesses receiving the flyer	The stormwater flyer for community businesses was added to the Town webpage during Permit Year 11 and maintained on the Town website during Permit Year 15.
1h Revised	Stormwater Media Campaign Post media information on the Town website	Engineering Department and SuAsCo Watershed Community Council	Media Information packet delivered to the local media, and 4 press releases generated and issued to local media and major media outlets	As discussed in "Notable Accomplishments," media information was maintained on the stormwater page, which can be accessed through the Engineering, DPW and Planning Department websites.
1i Revised	Stormwater Video	Engineering Department and SuAsCo Community Watershed Council	Show stormwater video at a minimum of one public meeting, and air stormwater video at least once on local cable station	The stormwater video and power point presentation was completed by the SuAsCo Watershed Community Council and was delivered to the local cable access channel and aired as discussed in BMP 1B.

2. Public Involvement and Participation

Note that the "Planned Activities" column has been deleted from this Annual report. In Fiscal Year 2019, the Town of Northborough will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies and Town-wide stormwater related programs, preparation of the Notice of Intent, and Implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)
2a Revised	Stormwater Traveling Display	Engineering Department and SuAsCo Watershed Community Council	Stormwater display circulates around the community for a minimum of 3 months in permit year #1, and stormwater display is posted at a minimum of 3 different public locations in permit year #1, and stormwater display is also used in future permit years for posting in public places or at stormwater events	The stormwater display was not able to be utilized during town events during permit year 15, but posters were displayed at the Town Hall.
2b	Stormwater poster contest for Fifth Grade Students	Engineering Department and SuAsCo Watershed Community Council	Poster contest is held and entries are received, judged and displayed	The information for the stormwater poster contest was previously delivered to the school administrator's office but has not been implemented yet as there was a conflict with schedules and curriculum time constraints.
2 c Revised	Stormwater Photo Contest for High School Students	Engineering Department and SuAsCo Watershed Community Council Students	Photo Contest is held and entries are received, judged and displayed	No significant progress occurred during the permit year. The information for the stormwater photo contest will be sent to the School Administrator's office to be possibly included in the Photography Club's future plans.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)
2d Revised	Implement Hazardous Materials Collection Day	Engineering Department	Collect materials from residents on day per year	The town continues to hold one Household Hazardous Waste (HHHW) Collection event each year and continues to collect metal items and Styrofoam The Town also holds an additional event called "Take It or Leave It Day" where residents can swap items that they no longer use for items brought by other town residents. Residents can also bring other recyclables to this event. Both events are advertised in the paper, on cable and on the Town website once the dates are scheduled.
2e Revised	Implement an Annual Volunteer Stream Clean-Up Day	Engineering Department	Hold stream clean-up day once per year	This permit year, the Spring Cleanup was held on April 29, 2017. More than 125 volunteers participated in this event. This fall, stream cleanup was held on September 16, 2017. 70 volunteers participated in the cleanup. The Town has noticed that less and less debris is being found in the river over time.

