

Municipality/Organization: Town of Milford, Massachusetts

EPA NPDES Permit Number: MAR041135

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

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

Part I. General Information

Contact Person: Scott Crisafulli **Title:** Highway Surveyor

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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: Scott J. Crisafulli

Title: Highway Surveyor

Date: 5/1/17

Part II. Self-Assessment

The Town of Milford has completed the required self-assessment and has determined that our municipality is in compliance with the permit conditions. Discussions of the progress on BMPs toward the measurable goals, as well as quantification of some of the programs, are included in the following sections. This Annual Report is based on the current General Permit being administratively continued, as it expired on May 1, 2008 and the new General Permit will not be effective until July 1, 2017.

Public Education and Outreach

Milford has met the goals of the BMPs in this category and will continue to provide public education in the form of presentations, distribution of brochures, providing stormwater materials in the local library and other Town venues (schools, Town Hall), and postings on the Town website. During this permit year, the Town hung stormwater educational posters in five schools and the library.

Public Involvement and Participation

Annual clean-ups, scrap metal and used motor oil recycling, and annual hazardous waste collection days are ongoing programs to fulfill this BMP. These include participation in the annual Charles River Earth Day Cleanup event, the Milford Upper Charles Trail Cleanup event sponsored by the Friends of the Milford Upper Charles Trail, and the Town-wide Earth Day Cleanup. In addition, the town is collaborating with residents to provide seasonal curb-side pick-up of leaves, Christmas trees, and winter brush/blowdown. Quantities of materials collected as part of ongoing recycling and disposal programs during calendar year 2016 are presented later in this report.

Illicit Discharge Detection and Elimination (IDDE)

The Milford Sewer Department regularly conducts several programs to address existing and potential sanitary sewer overflows (SSOs). These include annual and monthly flushing of specific areas within the sewer collection system in an effort to reduce the frequency, duration and volumes of SSOs that could potentially occur, an infiltration/inflow removal program, and a sump pump removal program. The Sewer Department disconnected 8 sump pumps from the collection system in calendar year 2016, and the program is still being offered to residents. During calendar year 2016, the Sewer Department did not replace any sanitary sewer main. The Department installed approximately 926 linear feet of cured-in-place pipe (CIPP), which will reduce infiltration to sanitary sewers, and potential exfiltration into the drainage system.

In 2016, Milford continued its efforts to develop a comprehensive GIS map of the drainage system. To date, the Town has completed a flyover of the Town; collection of GPS coordinates for known outfalls, manholes, catch basins, and structural BMP; and incorporation of this data into its GIS system. The Town is currently working to build out the remaining portions of the drainage GIS, including drain line configuration and connectivity. The number of system components is as follows:

Outfalls	301
Manholes	1626
Catch Basins	3,417
BMPs	39

Construction Site Stormwater Runoff Control, Post-Construction Stormwater Management in New Development and Redevelopment

The following summarizes Conservation Commission activity for 2016, related to the Milford's MS4 permit:

Activity	Number
Total conservation filings	41
RDA – negative determination	8
NOI – Order of Conditions Issued	16
Certificate of Compliance – previous Order	12
Extension	2
Enforcement Orders	2
ORAD Filings	1

Thirty Site Plan Amendments or re-development proposals were submitted to the Planning Board for review. Most of the filings were for change of use (i.e., no stormwater impacts). Several required Conservation Commission filing. Two are large shopping center redevelopments under construction, one of which is 95-percent completed, the other has just started construction. Remaining, are the proposed residential developments stormwater BMPs. Proposed new drainage systems included deep-sump catch basins, vortex units, detention basins, and recharge volumes. All submissions require Operation and Maintenance plans. The work at the two residential developments is ongoing, but the drainage systems and detention basins have been completed.

There were no reported violations of the Stormwater By-law.

Pollution Prevention and Good Housekeeping in Municipal Operations

The Town installed one new catch basins along with 350 feet of new drainage pipe in 2016. Debris gates on Godfrey Brook, Hospital Brook, and O'Brien Brook were cleaned on 55 occasions. Two detention basins were cleaned and brush cutting was performed at 37 locations. Detention basin maintenance (brush cutting) was performed during July and August.

