TOWN OF MILTON

DEPARTMENT OF PUBLIC WORKS
629 RANDOLPH AVENUE
MILTON, MA 02186
www.townofmilton.org

JOSEPH W. LYNCH
Director of Public Works
JOHN P. THOMPSON, P.E.
Town Engineer
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CHRISTOPHER TRUDEL
Civil Engineer
KATHLEEN M.BOWEN
Senior Administrative Clerk – Conservation
ALLAN BISHOP
Engineering Department/GIS

April 27, 2017

Glenda Velez-CIP
U.S. Environmental Protection Agency- Region 1
5 Post Office Square – OEP06-01
Boston MA 02109 - 3912

Fred Civian
Massachusetts Department of Environmental Protection
1 Winter Street – 5th floor
Boston, MA 02108

RE: NPDES Phase II Small MS4 General Permit
Town of Milton, Massachusetts Annual Reports 13
EPA Permit Number MAR041079
MADEP Transmittal No. W-039893

To Whom It May Concern:

The Town of Milton, Massachusetts is pleased to provide you with the attached National Pollutant Discharge Elimination System (NPDES) Phase II Small MS4 General Permit Annual Report 14 for the period from March 31, 2016 to April 1st, 2017. The Town has developed the stormwater management program and will continue to implement activities in accordance with regulatory requirements and as available funding permits. Should you have any questions, please do not hesitate to call me at (617) 898-4870.

Sincerely,

Christopher Trudel,
Civil Engineer

cc: Michael Dennehy, Town Administrator
Joseph Lynch, Director of Public Works
John Thompson, P.E., Town Engineer

Via: USPS certified mail w/ enclosures

Municipality/Organization: TOWN OF MILTON, MA

EPA NPDES Permit Number: MAR041079

MassDEP Transmittal Number: W-039893

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

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

Part I: General Information

Contact Person: Christopher Trudel Title: CIVIL ENGINEER

Telephone #: 617 898-4870 Email: ctrudel@townofmilton.org

Mailing Address: Milton DPW, 629 RANDOLPH AVENUE, MILTON, MA, 02186

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: JOSEPH W. LYNCH

Title: DIRECTOR OF PUBLIC WORKS

Date:

Part II: Self-Assessment Narrative

The Town of Milton, Massachusetts has completed the required self-assessment and has determined that our municipality has been working towards full compliance as submitted to EPA and approved as Milton's (Notice of Intent) NOI to the General Permit issued to Massachusetts under Phase II of the Regulations. All best management practices (BMPs) met the Town's measurable goals set forth in the NOI except for:

- BMP 6.7 Maintain storm drain system – Due to required equipment repairs the town was unable to clean the expected number of catch basins to meet the goal of one third of all basins per year. The town has met or exceeded this goal in all past years of this permit making the overall progress towards the goal still feasible.

Since the NPDES permit inception, the Town has taken great efforts to permit and incorporate stormwater controls and management into all construction and post-construction activities within the Town.

The creation of detailed GIS databases and maps of the Town's utilities and waterways has provided a valuable tool for the Town to keep track of maintenance and a more efficient tool to update the Town's infrastructure and resources. GIS has also aided in tracking illicit discharges. The Town continues to refine the databases and maps through research, field survey, and television inspection. The town is currently implementing a more thorough tracking system combining GIS with tablets in the field and utilizing mobile databases to track and quantify all catch basin cleaning, as well as other municipal tasks. The goal is to use this real time data to refine and optimize the cleaning schedule to target the most heavily used catch basins for more frequent cleanings, as well as efficiently tracking catch basin issues and addressing them in an effective manner.

The Planning Board, the Zoning Board of Appeals, and the Board of Selectmen have adopted a Cluster Development Plan to amend zoning by-laws to allow for site specific cluster developments. The Town continues to support and encourage low impact development in all new construction proposals. There is currently one cluster development under construction in the town with two more in the process of being approved.

This year, the Town setup a stormwater education display table at the Annual DPW Day which attracts several hundred residents to the DPW for an Open House and a cookout. This event also provides an opportunity for residents to view vehicles, equipment, and everyday job functions of department personnel. The display table provided flyers, children activities, and posters to increase education on stormwater pollution and prevention. The Town is also partners with Sustainable Milton, a non-profit organization that promotes environmental awareness and sustainability. Sustainable Milton also provided information on many environmental issues including stormwater during this event. The town has also used social media to post pictures related to stormwater, particularly addressing the issue of dog waste in catch basins, which had an outreach of over 5000 people.

