



Town of Millbury Department of Public Works

MUNICIPAL OFFICE BUILDING • 127 ELM STREET • MILLBURY, MA 01527 Tel. 508 / 865-9143 • Fax: 508 / 865-0843

Keith Nastasia • Director
knastasia@townofmillbury.net

April 24, 2018

Glenda Velez - CIP

United States Environmental Protection Agency – Region 1

5 Post Office Square - OEP06-01

Boston, Massachusetts 02109-3912

Re: National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)

Annual Report for Town of Millbury, MA (Permit Year 15)

Permit Number: MAR041136

Ms. Velez:

Pursuant to the requirements of EPA's "National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems" issued May 1, 2003; the Town of Millbury, MA is pleased to submit the enclosed Annual Report for Permit Year 15.

If you have any questions regarding this report, please feel free to contact me at (508) 865-9143.

Very truly yours,

Keith Nastasia
Director of Public Works

Town of Millbury

Enclosures

cc: Fred Civian, MassDEP

David J. Marciello, Town Manager

Frank E. Occhipinti, PE, Senior Associate, Weston & Sampson

Municipality/Organization: Town of Millbury, MA

EPA NPDES Permit Number: MAR041136

MassDEP Transmittal Number: X270588

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: David J. Marciello

Title: Town Manager

Telephone #: (508) 865-4710

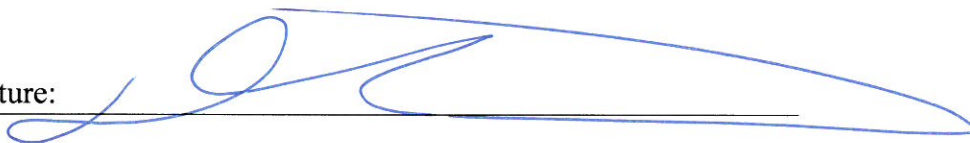
Email: dmarciello@townofmillbury.net

Mailing Address: 127 Elm Street, Millbury, MA 01527

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: David J. Marciello

Title: Town Manager, Town of Millbury

Date: April 24, 2018

Part II. Self-Assessment

The Town of Millbury has completed the required self-assessment and has determined that our municipality is generally in compliance with the conditions of the permit. See Part III for status of BMPs.

Some accomplishments during Permit Year 15 include:

- In May 2017, the DPW made a presentation to the Board of Selectmen regarding requirements of the 2016 MS4 Permit and the cost implications based on the evaluation that was previously prepared by Weston & Sampson in Permit Year 14. Weston & Sampson had evaluated the cost for the Town to comply with the requirements of the Final 2016 MA MS4 Permit.
- The Town continued their involvement as a member of the Central MA Regional Stormwater Coalition attending meetings and seminars that were offered over the past year. This included participating in a tour of various stormwater projects where Best Management Practices have been implemented.
- The Town developed and implemented a multi-year sewer system evaluation and rehabilitation program designed to investigate, evaluate and rehabilitate the sewer collection system over a period of approximately 15 years. The Town has just finished work under Year 1 and is moving forward with Year 2 of the program, which includes identification of defects in the sanitary sewer system, including locations where wastewater could potentially exfiltrate out of the sewer system and enter the drainage system. Year 1 included television inspection of approximately 8,000 linear feet of sewer and topside inspection of 30 sewer manholes. The program for Year 2 includes television inspection of as many as 14,200 linear feet of sanitary sewer to identify problem areas, topside inspection of 100 sewer manholes and smoke testing of up to 22,500 linear feet of sewer to identify cross connections between the sanitary sewer and storm drain systems. As part of this effort, the Town is also working to make updates to their existing wastewater GIS.
- In June 2017, the Town applied for and was subsequently awarded a \$150,000 319-grant for the Armory Village Green Infrastructure Project, which will improve stormwater discharges to the Blackstone River. This project builds upon work that was previously funded by EPA through the New England Interstate Water Pollution Control Commission, through which a plan was developed to address stormwater impacts and minimize non-point source pollutants while revitalizing Millbury Center through the implementation of Low Impact Development (LID) techniques and green infrastructure. This project is Phase I of a multi-year effort to bring LID and green infrastructure practices to Millbury Town Center.