3. Illicit Discharge Detection and Elimination

Note that the "Planned Activities" column has been deleted from this Annual report. In Fiscal Year 2019, the Town of Northborough will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies and Town-wide stormwater related programs, preparation of the Notice of Intent, and Implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)
3a Revised	Map Outfalls and Receiving Water	DPW Director, GIS Manager *Assistant DPW Director's position remains unfilled	Prepare draft map in 1st year and map 25% of outfalls each following year	Mapping of outfalls continued in permit year 15 to enter information into the Town's GIS data layers with backup hard copy plans. Some of this information was digitized and photos were taken of the outfalls to assist with updating the outfall inventory. Outfall mapping is 95% complete and a meeting about the status and next steps for outfall mapping occurred in May 2015 and staff will be completing this work as time allows.
3b Revised	Review Existing Bylaws and Regulations	DPW, Engineering Department and Planning Department	Determine whether bylaws & regulations meet EPA requirements	In 2008, the Town prepared and approved an Illicit Discharge, Detection and Elimination bylaw in Article 30
3c Revised	Develop Illicit Discharge Detection & Elimination Plan	DPW, Engineering Department and Planning Department	Make recommendations for plan and begin implementation by the fourth year	An Illicit Discharge Detection & Elimination Plan was created using the Coalition-created template plan which has been reviewed by the Town. The Town plans to utilize this template for future outfall inspections.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15
3d	Develop/Modify General Illicit Discharge Bylaw	DPW, Engineering Department, Planning Department	Propose recommendations for developing a new bylaw or modifying the existing bylaw & make presentations for Town Meeting action	An illicit discharge bylaw was developed in year 4 and adopted at Town Meeting in year 5.
3e Revised	Incorporate Information on Illicit Discharges into Public Education and Outreach Topics	DPW, Engineering Dept., Planning Dept.	Materials posted on the Town website	Information discussing stormwater impacts is available on the Town's stormwater webpage.
3f Revised	Setup and Advertise a Method for the Public To Report Illicit Discharges	DPW, Engineering Dept., Planning Dept.	Method established and log of complaints and action taken.	Various departments in Town receive calls regarding illegal dumping and potential illicit discharges. No calls were received regarding illicit discharges during the permit year. The DPW webpage has a link for the public to report a problem related to a variety of issues in Town, including illegal dumping and illicit discharges. The Town responded to calls related to solid waste dumping and addressed the issues.

4. Construction Site Stormwater Runoff Control

Note that the "Planned Activities" column has been deleted from this Annual report. In Fiscal Year 2019, the Town of Northborough will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies and Town-wide stormwater related programs, preparation of the Notice of Intent, and Implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15
4a	Review Existing Regulations, Monitoring and Enforcement Measures	DPW, Engineering Department & Planning Department	Determine whether required EPA requirements are me.t	This item was previously completed.
4b	Develop/Modify Regulations, and Monitoring & Enforcement Measures	Department of Public Works, Engineering Department	Propose recommendation for modifying existing regulations and practices	All existing bylaws and regulations were reviewed and found to be adequate with minor revisions by each Board or Committee.
4c	Present New Regulations for Town Meeting Action	DPW, Engineering Department & Planning Department	Make presentations for Town Meeting action	No Town Meeting Action is required at this time.
4d	Establish a procedure for receipt of information submitted by the public	DPW, Engineering Department & Planning Department	Number of phone calls and record of follow up actions	The DPW typically receives phone calls regarding construction sites and investigates them or forwards the information to the appropriate Town department. Some calls were received during the permit year.

5. Post-Construction Stormwater Management in New Development and Redevelopment

Note that the "Planned Activities" column has been deleted from this Annual report. In Fiscal Year 2019, the Town of Northborough will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies and Town-wide stormwater related programs, preparation of the Notice of Intent, and Implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15
5a	Review Existing Regulations, Monitoring and Enforcement Measures	DPW, Engineering Department & Planning Department	Determine whether required EPA requirements are me.t	All existing bylaws and regulations were previously reviewed and found to be adequate with minor revisions by each Board or Committee.
5b	Develop/Modify Regulations, and Monitoring & Enforcement Measures	DPW, Engineering Department & Planning Department	Propose recommendation for modifying existing regulations and practices	All existing bylaws and regulations were reviewed and found to be adequate with minor revisions by each Board or Committee.
5c	Present New Regulations for Town Meeting Action	Engineering Department & Planning Department	Make presentations for Town Meeting action	No Town Meeting Action is required at this time.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