The Town continues to have a successful partnership with the Neponset River Watershed Association (NepRWA) which together have undertaken a stormwater education program, a stormwater sampling program, illicit discharge detection and elimination program, and have completed construction of bio-retention cells and tree filter boxes along Pine Tree Brook as part of the 319 TMDL Implementation Grants, which the Town continues to maintain. The Town is currently working with NepRWA on an additional 319 Non-Point Source Pollution Grant to install tree filter boxes along Wendell Park to further reduce pollution in Pine Tree Brook.

The Town also worked in conjunction with NepRWA and Coastal Zone Management to implement intensive water quality monitoring at 18 stations along the length of Unquity Brook. Funds from a Coastal Pollution Remediation grant were then used to utilize the data obtained from this testing to identify 10 sites as candidates for stormwater BMP retrofits within the Unquity Brook subwatershed. These 10 sites have now been prioritized to the top 4 sites which are all associated with large drainage areas and also present opportunities for future public education about stormwater best practices. The Town is now in the process of working with a design consultant to develop 25% plans for BMPs at these 4 sites, also using CPR grant funds.

NepRWA, the Metropolitan Area Planning Council (MAPC), and the 10 watershed member communities (including the Town of Milton) secured a Community Innovation Challenge Grant to develop a Neponset Stormwater Partnership. As part of this Partnership, the Town of Milton was selected as a pilot municipality to utilize a Stormwater Financing / Utility Kit developed by the MAPC to help municipalities define the cost implications necessary to comply with the new MS4 permit and explore options on how to fund these new costs. It was determined that the most effective way for the Town of Milton to fund these costs would be to establish a Stormwater Utility. As such the Town worked with these organizations to hold public meetings and develop the new regulations to establish the new Stormwater Utility under the Enterprise System. The new utility was successfully passed at a Special Town Meeting in February 2016, with the budget being approved at the annual Town Meeting in May 2016. Following these approvals the Town's GIS division began performing detailed analysis based on impervious area of each parcel within the Town to determine each resident's, business, or non-profit organziation's stormwater bill the first of which were mailed out in February 2017.

The following table is a complete list of the Town's BMPs, the actions the Town has committed to perform, the progress on the goals, and projected activities for the upcoming year.

PART III: BEST MANAGEMENT PRACTICES

1. Public Education and Outreach

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 14	Planned Activities- Permit Year 15
1.1	Educate dog owners about picking up dog waste	Public Works	Develop and print collateral piece on pet waste	Posted Palm card on website. Set up stormwater education booth at annual DPW day, social media outreach about this issue	Continue to post Palm card on website annually, and make social media posts related to picking up dog waste.
1.2	Prioritize areas in Town that have pet waste problems; install up to three mutt mitt stations	Public Works	Prioritize list of mutt mitt installation sites	Mutt mitt stations are periodically inspected	Keep mutt mitt stations functioning and free from graffiti
1.3	Develop a draft by-law that requires dog owners to clean up after their dogs. Present to Town Meeting.	Town Counsel	Draft by-law; present to Town Meeting	None	None
1.4	Update stormwater section of Town website 3x a year	Public Works	Update stormwater section of the Town website 3x per year	Updated stormwater section continues to be posted on website	Update stormwater section
1.5	Inspect signs that identify water bodies within town & contact DCR/MHD for repairs	Public Works	Inspect signs	Locate and inspected DCR/MHD signs	Inspect all signs
1.6	Provide update of SWMP at Selectmen's meeting	Public Works	Present annual update of SWMP at Selectmen's meeting	Provided numerous updates in regard to development of new stormwater utility	Present update to Selectmen (if requested)
1.7	Develop two press releases per yr describing importance of stormwater management	Public Works	Publish two newspaper articles/press releases describing importance of SWMP	The Town has set up a stormwater education table which provides multiple handouts and activities at the Milton DPW held annually in May	Educate public on new stormwater regulations through two articles or press releases
1.8	Show two cable programs or PSAs on stormwater importance of stormwater management	Public Works	Two programs or PSA's on local cable TV	Two public hearings giving information about the proposed stormwater utility were broadcast on the local access cable channel.	Educate public on new stormwater regulations by airing related PSAs on cable TV.