The primary goals of the Armory Village Green Infrastructure Project are to (1) reduce sediment and nutrient loads as well as the quantity/velocity of stormwater flows to the Blackstone River through the use of green infrastructure including bioretention systems, tree box filters, flow through planters, tree plantings, expansion of open space areas, and selective application of

permeable paving surfaces; (2) provide continued education and outreach on the types and benefits of green infrastructure to community members and public officials; and (3) demonstrate the use of infiltration-based green infrastructure within the public right-of-way to promote stakeholder support for their use within other areas of Millbury that also contribute considerable stormwater runoff to the Blackstone River.

The final design is proposed to include the following elements:

- o Installation of two trees within a flow-through planter to temporarily store and filter runoff with excess water drained via a perforated underdrain;
- o Installation of four rain gardens totaling 1,200 square feet to infiltrate runoff from the adjacent sidewalk and street pavement;
- o Installation of 8 tree box filters to control runoff, remove pollutants and provide irrigation for the trees;
- o Construction of an underground infiltration structure beneath a parking lot to intercept and infiltrate approximately 70% of the stormwater runoff within the drainage area; and
- o Replacement of approximately 925 square feet of existing impervious surface with concrete pavers, which will capture approximately 9% of the drainage area's stormwater runoff.

An operation & maintenance plan will also be developed for those BMPs installed.

As part of the larger project, the Town also plans to remove and replace the sanitary sewer main and sewer manholes within the project limits, including removal of any identified illicit connections.

Public education and outreach initiatives proposed under the project include:

- o Public information sessions to be held during design.
- o Issuance of press releases regarding the project to be published in the Millbury-Sutton Chronicle.
- o Development of a web page about the project that includes tips that homeowners can utilize to incorporate LID techniques on their property, and links to LID and green infrastructure resources.
- o Installation of a new kiosk within the project area that provides information on LID measures installed and the water quality benefits to the Blackstone River.

The environmental outcomes anticipated from this project include significant reductions in sediment and nutrient loads to the Blackstone River from the project area and an associated improvement in water quality. Although sediment and nutrients are the primary pollutants that will be addressed, the proposed infiltration BMPs will also help to reduce loadings of other pollutants including pathogens, oil and grease, and metals.

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 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
1	Create a Stormwater Program	Department of Public Works, Planning Board, Conservation Commission, Board of Health, Board of Selectmen	Millbury will present to the public at a public meeting Millbury's Comprehensive Stormwater Management Program.	BMP Completed. Measurable goal achieved in previous permit years. In May 2017, the DPW made a presentation to the Board of Selectmen regarding requirements of the 2016 MS4 Permit and the cost implications. Stormwater topics of concern are also included in monthly reports provided to the Board of Selectmen by the DPW.	No further action is required at this time. Stormwater topics of concern will continue to be included in monthly reports provided to the Board of Selectmen by the DPW.
Revised					
2	Create Stormwater Program	Department of Public Works	Millbury will identify appropriate sources of funding assistance (SRF, 319 Grant Program, 604(b) Grant Program, Lakes & Ponds Grant Program, Source Water Protection Grant Program, Recycling Grant Program) and apply for assistance in implementing portions of Millbury's Comprehensive Stormwater Management Program, including public education and outreach.	Measurable goal completed in previous permit years. Millbury continued to actively participate in stormwater management activities as one of 31 municipalities involved in the Central Mass Regional Stormwater Coalition (CMRSWC). Millbury applied for and was awarded a 319 grant for the Armory Village Green Infrastructure Project, which will improve stormwater discharges to the Blackstone River. The Town received \$150,000 in funding through the program. Various public education and outreach initiatives are proposed as part of the project.	Millbury will continue to participate in the CMRSWC. In Permit Year 16, the Town will continue work on the Armory Village Green Infrastructure Project, including various public education and outreach initiatives such as public information sessions, press releases, a project specific website, and the development of educational materials.
Revised					