The Town Parks Department has a landscape management plan that oversees the seed, phosphorus free fertilizer, herbicide, and pesticide application at ten town-owned park facilities. Typically, each of the field facilities receives three applications of seed, fertilizer, herbicide, and pesticide on an annual basis. Additionally, all landscape waste generated by the Parks Department is brought to a town compost facility for disposal. Trash receptacles are provided at the park and emptied at least twice per week to minimize litter. The Parks Department also maintains five pet-waste stations with signage along the Charles River Bicycle Trail in an effort to minimize pollutants from pet waste being introduced into stormwater. The town pool is dechlorinated and discharged to the stormwater system three times per year.

Milford has also begun recycling (grinding) brush and other tree wastes into bark mulch, which is then used on town properties instead of retail purchasing of mulch.

Capital Improvements

The Town completed work on the Main St./Congress Ter. project in 2016. The project was designed to rehabilitate the stone masonry channelized sections of the Godfrey and O'Brien Brooks stream channels, which convey natural flows and stormwater. Frequent damage to the aged stone walls results from high flows and contributes to periodic episodes of sediment loading from erosion. The total project cost was \$2.2 million. In 2015, the Town completed replacement of 350 linear feet of culvert at a portion of Godfrey Brook that crosses Rt. 16 by the hospital, and replacement of 290 linear feet of culvert from Congress Terrace to Westbrook Street. In addition, nearly 400 linear feet of old sewer pipe was replaced between Westbrook St. and West Walnut St. The project provides better stormwater conveyance and flood control while eliminating erosion of the old earth and stone channel walls.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14	Planned Activities Permit Year 15
PE1	Brochures to educate public about stormwater pollution, pollution prevention, importance of reporting illicit dumping	Highway Dept.	Develop brochures in Permit Year (PY) 1. Produce and mail to residents in PY2.	Brochures distributed during PY2. Town mailed brochures to households and businesses as inserts in the sewer or tax bills to educate public about not dumping in local streams, and to provide information about waste disposal and recycling in Town. BMP completed in Permit Year 2.	Catch basin cleaning crews to monitor reduction of trash and other pollutants observed in catch basins.
PE2	Brochures to educate business/industry regarding pollution prevention, material storage and handling, housekeeping, disposal practices	Highway Dept.	Develop brochure in PY1. Produce and mail to businesses in PY2.	Brochures distributed during PY2. Town mailed brochures to households and businesses as inserts in the sewer or tax bills to educate public about not dumping in local streams, and to provide information about waste disposal and recycling in Town. BMP Completed in Permit Year 2,	Catch basin cleaning crews to monitor reduction of pollutants observed in catch basins.
PE3	Outreach program for local students, civic groups	Highway Dept.	Organize and implement round of presentations for local schools and at least one civic group.	Stormwater educational posters were put up in five schools and at the Town Library in PY13. Posters maintained in PY14.	The Town will continue to seek opportunities to educate students, civic groups, etc.
PE4	Educational material in Library	Highway Dept.	Organize a group of materials regarding stormwater pollution and make available at library.	Stormwater educational posters were put up in five schools and at the Town Library in PY13. Posters maintained in PY14.	Town will continue to maintain a collection of materials, with a focus on bacteria and phosphorus.
<i>Revised</i>	<i>Educational materials in Town Hall and other locations</i>	<i>Highway Dept.</i>	<i>Hang posters and have materials available in Town Hall.</i>		
PE5 <i>New</i>	Education and outreach regarding the 2017 MS4 Permit	Highway Dept.	Provide education to municipal officials and taxpayers about the 2017 MS4 Permit		Provide education to municipal officials and taxpayers about the 2017 MS4 Permit.