2. Public Participation and Involvement

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 14	Planned Activities- Permit Permit Year 15
2.1	Comply with state public notification guidelines	Town Clerk	Post notice as required	All public hearings are properly posted	Will post notice as required if public hearing is held
2.2	Provide trash pickup on Milton Pride Day	Public Works	Trash pickup required each year	Town-wide cleanup termed "Milton clean-up" in April 2016	Schedule Town-wide clean-up in spring 2017
2.3	Provide support for the nepRWA 319 TMDL Implementation Grant	Public Works	Assist with wetland projects as requested by NepRWA	Assisted NEPWRA with a design grant to install BMP's in 4 different candidate locations, as well as designing tree filter boxes for a construction grant in collaboration with NEPWRA	Continue to maintain bio-retention cells and tree filter boxes, install tree filter boxes with construction grant, continue design process for future BMPs
2.4	Outreach to Milton school teachers on stormwater issues	Public Works	Increased awareness among Milton families about stormwater issue	The Town has teamed up on multiple occasions with NepRWA and Sustainable Milton to increase stormwater awareness in the classroom.	Continue to assist Sustainable Milton and Schools with stormwater information for environmental curriculums
2.5	Work with nepRWA on Uniquity Brook outreach	Public Works	Secure funding to examine flow patterns and possible septic tank leakage into Unquity Brook	Continue support of stream tram that samples to indicate possible illicit discharges	Continue to work with nepRWA and Milton Conservation Commission on Unquity Brook outreach

3. Illicit Discharge Detection and Elimination

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 14	Planned Activities- Permit Year 15
3.1	Remove sewer underdrains if found during routine maintenance	Public Works	Document number of underdrains found and removed	None found	Remove as needed
3.2	Map stormwater outfalls and receiving waters; identify outfalls and other structures owned by other entities; evaluate structures on state-owned Town roads	Public Works	Create Map	Continued to update and edit GIS drainage map initially completed in fall, 2005	Continue to use map for day-to day stormwater-related activities
3.3	Digitize stormwater collection system in a GIS-compatible format	Public Works	None	GIS map completed in fall 2005. Full-time GIS operator updates maps and databases on a continual basis	Continue to use map in day-to day stormwater-related activities
3.4	Develop and implement a plan to identify and remove non-stormwater discharges to the MS4	Public Works	Create Map	Continued to work and support nepRWA by investigating illicit discharges by using optical brightener testing at various outfalls	Continue ongoing illicit discharge detection & elimination. Follow up with results from optical brightener report to track illicit discharges
3.5	Develop bylaw requiring inspection of new construction for correct connection to the sanitary sewer	Town Counsel	Develop bylaw requiring inspection of new construction for correct connection to the sanitary sewer	Sewer regulations and permit requirements revised and implemented in 4/03	Continue to enforce by-law
3.6	Conduct a Town-wide sewer rehabilitation program	Public Works	Implement program	Funding secured; sewer rehabilitation completed for Year 11 of the sewer capital plan	To secure funding to complete sewer rehabilitation for Year 12 of the sewer capital plan

4. Construction Site Runoff Control

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 14	Planned Activities- Permit Year 15
4.1	Develop a Construction Site Erosion & Sediment Control bylaw for all construction sites requiring a building permit (7500 sq. ft or over)	Public Works	Pass the By-law	-Accomplished – Enforced By-law that was passed in May 2006	Continue to enforce By-law
4.2	Require a waste management plan at construction sites 1-5 acres	Conservation Commission; Building Dept., Public Works	Implement regulation or by-law requiring a waste management plan at construction sites 1-5 acres	Enforced Regulatory mechanism in place for requiring a waste management plan for all construction sites	Continue to enforce
4.3	Review Site Plans not already subject to Conservation Commission or Planning Board review	Conservation Commission, Public Works (Engineering)	Implement protocol for site plan review	All Site plans reviewed as part of DPW Permitting Process	All site plans will be reviewed by the Engineering Department
4.4	Consider public input for new construction sites not subject to the jurisdiction of Conservation Commission or Planning Board	Planning Board, Conservation Commission	Discuss plan for public input	-Accomplished- By-law adopted at Town Meeting in May 2006	None
4.5	Inspection erosion and sediment controls at construction sites involving wetlands	Conservation Commission	Number of Inspections conducted	49 inspections(this includes duplicate visits to sites)	Continue inspections as needed