3	Address Specific Groups	Department of Public Works	Distribute EPA and other relevant educational brochures to targeted audiences. Distribution points include Town Hall, Library and Transfer Station.	During Permit Year 15, the Town continued to make stormwater information available at the DPW Office in Town Hall and on the Town's website.	During Year 15, Millbury will continue to distribute stormwater educational messages at public events.
Revised				The DPW Director also continued to include stormwater management in the monthly report provided to the Board of Selectmen. The BOS Meetings are advertised, open to the public and shown on the local cable access channel. In May 2017, the DPW made a presentation to the BOS regarding requirements of the 2016 MS4 Permit and the cost implications.	Millbury will also continue to utilize monthly meetings of the Board of Selectmen to inform and educate the public regarding stormwater management activities.
4	Target Groups Likely to Impact Stormwater	Department of Public Works	Brochures targeting specific audiences and activities will be available. Distribution points include Town Hall, Library and Transfer Station.	Stormwater brochures continued to be made available to the public at municipal buildings, including the DPW Office in Town Hall, the Library and the Transfer Station. The Health Department also continued to provide information to property owners on septic system maintenance.	Stormwater brochures will continue to be made available to the public at municipal buildings.
Revised					As part of the Armory Road Green Infrastructure Project, additional educational materials will be developed for public distribution.
5	Identify Alternate Information Sources	Department of Public Works, MIS Department	Millbury will post links to stormwater BMPs and other water quality education resources, including EPA and DEP on its website. http://millbury-ma.org . Millbury will post links to our Lady of Assumption School student storm drain project (www.sdwgt.tripod.com/). The Town will work with Lake Singletary Watershed Association in the collection and dissemination of data from the association's sampling program. Data will be posted on the Town's website along with relevant BMPs for target audiences.	During Permit Year 15, Millbury maintained links to both the Dorothy Pond and the Lake Singletary Watershed Associations. The Lake Singletary Watershed Association continued to maintain information on their website regarding how the use of pesticides and fertilizers, and overwatering, impacts the environment; and the proper maintenance of septic systems. The Town also maintained information on the Dorothy Pond Restoration Committee and the Ponds and Lakes Commission.	Millbury plans to develop a web page specific to the Armory Green Village Infrastructure Project that will include information about the BMPs proposed as part of this project, as well as tips that homeowners can utilize to incorporate LID techniques on their property with links to LID and green infrastructure resources.
Revised					

6	Identify Alternative Information Sources	Department of Public Works, MIS Department	The Town of Millbury will contact the Blackstone River Watershed Council to review opportunities in Millbury. The opportunities include hosting a watershed association meeting in Millbury with notice on website and local access channel, and televising a meeting reviewing watershed activities or needs specific to Millbury.	The Town worked closely with the Blackstone River Coalition in developing the Low Impact Development Concept Plan, which formed the basis of the Armory Village Green Infrastructure Project, for which the Town was awarded a 319 grant. The Town continued to also work with the Lake Singletary Watershed Association, the Blackstone River Watershed Council and the Dorothy Pond Watershed Association to support their programs and events. The Town provided assistance with both water level monitoring and clean-up days.	Millbury will continue ongoing efforts to partner with various groups to educate the public regarding stormwater impacts.
Revised					
7	Utilize Local Public Access Channel	Department of Public Works	Public meeting notice and a meeting reviewing Millbury's Comprehensive Stormwater Management Program will be posted/broadcast on Millbury's local access channel.	In previous permit years, the Town aired the stormwater videos "Water Blues, Green Solutions" and "Liquid Assets" on the local cable access channel, although no videos were aired during Permit Year 15. However, the DPW Director continued to include stormwater management in the monthly report provided to the Board of Selectmen. The BOS Meetings are advertised, open to the public and shown on the local cable access channel. In May 2017, the DPW also made a presentation to the BOS regarding requirements of the 2016 MS4 Permit and the cost implications.	Continue to include stormwater management in the monthly report provided to the Board of Selectmen, which is aired on the local cable access channel. Air stormwater-related videos on the local cable access channel.
Revised					