2. Public Participation & Participation

BMP ID #	BMP Description	Responsible Dept./Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14	Planned Activities – Permit Year 15
PP1	Community cleanup	Highway Dept.	Form volunteer group for annual cleanup. Hold cleanup day and record participants.	<p>The Charles River Earth Day Cleanup Steering Committee held its Annual Earth Day Charles River Watershed Cleanup Event in April 2016. This event involves volunteers collecting trash throughout the Charles River watershed, including sites within Milford.</p> <p>The Friends of the Milford Upper Charles Trail held its annual spring cleanup in April 2016.</p> <p>The Citizens of Milford held its annual town-wide Earth Day Cleanup in April 2016.</p>	Continue to support annual cleanup days to reduce amount of debris/trash along waterways and roadways.
PP2	Scrap metal and used motor oil recycling	Highway Dept.	Continue to offer recycling program. Record amount of material collected.	Program is ongoing and maintained by the Board of Health. Waste/used engine oil, latex/oil based paint, auto batteries, and household batteries are collected year round. 1,500 gallons of motor oil, 24 tons of E-waste, and 740 tons of scrap metal/large appliances were collected during CY2016.	Continue to offer program and record amounts of materials collected.
PP3	Hazardous waste dropoff days	Highway Dept.	Continue to offer semi-annual dropoff program and record amount of material collected.	Program is ongoing and maintained by the Board of Health. In 2016, all materials listed above were collected year round. Two comprehensive household hazardous waste collection days were hosted by the Town of Milford in 2016. Town residents also had access to three additional comprehensive household hazardous waste collection events in Hopedale, Holliston, and Franklin.	Continue to offer drop off program and record amount of material collected.
PP4	Public meeting	Highway Dept.	Hold public meeting to present proposed bylaw/ordinances for input prior to implementation by end of PY1.	Task completed in PY3.	Task complete.
<i>Revised</i>			<i>Public meeting may also discuss stormwater pollution prevention.</i>	Task completed in PY3.	Task complete.

3. Illicit Discharge Detection & Elimination

BMP ID #	BMP Description	Responsible Dept./Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14	Planned Activities – Permit Year 15
IDD1	Storm Sewer Map	Highway Dept.	Seek Town Meeting funding in PY1. Complete map in PY2.	Outfall mapping completed by consultant in August 2004. Additional drainage system mapping completed in Permit Years 4, 5, 6 and 12. SEE PART II. SELF ASSESSMENT for details. In Permit Year 14, the Town's Drainage GIS was further updated, including orthophoto information.	Task complete (all outfalls). Will update GIS and orthophoto information.
IDD2	IDDE program development, identification of problem areas, correction of issues.	Highway Dept.	Conduct outfall sampling in PY2. Number of illicit discharges to be removed in PY3, 4, 5.	Dry-weather field screening completed by consultant in Fall of 2005 and "Dry Weather Outfall Investigation Summary Report" completed November 2005. 303 outfalls/structures were inspected at least once during dry weather. No illicit discharges identified during PY14.	Continue IDDE program.
IDD3	IDDE program documentation.	Highway Dept.	Submit annual report, including information on IDDE program steps.	Annual report is hereby submitted.	Future PY annual reports will include information on IDDE program tasks
IDD4	Storm drain stenciling program, focusing on drains tributary to ponds and known dumping areas. Program extended to brook drains as feasible.	Highway Dept.	Percentage/number of storm drains stenciled annually. Records of catch basin cleaning showing decreased dumping/pollutants in catch basins.	All Town storm drains (approximately 3,353) were stenciled or re-stenciled in PY11. The Eagle Scouts assisted with the stenciling. Task completed in Permit Year 11.	Task complete.
IDD5	Regulation prohibiting non-stormwater discharges to municipal system.	Highway Dept.	Development and implementation of regulation during PY2.	Sections on Prohibition of Illegal Discharges, Prohibition of Illicit Connections, and Waste Disposal Prohibitions included in Stormwater Management bylaw, in effect as of February 9, 2006.	Continue to implement bylaw. Work with property owners to remove illicit discharges as needed.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14	Planned Activities – Permit Year 15
CR1	Regulation for erosion/sediment controls, BMPs, construction controls	Highway Dept.	Development and establishment of regulation.	<p>Stormwater Management bylaw requiring stormwater management permit for construction activities disturbing greater than 1 acre approved at Town Meeting on October 24, 2005.</p> <p>The Stormwater Management bylaw was approved by the Attorney General's Office in letter dated February 9, 2006.</p>	Task complete.
CR2	Mechanism for site plan review, inspections, review procedures	Highway Dept.	Establishment of procedures and number of plans reviewed annually.	The Stormwater Management General By-Law, adopted on October 24, 2005, requires a Stormwater Permit for any construction activity disturbing greater than 1 acre of land except for projects that are required to file a Notice of Intent (NOI) with the Milford Conservation Commission. Such NOIs must include a fully executed Stormwater Management Form and projects must be designed in full compliance with DEP's Stormwater Management Policy. SEE PART II. SELF ASSESSMENT FOR DETAILS.	Continue to implement bylaw.