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

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 14	Planned Activities- Permit Year 15
5.1	Develop a draft bylaw to apply Standards 2,3,4 and 7 of MSP to entire Town; present bylaw to Town Meeting	DPW	Develop bylaw and present to Town Meeting until passed	-Accomplished- Bylaw adopted at Town Meeting in May 2006	Continue to enforce Bylaw
5.2	Specify a stormwater BMP manual to be used for consistent design and performance standards	DPW	Select BMP manual	MA DEP and CZM "Stormwater Management Vol 2: Stormwater Technical Handbook" selected	Continue to Research useful BMP's and add to reference list in anticipation if new permit regulations.
5.3	Develop a draft bylaw that ensures long-term maintenance of private structural BMPs	DPW	Include in stormwater bylaw and present to Town Meeting	- Accomplished - Bylaw adopted at Town Meeting in May 2006	Continue to enforce Bylaw
5.4	Develop a draft zoning bylaw that allows and/or encourages use of low-impact development (LID)	Planning Board	Draft bylaw developed and presented to Town Meeting	The Town adopted a site specific Cluster Development Plan	Continue to work with developers with LID projects.

6. Municipal Good Housekeeping

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 14	Planned Activities- Permit Year 15
6.1	Identify sensitive receptors within Town	Public Works	Develop list of sensitive receptors; notify staff	Accomplished	Accomplished
6.2	Funding to develop employee training program	Public Works	Keep DPW staff informed on importance of stormwater management	Conducted DPW staff training for proper maintenance, inspection and record keeping of the Town's Drainage system	Continue to provide stormwater management training to the staff.
6.3	Sweep all streets once every spring & fall	Public Works	Percent of streets swept twice per year	100% of street swept once a year. Arterial streets swept monthly. Business districts swept weekly. (In non-winter months)	Continue to on-going street sweeping programs
6.4	Continue existing road salting procedures	Public Works	Maintain documentation of de-icer amount used	4318 tons of salt used	Continue to maintain documentation of de-icer amount used
6.5	Minimize impacts from vehicle maintenance	Public Works	Build containment area for vehicle washing; switch to phosphate-free biodegradable soap	Continued to use environmental friendly soap products	Revisit equipment wash practice, implement good housekeeping procedures
6.6	Minimize impacts from vehicle maintenance	Public Works	Hold employee training	Vehicle maintenance area workers aware of good maintenance protocol	Continue to train and improve good housekeeping practices
6.7	Maintain storm drain system	Public Works	Clean all catch basins once every 3 years; inspect & clean drain pipes as needed; keep daily record of catch basin residuals volumes; prioritize large volume catch basins for more frequent cleaning	589 catch basins cleaned in Permit Year 14	Continue to use revamped inspection and record keeping procedures to meet measurable goals.

6. Municipal Good Housekeeping(continued)

BMP ID#	BMP Description	Responsible Dept.	Measurable Goal(s)	Progress on Goal(s)- Permit Year 13	Planned Activities- Permit Year 14
6.8	Train staff to minimize chemical applications in recreational areas	Public Works	Hold training; minimize use of chemical pesticides, fertilizer & herbicides; keep maintenance records	Kept records of all DPW chemical applications	Coordinate with other town departments on proper use of pesticides, fertilizer & herbicides.
6.9	Hold biennial HHW Day	Public Works	Hold at least one HHW Day every other year; hold one tire and battery collection per year	Annual HHW Day was held in September of 2016. Tire and batteries were collected throughout the year	HHW Day will be held in Fall 2017
6.10	Plant a new tree to replace every tree removed each year	Public Works, Tree Warden	Plant more trees than are cut down every year	75 trees planted from March 2016-March 2017 which surpassed the number of trees cut down	Continue planting as many trees as the budget allows; apply for Tree City USA status
6.11	Pursue cooperative agreements with Milton garden clubs to implement litter management program	Public Works	Work with Milton Garden Club and Amateur Gardeners of Milton to raise funds for litter vac purchase; develop litter management program	- Accomplished – Continued to follow the Litter Management Program.	Continue to use litter vacuum from early Spring to late Fall.
6.12	Identify stormwater outfalls within Milton owned by other entities and inform them of their management responsibility	Public Works	Outfalls assessed; state agencies notified	Accomplished	Re-evaluate stormwater inter-connections in anticipation of new permit regulations