8	Develop, Conduct and Document Educational Programs	Department of Public Works Selectmen Liaison	The Town of Millbury will contact the Blackstone River Watershed Council to review opportunities in Millbury. These opportunities include hosting a watershed association meeting in Millbury with notice on website and local cable access channel, and televising a meeting reviewing watershed activities and needs specific to Millbury. The Dorothy Pond Restoration Committee and the Ponds and Lakes Commission (appointed by the Town) will post meeting and event notices on the Town of Millbury's web page. Special events and seminars with guest speakers will be televised on Millbury's local access channel.	The Town worked closely with the Blackstone River Coalition in developing the Low Impact Development Concept Plan, which formed the basis of the Armory Village Green Infrastructure Project, for which the Town was awarded a 319 grant. The Dorothy Pond Restoration Committee, and the Ponds and Lakes Committee continue to maintain a presence on the Town website, and post meeting and event notices on the Town of Millbury's webpage as needed. There are also links to both the Dorothy Pond Watershed Association and the Lake Singletary Watershed Association on the Town's website.	The Town will continue to post meeting and event notices for the Dorothy Pond Restoration Committee, and the Ponds and Lakes Committee on the Town of Millbury's Webpage, and maintain links to both the Dorothy Pond Watershed Association and the Lake Singletary Watershed Association. Special events and seminars with guest speakers will continue to be televised on Millbury's local cable access channel.
Revised					
9	Promote Household Waste Recycling	Department of Public Works, Board of Health	The Town of Millbury will work with its contracted waste hauler and the Board of Health to continue to sponsor Hazardous Waste Collection days.	Millbury continued to encourage participation in the Regional New England Disposal Technologies (NEDT) Household Hazardous Products Collection Center in neighboring Sutton by making this information available to residents via their website. The Town also accepts antifreeze, motor oil, and dried water-based paint at the recycling center at the transfer station.	The Town will continue to provide information to residents on and encourage participation in the Regional NEDT Household Hazardous Products Collection Center. The Town will also continue to accept certain items at the recycling center located at the transfer station
Revised					

1a. Additions

--	--	--	--	--	--

2. Public Involvement and Participation

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)	Planned Activities – Permit Year 16 (if applicable)
10	Storm Drain Stenciling	Department of Public Works	The Town of Millbury will work with local students at Our Lady of the Assumption School in continuing its support of storm drain stenciling by students.	BMP Completed. Measurable goal completed in previous permit years. School provided stenciling during Permit Years 1-4.	Additional storm drain stenciling programs and/or the installation of inset medallions will be considered as an element of the 2016 MS4 Permit once it is effective.
Revised					
11	Community Clean-Ups	Department of Public Works, Millbury Conservation Commission	The Town of Millbury will encourage local stream team cleanups with local residents and area Scout Groups. The Town will provide solicitation of sponsors and notice of events on local cable access channel and website.	The Town continued involvement with community clean-ups including the cleaning of the culvert at 137 Main Street along Ramshorn Brook and the Blackstone River Clean-Up Day held on March 30 th .	The Town will continue to support area cleanups and maintain BMP systems. The Lake Singletary Watershed Association plans to hold an Earth Day Clean-up on April 21, 2018.
Revised					
12	Community Clean-Ups	Department of Public Works	Town will provide trucks and other material to support cleanup efforts and disposal of materials.	The Town continued to support clean-up efforts by providing rakes, trash bags, and dump trucks, to assist in the collection and disposal of all materials collected. This includes efforts involved with the cleaning of the culvert at 137 Main Street along Ramshorn Brook and the Blackstone River Clean-up held on March 30 th .	The Town will continue to support community clean-ups.
Revised					

2a. Additions

--	--	--	--	--	--

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
13	Inventory and Mapping of Storm Drain System	Department of Public Works	The Town of Millbury will identify appropriate sources of funding assistance (SRF, 319 Grant Program, 604(b) Grant Program, Lakes & Ponds Grant Program, Source Water Protection Grant Program, Recycling Grant Program) and apply for assistance in implementing portions of Millbury's Comprehensive Stormwater Management Program, including public education and outreach.	Measurable goal of mapping outfalls was completed in previous permit years. Millbury applied for and was awarded a 319 grant for the Armory Village Green Infrastructure Project, which will improve stormwater discharges to the Blackstone River.	During Permit Year 15, the Town will continue to map new structures and inspect existing structures as needed. In Permit Year 16, the Town will continue work proposed under the Armory Village Green Infrastructure Project.
Revised					
14	Mapping and Identification of Outfalls and Receiving Waters	Department of Public Works, Board of Assessors	Millbury will develop and implement a plan to map all outfalls and receiving bodies of water, contingent on Town Meeting approval of funding.	BMP Completed. Measurable goal of mapping outfalls was completed in previous permit years.	The Town will continue to map new outfalls as needed during Permit Year 16.
Revised					
15	Identification/Description of Problem Areas	Department of Public Works	The Town of Millbury will develop and implement an Illicit Discharge Detection and Elimination (IDDE) Plan, contingent on Town Meeting approval of funding.	BMP Completed. Measurable goal completed in previous permit years.	The Town will continue to map new drainage structures as needed during Permit Year 16.
Revised					