5. Post-Construction Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14	Planned Activities – Permit Year 15
PCR1	Regulation for BMPs	Highway Dept.	Develop and adopt regulation, measure compliance (# of BMPs, % compliance, etc).	Thirty Site Plan Amendments or re-development proposals were submitted to the Planning Board for review. Most of the filings were for change of use (i.e., no stormwater impacts). Several required Conservation Commission filing. Two are large shopping center redevelopments under construction, one of which is 95-percent completed, the other has just started construction. Remaining, are the proposed residential developments stormwater BMPs. Proposed new drainage systems included deep-sump catch basins, vortex units, detention basins, and recharge volumes. All submissions require Operation and Maintenance plans. The work at the two residential developments is ongoing, but the drainage systems and detention basins have been completed.	Continue to implement bylaw.
PCR2	Regulatory mechanism for BMP operation and maintenance (O&M)	Highway Dept.	Regulation development and adoption; maintenance of inspection reports.	Stormwater Management bylaw approved at Town Meeting on October 24, 2005 includes Operation, Maintenance, and Inspection Schedule requirements for privately-owned facilities, and assigns maintenance responsibility. The Stormwater Management bylaw was approved by the Attorney General's Office in letter dated February 9, 2006.	Continue to implement bylaw.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14	Planned Activities – Permit Year 15
MGH1	Street sweeping	Highway Dept.	Continue street sweeping program, note reduction in sediments in catch basins, quantities of material collected.	Street sweeping was conducted March 30 through August 30 of 2016. A total of 363.15 tons of material was collected. All accepted streets (120 miles) were swept at least twice, and sidewalks and parking lots were also swept. Associated cost and labor: \$14,725 labor, \$6,600 fuel, \$16,000 maintenance and brooms.	Continue program through all permit years.
MGH2	Catch basin cleanouts	Highway Dept.	Continue catch basin cleanout program. Record number of catch basins cleaned, sediment collected.	The Town conducted annual catch basin cleanouts in July through August of 2016. A total of 3,417 catch basins were cleaned and a total of 348.35 tons of material removed. Total cost of \$14,125.	Continue program through all permit years.
MGH3	Record keeping/schedule of maintenance	Highway Dept.	Continue to keep listing of regular maintenance activities, schedules, and procedures.	Records added to maintenance file.	Continue to maintain records and update program as needed.
MGH4	Recycling and waste disposal program	Highway Dept.	Continue recycling and waste disposal program for municipal operations. Record quantities involved in program.	Program ongoing. Residents may drop off yard waste at the Town composting facility year-round. A total of 2,500 tons of yard waste was recycled in Calendar Year 2016 (BOH data), as well as 270 Christmas trees. Parks department landscape waste is composted at town compost facility.	Continue program through all permit years.
MGH5	Waste disposal/ housekeeping training and practices	Highway Dept.	Continue proper disposal procedures, conduct training, keep logs of material disposal.	A total of 2,017 gallons were removed from two oil/water separators at the Highway Department Garage in April and December 2016 at a total cost of \$16,775.	Continue program through all permit years.
MGH6	Identification, inspection, maintenance of Town owned BMPs	Highway Dept.	Inspection and maintenance of structures, maintain records.	A total of 350 feet of new drainage and one new catch basins were installed. Debris gates in the Godfrey, O'Brien, and Hospital Brooks were cleaned on 55 occasions. Brush cutting was completed at 37 locations and two detention basins were cleaned.	Perform recommended maintenance activities on detention basins. Continue program.