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, 2013 through March 31, 2014)

Programmatic

(Preferred Units) Response

Stormwater management position created/staffed	Y/N	NO
Annual program budget	($)	$719,219.00
Total program expenditures since beginning of permit coverage	($)	$4,959,219.00
		Capital Borrowing, stormwater utility

Education, Involvement, and Training

Estimated number of property owners reached by education programs(s)	(# or %)	9800
Stormwater management committee established	(y/n)	No
Stream teams established or supported	(# or y/n)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	Yes
Shoreline cleaned since beginning of permit coverage	(mi.)	8.6
Household Hazardous Waste Collection Days		
▪ days sponsored**	(#)	1
▪ community participated**	(# or %)	252
▪ material collected**	(tons or gal)	4.04 Tons 390 Gal
School curricula implemented	(y/n)	NO

Legal/Regulatory

	In place prior to Phase II	In Review by Existing Authority	Drafted	Draft in Review	Adopted
▪ 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

Construction

Number of construction starts (>1-acre)**	(#)	1
Estimated percentages 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 $)	2 $7,500
Complaints/concerns received from public**	(#)	3

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)	1/3 PER YR
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)**	(times/yr)	1/3 PER YR
Qty of storm drains structures	(#)	3482
Qty. of storm drains cleaned**	(%,LF or mi.)	350 LF
Qty. of screenings/debris removed from storm sewer infrastructure**	(lbs. or tons)	406T(est)
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.)**	(location)	Onsite stockpile to landfill

Basin Cleaning Costs		
• Annual budget/expenditure(labor & equipment)**	($)	56,000
• Hourly or per basin contract rate**	($/hr or $ per basin)	$48.24 pe basin
• Disposal cost**	($)	$48.98 per ton
Cleaning Equipment		
• Clam shell truck(s) owned	(#)	1
• Vacuum truck(s) owned/leased	(#)	0
• Vacuum trucks specified contracts	(y/n)	0
• % Structures cleaned with clam shells **	(%)	100
• % Structures cleaned with vactor**	(%)	0

(Preferred Units) Response

Average Frequency of street sweeping (non-commercial/non-arterial streets)**	(times/yr)	1X +
Average frequency of sweeping (commercial/arterial or other critical streets)**	(times/yr)	32X
Qty. of sand/debris collected by sweeping**	(lbs. or tons)	727T
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)**	(location)	
Annual Sweeping Costs		
• Annual budget/expenditure(labor & equipment)**	($)	60,000
• Hourly or lane mile contract rate**	($/hr or $ In mi.+)	$36 PER HOUR
• Disposal cost**	($)	$46.25
Sweeping Equipment		
• Rotary brush street sweepers owned	(#)	1
• Vacuum street sweepers owned/leased	(#)	1
• Vacuum street sweepers specified in contracts	(y/n)	1
• % Roads swept with rotary brush sweepers**	%	0
• % Roads swept with vacuum sweepers**	%	100

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

Average Ratio of Anti-/De-Icing products used ** (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	%NaCl	95
	% CaCl2	5
	% MgCl2	
	% CMA	
	% Kac	
	% KCl	
	% Sand	Trace
Pre-wetting techniques utilized**	(y/n or %)	Y
Manual control spreaders used**	(y/n or %)	Y
Zero-velocity spreaders used**	(y/n or %)	N
Estimated net reduction or increase in typical year salt/chemical application rate	(± lbs/ln mi. or %)	NA
Estimated net reduction or increase in typical year sand application rate**	(± lbs/ln mi. or %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100
Storage shed(s) in design or under construction	(y/n or #)	NA
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Y

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	NA
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	NA