16	Enforcement Procedures Addressing Illicit Discharge	Department of Public Works	The Town of Millbury will review whether local authority is appropriate and able to respond to potential illicit discharges. New bylaws, if necessary, will be proposed at Town Meeting.	Measurable goal completed in previous permit years. A bylaw prohibiting illicit discharges and establishing enforcement procedures was presented and approved at Town Meeting in Fall 2007.	During Permit Year 16, the Town will continue to enforce its IDDE bylaw and to inspect all new building foundations to ensure that there are no illicit discharges to the storm drain system.
Revised		<i>Revised:</i> Department of Public Works/Code Enforcement		All new building foundations continue to be inspected by the Plumbing Inspector prior to issuance of a sewer connection permit to ensure that there are no illicit discharges to the storm drain system.	
17	Public Information Program Regarding Hazardous Wastes and Dumping	Department of Public Works, Board of Health	The Town of Millbury will provide educational brochures to residents promoting proper disposal of household hazardous wastes and conditions for regional collections.	During Permit Year 15, the Town continued to distribute educational brochures regarding the proper disposal of household hazardous waste with transfer station stickers, and to make information available on the Town's website.	During Permit Year 16, the Town will continue to distribute educational brochures regarding the proper disposal of household hazardous waste with transfer station stickers and make information available regarding household hazardous waste collection on the Town's website.
Revised					
18	Initiation of Recycling Programs	Planning Board, Board of Health	Millbury will apply for funding assistance from DEP's Recycling Grant Program for assistance in public education and the purchase of recycling materials.	The Town's Recycling Program, which was established in prior permit years, was continued throughout Permit Year 15. Information on the recycling program was also included on the Town's website.	Millbury will continue their recycling program in Year 16 and continue to include information regarding this program on the Town website.
Revised					

19	Watershed Assessments and Studies	Department of Public Works, Conservation Commission, Board of Health	Millbury will identify opportunities for funding assistance from DEP's 604(b) and 319 grant programs, and the Lake and Ponds Grant Program to support watershed assessment and implementation activities. Task can include design and installation of stormwater BMPs and public outreach including storm drain stenciling. Emphasis will be on assessments and remediation for stormwater related problems impacting water quality in Brierly Pond, Dorothy Pond, Hathaway Pond, Howe Pond, Howe Reservoirs, Slaughterhouse Pond and Woolshop Pond. These waterbodies have been identified as impaired on DEP's 303d list.	Millbury applied for and obtained a \$150,000 319-grant for the Armory Village Green Infrastructure Project, which will improve stormwater discharges to the Blackstone River, which has impairments for sediment and nutrients. This project will incorporate the use of green infrastructure including bioretention systems or rain gardens, tree box filters, flow through planters, tree plantings, expansion of open space areas, and selective application of permeable paving surfaces to reduce nutrient and bacteria loadings.	As part of the Armory Village Green Infrastructure Project, the Town plans to test discharges at the South Main Street Outfall where it discharges to the Blackstone River prior to construction and after construction is complete to document improvements in stormwater discharge quality.
Revised					
20	Watershed Assessments and Studies	Department of Public Works, Public Water Suppliers	The Town of Millbury will encourage the Massachusetts American Water Works Co. to apply for funding assistance from DEP's Source Water Protection Program for grant assistance to develop wellhead protection plans and stormwater management plans within Zone II. These plans can include stormwater management programs. The proposed tasks will include a public education component. The Lake Singletary Watershed Association will be consulted and asked to provide educational data from their studies and monitoring of Lake Singletary for posting on Millbury's local access channel and website.	Millbury has continued to work with the Lake Singletary Watershed Association to obtain and distribute water quality data when available.	Millbury will continue to work on its Source Water Protection Program and seek data from the Lake Singletary Watershed Association when available for distribution.
Revised					