Note that the "Planned Activities" column has been deleted from this Annual report. In Fiscal Year 2019, the Town of Northborough will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies and Town-wide stormwater related programs, preparation of the Notice of Intent, and Implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15
6a	Implement Street Sweeping Program	Department of Public Works	Sweep every street once per year	The DPW sweeps all streets within the town once per year with some streets being swept additionally as needed based on the accumulation of material.
6b	Implement Catch Basin Cleaning Program	Department of Public Works	Clean & Inspect all catch basins within five year permit cycle	Approximately 100% of all catch basins were cleaned. Budget constraints prevent cleaning of all catch basins.
6c	Perform Site Visits to Examine Existing Practices at Facilities	Department of Public Works, Engineering Department	Target all applicable municipal facilities and visit each annually	Informal site visits are performed at each municipal facility annually.
6d Revised	Train Municipal Employees at Each Facility	Department of Public Works, Engineering Department	Target all applicable municipal facilities and provide annual refreshers	An informal training session for winter road maintenance (i.e., proper salt application) was completed for the 2014/2015 winter. Stormwater training for municipal employees scheduled for summer 2016 did not occur due to funding limitations.
6e	Perform Follow-ups to Ensure Required Practices are Met	Department of Public Works, Engineering Department	Target all applicable municipal facilities and visit each annually	Follow-up visits are performed as necessary.
6f Revised	Ensure Proper Maintenance of the Storm Drain System	Department of Public Works, Engineering Department	Record of repairs and improvements to the storm drain system	As discussed in Part II, some repairs and improvements were designed and /or constructed.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)

Note that the "Planned Activities" column has been deleted from this Annual report. In Fiscal Year 2019, the Town of Northborough will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies and Town-wide stormwater related programs, preparation of the Notice of Intent, and Implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)
7a Revised	Prioritize Stormwater System Mapping Along the Assabet River	DPW, GIS Manager	Map outfalls discharging to the Assabet River by the fourth permit year	All outfalls continue to be mapped on the Town's GIS system with the backup paper copies.
7b Revised	Perform Dry Weather Inspections of Outfalls Along the Assabet River	DPW, GIS Manager	Inspect outfalls discharging to the Assabet River during dry weather by the fifth permit year	Due to continued budget constraints outfalls are inspected only as needed by the DPW. Photos of outfalls have been taken as well as some digitizing of information. DPW developed a form to evaluate conditions for each outfall.

7b. WLA

This will be evaluated as part the Notice of Intent for the new 2016 MA Small MS4 General Permit.

Part IV. Summary of Information Collected and Analyzed

See Part II for a description of notable accomplishments.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures	($)	~$21,000 (Engineering)
Total program expenditures since beginning of permit coverage	($)	~$205,000 (Engineering)
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		General Fund

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	100% (website)
Stormwater management committee established	(y/n)	N
Stream teams established or supported	(# or y/n)	1 (OAR)
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Y
Shoreline cleaned since beginning of permit coverage	(mi.)	Assabet*
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	1
▪ community participation	(# or %)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	N

*cleanup was limited to the shoreline that is accessible to public.

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "X")					
▪ Illicit Discharge Detection & Elimination					X
▪ Erosion & Sediment Control	X				
▪ Post-Development Stormwater Management	X				
Accompanying Regulation Status (indicate with "X")					
▪ Illicit Discharge Detection & Elimination					X
▪ Erosion & Sediment Control	X				
▪ Post-Development Stormwater Management	X				

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	95%
Estimated or actual number of outfalls	(#)	300
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	95%
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened	(# or %)	0%
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	0%
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	(%)	30%
% of population on septic systems	(%)	70%

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 %)	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 %)	100%
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/yr
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1/yr
Qty. of structures cleaned	(#)	1,500
Qty. of storm drain cleaned	(%, LF or mi.)	0
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	306.50 Tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.)	(location)	Landfill

Operations and Maintenance (cont'd.)

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)	($)	$27,000
• Hourly or per basin contract rate	($/hr or $ per basin)	$17.50
• Disposal cost	($)	$16,565
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	N
• % 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/yr
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	1/yr
Qty. of sand/debris collected by sweeping	(lbs. or tons)	222.34 Tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)	($)	$65,000
• Hourly or lane mile contract rate	($/hr. or ln mi.)	
• Disposal cost	($)	$9,782
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	2
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	0
• % Roads swept with rotary brush sweepers	%	100%
• % Roads swept with vacuum sweepers	%	0

Operations and Maintenance (cont'd.)