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

There are currently two approved TMDLs which apply to Milford, both of which are within the Charles River Watershed.

Many of the BMPs that the Town is currently implementing as part of their Stormwater Management Program will assist the Town in meeting these approved TMDLs. These include BMP #PE4, PP1, IDD2, MGH1, and MGH2. In addition, the Town has also implemented the following BMPs which are aimed at assisting the Town in meeting the TMDL Waste Load Allocations:

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 15 (if applicable)
7-1	Phosphorus free fertilizer	Parks Department	Reduce phosphorus to Charles River Watershed by using phosphorus free fertilizer	The Town's Parks Department incorporated a phosphorus free fertilizer to their landscape management plan.	Continue use of phosphorus free fertilizer
7-2	Pet waste Stations	Parks Department	Continue to maintain five pet stations and signage along Charles River Bicycle Trail.	The Parks Department maintains five pet stations with signage along the Charles River Bicycle Trail in an effort to eliminate pet waste pollution. This program anticipated to provide improved bacteria removal.	Continue to maintain five pet stations and signage along Charles River Bicycle Trail.
7-3	Milford Pond Aquatic Restoration Project Replicated wetlands.	Engineering Dept.	Replicated wetlands will increase nutrient uptake in Milford Pond and anticipates to provide improved phosphorus removal.	Monitoring of the pond will indicate phosphorus removal. Monitoring to be conducted by USACE through 2018.	Continue to track phosphorus removal through monitoring.

7b. WLA Assessment

The Waste Load Reduction for the section of the Charles River that Milford discharges to, as included in the Final Pathogens TMDL for the Charles River Watershed, is as follows:

Waterbody	Pathogen Load Reduction Needed to Meet Water Quality Standards	
	Maximum Fecal Coliform Concentration/100mL	Required Reduction to meet Water Quality Standard (%)
Charles River (MA72-02)	82,000	99.8%

The Waste Load Reductions for Charles River Watershed for Phosphorus, as included in the Final TMDL and as they relate to Milford, are as follows:

Waterbody	Phosphorus Load Reduction			
	Baseline Phosphorus Load, kg/yr	Stormwater Phosphorus Load Reduction Requirement kg/yr	Allowable Phosphorus Load, kg,yr	Stormwater Percent Reduction in Phosphorus Load (%)
Charles River	1,611	663	948	41%

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 quantities of materials accepted by the Town's recycling programs are recorded by the Board of Health and have been included in the following section.

Part V. Program Outputs & Accomplishments

Education, Involvement, and Training

Stormwater education materials collected and available at library	(y/n)	Yes
Clean-up days held	(#)	2 events
Household Hazardous Waste Recycling		
☐ material collected (automotive waste oil)	(gal)	1,500
☐ material collected (household paint)	(gal)	Not reported
☐ annual recycling (January 2016-December 2016, inclusive)	(tons)	6,098

Legal/Regulatory

	In Place Prior to Phase II	Existing Regs Reviewed	Drafted	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 (partly)			X
☐ Post-Development Stormwater Management				X

Mapping and Illicit Discharges

Number of outfalls mapped to date	(#)	301
Estimated or actual number of outfalls	(#)	301
Mapping/Survey method(s)	type	GPS/CAD/GIS
Outfalls inspected/screened during dry weather	(#)	282 (100%)
Estimated % of population on sewer	(%)	80
Estimated % of population on septic systems	(%)	20
Outfalls identified for further investigation	(#)	24 (9%)
Outfall drainage systems mapped (complete or partial)	(#)	301 (100%)
Illicit discharges traced	(#)	8
Illicit discharges removed	(#)	7

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
Total number of structures cleaned	(#)	3,417
Total amount of material removed from structures	(cubic yards)	348.35 tons catch basin cleanings + 363.15 tons street sweepings
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		registered landfill
Disposal of yard waste		Composted and used by Public, Parks, and Highway Dept.
Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	2
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	At least 2
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	registered landfill
Anti-/De-Icing products	material	NaCl and limited CaCl ₂
Salt pile(s) covered in storage shed(s)	(y/n)	Yes