3a. Additions

--	--	--	--	--	--

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
21	Bylaw: Stormwater Management Regulations for Construction Sites 1 Acre or Larger	Planning Board, Conservation Commission, Town Counsel, Board of Health, ZBA	Millbury will review model bylaw developed by DEP in consultation with the Attorney General's Office.	BMP Completed. Measurable goal (development of bylaw) completed in previous permit years. Modifications to the Town's existing Site Plan Review and Zoning Regulations were proposed and passed at Town Meeting in 2005. The Town's Subdivision Regulations include requirements for sediment and erosion control at construction sites as well.	No further action is required at this time. During Permit Year 16, the DPW will continue to work with the Planning Board to ensure that site plan reviews and inspections of approved projects occur during and after construction. The Town will also continue to enforce their Site Plan Review and Zoning Regulations, as well as their Subdivision Regulations, which include requirements for sediment and erosion control at construction sites.
Revised					
Revised					
Revised					
Revised					

4a. Additions

--	--	--	--	--	--

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
22	Bylaw: Require Post-Construction Runoff Controls	Planning Board, Conservation Commission, Town Counsel, Board of Health, ZBA	Millbury will review model bylaw developed by DEP in consultation with the Attorney General's Office.	BMP Completed. Measurable goal completed in previous permit years. The Planning Board sponsored a new Stormwater Management Bylaw on the Town warrant for Spring 2007, which was approved in April 2007.	No further action required at this time.
Revised				O&M plans for new BMPs currently require a maintenance agreement.	The Town will also continue to enforce their Site Plan Review and Zoning Regulations, as well as their Subdivision Regulations, and their existing Stormwater Management Bylaw, with respect to post-construction stormwater runoff controls. During Permit Year 16, the DPW will continue to work with the Planning Board to ensure that site plan reviews and inspections of approved projects occur during and after construction. O&M plans will also continue to require a maintenance agreement for new BMPs.
Revised					
Revised					
Revised					

5a. Additions

--	--	--	--	--	--

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
23	Develop a Municipal Operations and Maintenance Plan	Department of Public Works	Using regulations and recommendations from the DEP and EPA, Millbury will develop and update an operations and maintenance plan to include proper disposal of street sweepings, catch basin cleanout, snow disposal, roadway and de-icing procedures, vehicle washing and outside storage of materials.	Measurable goal completed in previous permit years. Millbury continued to utilize the Standard Operating Procedures developed by the CMRSWC, which cover outfall inspection, catch basin cleaning, sediment & erosion control, oil/water separator maintenance, use & storage of pesticides and fertilizers, etc.	Millbury will continue to follow and utilize the SOPs developed by the CMRSWC. Millbury will also continue to replace old catch basins with deep sump structures as opportunities are identified, and perform maintenance as outfalls as needed to prevent erosion.
Revised					
24	Develop a Municipal Operations and Maintenance Plan	Department of Public Works	Millbury will implement a formal inspection program, including maintenance logs and scheduling, for catch basin cleaning, repairs and new installation.	The measurable goal, which included implementation of a formal inspection program, was completed in previous permit years. Notable maintenance activities in Permit Year 15 included: - Swale clean-ups and culvert cleaning at 137 Main Street along Ramshorn Brook. - Stream maintenance work at Ramshorn Brook. - Cleaning of 194 catch basins utilizing Town equipment and personnel. Catch basins cleaned were also repaired as needed. - Sweeping of streets at least once per year. Streets in the downtown area and streets adjacent to lakes and ponds were swept more than once per year. - Cleaning and inspection of storm drains as needed. - Outfall maintenance as needed. Specifically, repairs were made to an outfall headwall. - Repair of a collapsed easement drain. - Calibration of hopper-style salt spreaders on trucks, quantifying the pounds of material applied at each device setting at different speeds.	Millbury will continue its ongoing O&M Program, and keep records of activities undertaken, including calibration sheets and deicing materials. Calibration maintenance will be performed each year. Streets will continue to be swept at least once per year with some streets swept more than once per year.
Revised					