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	NA
▪ Herbicides	(lbs. or %)	NA
▪ Pesticides	(lbs. or %)	NA
Integrated Pest Management (IPM) Practices Implemented	(y/n)	N

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % $CaCl_2$ % $MgCl_2$ % KCl % Sand	100%
Pre-wetting techniques utilized	(y/n or %)	0%
Manual control spreaders used	(y/n or %)	2/7*
Zero-velocity spreaders used	(y/n or %)	5/7*
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	0%
Estimated net reduction or increase in typical year sand application rate	(±lbs/ln mi. or %)	NA
% 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) since May 2008	(y/n)	Y
*2 out of 7 spreaders have manual controls and the remaining spreaders (5) have automatic (zero-velocity) spreaders. The Town has noticed a reduction in the salt application rate through the use of automatic spreaders. Salt is stored in a shed and the new salt storage shed construction was completed during permit year 13.		

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	0
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	NA
Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	

Attachment A
Central Massachusetts Regional Stormwater Coalition
Overview of Year 15 Activities – Northborough, MA

Central Massachusetts Regional Stormwater Coalition
Coalition Activities in Year 15 (April 1, 2017-March 31, 2018)

Introduction

The Central Massachusetts Regional Stormwater Coalition (CMRSWC) is an MS4 resource for all 30 member communities. CMRSWC has three standing sub-committees to allow members to focus efforts on specific issues important to the Coalition. These sub-committees are:

- Education Sub-Committee: responsible for developing and promoting outreach and educational materials required by the MS4 permit. The Education sub-committee is also responsible for planning and scheduling the Annual Meeting, educational workshops, and other forums for discussion of MS4 topics. The committee is CMRSWC's primary liaison to professional organizations and university partnerships.
- Technical Sub-Committee: responsible for managing Coalition's website and shared equipment resources; advising members on relevant technical issues including GIS system maintenance and upgrades.
- Legislative Sub-Committee: serves as the liaison to the Massachusetts Statewide Stormwater Collaborative; responsible for tracking MS4 related legislation and regulations and keeping the legislature and regulatory agencies informed of the concerns of member communities.

The CMRSWC Steering Committee held four meetings during this 12 month reporting cycle. The CMRSWC Annual Meeting was held on November 15, 2017 in Worcester. Members of CMRSWC also attended and actively participated in the Massachusetts Statewide Municipal Stormwater Coalition meetings.

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

Best Management Practices Technical Tour

On October 25, 2017, CMRSWC sponsored a technical tour and workshop for DPWs, Highway, and other staff in member communities responsible for the operations and maintenance of local roads, drainage, sidewalks, parking lots, and other public infrastructure. The tour was led by a team from Fuss & O'Neill and took attendees from 14 communities on a "road trip" to visit sites at Dennison Lubricants (Worcester), Tufts Veterinary School (North Grafton), and several Mass DCR sites. At each site, participants had the opportunity to learn about the BMPs in use at the site from a variety of staff from DCR and Mass DOT, as well as engineers and project owners. A lunch program offered additional opportunities to discuss stormwater management techniques. Handouts, presentation materials, and video footage of the tour are being offered to CMRSWC members through the website.

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

As a follow-up to the Best Management Practices Technical Tour, 12 new CMRSWC videos were produced that feature the various BMPs visited on the tour, presentations from the day, and additional detailed footage recorded at the BMP sites after the event.

Department of Conservation and Recreation Education and Outreach Materials (Minimum Control Measures 1 and 2)

As part of the Stormwater BMP Technical Tour, Kelley Freda from the Department of Conservation and Resources presented participants with stormwater education and outreach materials available from DCR. She distributed a packet of various brochures targeting a diverse audience. These materials are available from the DCR website www.mass.gov/dcr/watersupply

Worcester Polytechnic Institute Water Resource Outreach Center (Minimum Control Measures 1 and 2)

Worcester Polytechnic Institute's (WPI) Massachusetts Water Resource Outreach Center (WROC) is dedicated to assisting Central and Eastern Massachusetts municipalities and watershed associations with their water resource needs through student project collaboration. CMRSWC has been working with the WPI-WROC and MassDEP on Interactive Qualifying Projects (IQPs) since 2012.