25	Develop and Implement Training Programs for Municipal Employees	Department of Public Works	Millbury will send a minimum of 3 Public Works employees annually to training seminars sponsored by MassDOT, BayState Roads, and other relevant agencies or vendors.	In Permit Year 15, DPW staff members were sent to outside training courses offered by Baystate Roads that included training on spreader calibration and stormwater management. The DPW Director and DPW staff also continue to attend trainings and seminars offered as part of the Town's involvement in the Central Massachusetts Regional Stormwater Coalition.	Millbury will continue to provide training to public works employees on stormwater pollution prevention, IDDE, and good housekeeping, etc.
Revised					
26	Review Storm Drainage Infrastructure Needs	Department of Public Works	Millbury will incorporate storm drain infrastructure review in Millbury's Chapter 90 project utilizations.	Drainage improvements are completed as necessary in conjunction with Chapter 90 projects, and through the Town's I/I program. Millbury was awarded a 319-grant for the Armory Village Green Infrastructure Project, which will improve stormwater discharges to the Blackstone River. This project will incorporate the use of green infrastructure including bioretention systems, tree box filters, flow through planters, tree plantings, expansion of open space areas, and selective application of permeable paving surfaces. It will improve the existing drainage system in this area which is inadequate to handle existing stormwater flows. The project may also be financed in part using Chapter 90 funds.	The Town will proceed with design and construction of the Armory Village Green Infrastructure Project. BMPs installed as part of this project will be inspected regularly by the DPW. Millbury will continue to identify opportunities to incorporate stormwater improvements into future capital projects, and grant opportunities available to fund these projects.
Revised					

6a. Additions

--	--	--	--	--	--

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>

There are currently two approved TMDLs which apply to Millbury:

- The Lake & Pond Phosphorus TMDL, which includes Brierly Pond (14% reduction in total phosphorus) (MA51010); Dorothy Pond (1% reduction in total phosphorus) (MA51039); Howe Reservoir (48% reduction in total phosphorus) (MA51071), and Pondville Pond (8% reduction in total phosphorus - most of Pondville Pond is located in Auburn) (MA51120).
- The Long Island Sound Watershed Nitrogen TMDL.

Many of the BMPs that the Town is currently implementing as part of their Stormwater Management Program will assist the Town in meeting the conditions of these approved TMDLs. These include BMP #2, 3, 4, 5, 6, 7, 8, 9, 12, 15, 16, 17 and 24. In addition, the Town has also implemented the following BMPs, which will assist the Town in meeting the TMDL Waste Load Allocations:

7a. Additions

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)	Planned Activities – Permit Year 16 (if applicable)
27	Engage Watershed Groups: Dorothy Pond Watershed Association	Local Groups & Dept. of Public Works	Continue to hold regular meetings and disseminate information to the public	During Permit Year 15, the Dorothy Pond Watershed Association continued to maintain their website in addition to providing information on their Facebook Page. They also held their annual meeting on Feb. 24, 2018. The Dorothy Pond Restoration Committee also has a presence on the Town's website.	The Town will continue to maintain a link to the Dorothy Pond Watershed Association where information will be provided to residents on protecting water quality and opportunities for the public to participate in clean-up events. The Town will also maintain information on the Dorothy Pond Restoration Committee on their website.
28	Disseminate Information to Homeowners Regarding Septic System Maintenance	Health Department	Continue to distribute information to property owners regarding septic system maintenance	During Permit Year 15, the Health Dept. continued to make available to residents information on proper maintenance of septic systems.	The Health Department will continue to make available to residents information on how to maintain their septic system.
29	Allow for Yard Waste Disposal at the Transfer Station	Dept. of Public Works/Transfer Station	Continue to provide an opportunity for residents to dispose of yard waste at the transfer station	During Permit Year 15, the Town continued to accept yard waste at the Transfer Station.	The Town will continue to accept yard waste at the Transfer Station.

7b. WLA Assessment

The Waste Load Reductions for Phosphorus Impaired Waters, as included in the Lake & Pond Phosphorus TMDL and as they relate to Millbury, are as follows:

Waterbody	Predicted Total Phosphorous (ppb)	Predicted Load (kg/yr)	Target Total Phosphorous (ppb)	Target Load (kg/yr)	Required Percent Reduction*
Brierly Pond (MA51010)	30	278	25	231	14%
Dorothy Pond (MA51039)	26	366	25	350	1%
Howe Reservoir (MA51071)	50.9	104	25	51	48%
Pondville Pond (MA51120)	28.1	453	25	402	8%

*Required Percent Reductions are as included in the Final 2016 MS4 Permit.

Detailed TMDL Load Allocations by Lake:

Brierly Pond (MA51010):

Source	Current TP Loading (kg/yr)	Target TP Load Allocation (kg/yr)
Forest	75	75
Agriculture	49	38
Open Land	19	14
Residential (Low Density)	36	27
Residential (High Density)	77	59
Commercial/Industrial	12	9
Septic Systems	11	8
Other	0	0
Total Inputs	278	231

Dorothy Pond (MA51039):

Source	Current TP Loading (kg/yr)	Target TP Load Allocation (kg/yr)
Forest	49	49
Agriculture	1	0
Open Land	24	23
Residential (Low Density)	4	4
Residential (High Density)	228	217
Commercial/Industrial	60	57
Septic Systems	0	0
Other	0	0
Total Inputs	366	350

Howe Reservoir (MA51071):

Source	Current TP Loading (kg/yr)	Target TP Load Allocation (kg/yr)
Forest	15	15
Agriculture	0	0
Open Land	12	5
Residential (Low Density)	0	0
Residential (High Density)	66	27
Commercial/Industrial	11	4
Septic Systems	0	0
Other	0	0
Total Inputs	104	51

Pondville Pond (MA51120):

Source	Current TP Loading (kg/yr)	Target TP Load Allocation (kg/yr)
Forest	156	156
Agriculture	86	71
Open Land	12	10
Residential (Low Density)	59	49
Residential (High Density)	85	71
Commercial/Industrial	52	43
Septic Systems	3	2
Other	0	0
Total Inputs	453	402

The Town is making progress in meeting the Waste Load Allocations and Waste Load Reductions identified above through implementation of existing BMPs identified herein.

Part IV. Summary of Information Collected and Analyzed

The only additional information that has been collected outside of what was listed in Part III above includes sampling at pipes outlets that collect stormwater runoff from the Transfer Station/Recycling Center on Riverlin Street. In Permit Year 15, sampling was completed twice per year.

Part V. Program Outputs & Accomplishments (OPTIONAL)

(Since beginning of permit coverage unless specified otherwise by a **, which indicates response is for period covering April 1, 2016 through March 31, 2017)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	Yes
Annual program budget/expenditures **	(\$)	
Total program expenditures since beginning of permit coverage	(\$)	
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 %)	13,000
Stormwater management committee established	(y/n)	No
Stream teams established or supported	(# or y/n)	No
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	Ongoing through NEDT Facility in Sutton & Provided at Transfer Station
▪ community participation **	(# or %)	Unknown
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	Yes

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					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	98%
Estimated or actual number of outfalls	(#)	267
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	98%
Mapping method(s)		
▪ Paper/Mylar	(%)	0
▪ CADD	(%)	0
▪ GIS	(%)	100%
Outfalls inspected/screened **	(# or %)	
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	3
Illicit connections removed **	(#); and (est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	3
% of population on sewer	(%)	75%
% of population on septic systems	(%)	25%

Construction

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

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)	Yes
Low-impact development (LID) practices permitted and encouraged	(y/n)	Yes

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1+/year
Qty of structures cleaned **	(#)	~194
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Worcester Landfill
Basin Cleaning Costs		
Annual budget/expenditure (labor & equipment)**	(\$)	

• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
• Disposal cost**	(\$)	
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified in contracts	(y/n)	N/A
• % Structures cleaned with clam shells **	(%)	100%
• % Structures cleaned with vector **	(%)	0%

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1+/year
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	1+/year
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Worcester Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	~\$75,000
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	N/A
• Disposal cost**	(\$)	\$0
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	2
• 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 %)	0%
▪ Herbicides	(lbs. or %)	0%

▪ Pesticides	(lbs. or %)	0%
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	95% 5%
Pre-wetting techniques utilized **	(y/n or %)	Yes: NaCl
Manual control spreaders used **	(y/n or %)	Yes
Zero-velocity spreaders used **	(y/n or %)	No
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 %)	0%
% of salt/chemical pile(s) covered in storage shed(s)	(%)	0%
Storage shed(s) in design or under construction	(y/n or #)	N/A
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Yes

Water Supply Protection

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