The CMRSWC and MassDEP sponsored a 2017 WPI-WROC project called "Stormwater Management Educational Materials for Central Massachusetts Municipalities." Municipalities are required to distribute educational materials on stormwater issues to comply with the MS4 permit; "the ultimate objective being to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced." The project team used public surveys and questionnaires to assess the public's understanding of stormwater and stormwater runoff. The results showed that most people do not understand what stormwater is, how it gets into our waterbodies and the impacts it has on water quality and public health. Focusing on increasing awareness of the importance of protecting our water among our elementary school student population, the WPI students developed a stormwater toolkit featuring an activity book and stickers for children. The activity book includes opportunities for parents to participate and ask questions.

Building on the previous work for educational materials, the 2018 student team worked with stormwater experts at MassDEP, MA Department of Education representatives and school teachers from Shrewsbury and Holden to develop a 5th grade watershed curriculum that meets the new Massachusetts Next Generation science standards. Components of the curriculum include the water cycle, watersheds, stormwater runoff and other environmental features that demonstrate to children how runoff and contaminants affect water quality. The students will be presenting their findings on May 1, 2018 at 4:00 p.m. at the MassDEP Central Regional Office in Worcester.

More information is available at: http://wp.wpi.edu/wroc/

EnviroScape Nonpoint Source Pollution Model (Minimum Control Measures 1 and 2)

The CMRSWC owns two 3D EnviroScape® Watershed/Nonpoint Source models which are available for use by our members. These models provide a hands-on, interactive demonstration of the sources and effects of water pollution and ways to prevent pollution. The CMRSWC sponsored a booth at the EcoTarium's Earth Day Celebration in April using the model to teach about stormwater education. Several member communities including Holden, Charlton, Framingham, Hopkinton, Lunenburg, Palmer, Shrewsbury, Auburn, & Dudley have used the EnviroScape model for presentations at Earth Day festivals, school programs, scouting events, and public works open houses.

Member Needs Survey

In March 2018, CMRSWC contracted with Fuss & O'Neill to develop a technical needs survey that measured the concerns of member communities with respect to compliance with the updated MS4 General Permit for Stormwater Discharges (which is currently stayed pending judicial review). The survey served as a follow-up to the first coalition member survey in the fall of 2016 and asked members to rank certain programs/tasks that CMRSWC could support to assist members in complying with the MS4 Permit. The survey also requested that respondents identify the CMRSWC tools, resources, and events that they made use of during 2017 or provide feedback on why they chose not to take advantage of such tools or events.

Coalition members ranked their needs as follows:

1. Maintain the CMRSWC Website with Available Tools and Templates
2. Provide Written IDDE Program Template and Training
3. Provide NOI/SWMP Template and Training

Coalition members ranked their compliance concerns as follows:

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

Statewide Stormwater Coalition Grant Award

CMRSWC announced at its January 8th Steering Committee Meeting a $200,000 grant from the State to the Statewide Stormwater Coalition to develop and implement a statewide stormwater education and outreach campaign. The project will provide stormwater education materials to communities across the state, including CMRSWC member communities. The funds, issued through the Commonwealth's Fiscal Year 2018 "MS4 Municipal Assistance Grant Program," recognize the important work of stormwater coalitions and regionalized stormwater management. Materials will be made available in July 2018.

Conclusion

Working as a group, CMRSWC collectively protects regional water resources while assisting communities with meeting requirements of the MS4 permit in an efficient and cost-effective manner. Member communities continue to benefit from the use of CMRSWC tools, resources, and events to continue to implement their MS4 program with local staff and resources.