Municipality/Organization: **Tewksbury, MA**

EPA NPDES Permit Number: **MA-041226**

MaDEP Transmittal Number: **W-035320**

Annual Report Number & Reporting Period: **No. 13: March 15-March 16**

NPDES PII Small MS4 General Permit Annual Report

(Due: May 1, 2016)

Part I. General Information

Contact Person: Richard Montuori Title: Town Manager

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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: Richard Montuori

Title: Town Manager

Date: 4/29/16

Part II. Self-Assessment

The Town of Tewksbury has continued to follow the guidelines for the NPDES Phase II Small MS4 General Permit as required for year eleven. The Stormwater Committee consists of the Town Manager, Department of Public Works Superintendent, Community Development Director, Health Director, Town Engineer, Conservation Administrator and four engineering Project Managers. This committee has worked to comply with all requirements as given with the budgeting constraints. The Town of Tewksbury has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions for year 13 of the permit.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

The standard format from the previous permit years will not be used in this minimum control measure section as it does not seem applicable for permit year 13. The Town of Tewksbury had completed all the BMPs that were required within the original permit period. The following identifies the various ways the Town has reached out to the public with education in stormwater this permit year;

- The Tewksbury Community Development Department and Department of Public Works have been actively conducting public education and outreach this permit year with the Long Pond 319 Non-Point Source Pollution Grant. Through grant funding received from the EPA, and a match from the Community Preservation Committee, the Town has been able to aid an ongoing Town wide effort to prevent Long Pond, one of the Town's most important natural resources, from reaching a hyper-eutrophic state. This grant funding has been used to educate the residents on non-point source pollution and how it negatively impacts the Pond. The grant was used to construct 15 rain gardens and 8 stormwater treatment swales in various locations within the Long Pond watershed which was completed in 2015. This project included 23 informational signs at each BMP along with a master sign showing a map of all the BMPs.
- In addition, a stormwater article drafted by the Tewksbury Engineering Division was enclosed with the 2015 Consumer Confidence Report (CCR) which is distributed by Tewksbury Water Treatment Department to 11,000 residents and businesses. This article emphasized healthy household habits that residents can achieve with lawn and garden maintenance. The CCR is also available on the Town's Website.
- The Conservation Commission issued nine enforcement orders for unpermitted work within the jurisdiction of the Wetland Protection Act and the Town's Wetland Protection Bylaw. The Conservation Commission has also established an Educational Subcommittee in hopes to better inform the public on the negative consequences that can result from their actions on the environment.

- The Town of Tewksbury is part of the Northern Middlesex Council of Governments (NMCOG) which had been awarded a Community Innovation Challenge (CIC) Grant to implement a Stormwater Collaborative throughout the Northern Middlesex Region. The Collaborative was established during the previous permit year. Four communities joined the Collaborative, bringing the total number of member communities to 13. The Collaborative has completed a regional GIS map of stormwater infrastructure for the partner communities. This mapping is a compilation of the available GIS information data for each community and is available online to the member communities. As part of the grant, brochures have been created on various stormwater topics. These brochures are available for use by the member communities and can be easily tailored to a specific community. The Collaborative has subcontracted Nobis Engineering to develop joint procurement program. The purpose of this program is to reduce the costs associated with stormwater infrastructure maintenance by obtaining combining maintenance programs for several communities under one contract. The goal is to obtain lower pricing based on an increased scope of work. Currently subcontracts have been established for catch basin cleaning and laboratory services. The Collaborative has produced one 30 sec and one two minute public service videos that are available on YouTube, and can be used for stormwater public awareness campaigns of the participating communities.
- The Town of Tewksbury implemented an Inspection and Maintenance Program for all public buildings. Training has been provided, which involved a general overview stormwater and operations/maintenance and Stormwater Pollution Prevention Plan (SWPPP) key items, as well as a checklist for personnel in charge of their municipal facilities. Each facility manager or designee submits Inspection and Maintenance reports to the Engineering Division bi-annually.

2. Public Involvement and Participation

The standard format from the previous permit years will not be used in this minimum control measure section as it does not seem applicable for permit year 13. The Town of Tewksbury had completed all the BMPs that were required within the original permit period. The following identifies the various ways the Town has involved the public with education in stormwater this permit year;

- Of the 23 BMPs installed under Long Pond 319 Non-Point Source Pollution Grant, nine of the BMPs were installed on private property under a license agreement with the Town. An effort has been made to establish a maintenance schedules with the resident of the BMPs on their land.
- The Conservation Commission was an active participant in Zero Waste Day in which volunteers work throughout the town cleaning litter and debris from wetlands, parks, recreational areas and private/town owned land.

3. Illicit Discharge Detection and Elimination

This minimum control measure section will stay the same as it has in the past permitted years.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13
3A	Capital Planning/Budgeting	DPW	-Estimate costs for purchases and maintenance - Capital requests for future purchases	The DPW has continued to implement a Capital Improvement Plan (CIP) for fiscal planning to identify, fund and schedule implementation of various projects. During this permit period, the Town has made $700,000 worth of expenditures and improvements. Details of this past year's improvements can be reviewed in the BMP section of this report for Good House Pollution Prevention and Good Housekeeping in Municipal Operations, Capital Planning and Budgeting. The DPW hired a full time GIS Coordinator during permit year 12. The duties of the GIS Coordinator will include maintaining and expanding the Town's GIS database, collection of field data, validation of existing data, and establishment of a Town-wide GIS database. The DPW has contracted with a GIS consultant, who has prepared a detailed Stormwater GIS database from the Town's existing paper and electronic data. The GIS coordinator is in the process of working with the GIS consultant of finalizing the Stormwater GIS database.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13
3C & 3D	Mapping Known Stormwater Outfalls	Engineering and DPW Personnel		In addition to the manually created outfall map, the Town was able to complete an electronic map by locating all 637outfalls with a GPS unit and completing the GIS outfall layer for the Town. With the anticipation of the upcoming permit and utilizing summer intern staff, the Town Engineer discussed and received approval from Thelma Murphy of the US EPA, Region 01 in New England / Office of Ecosystem Protection for NPDES permitting, to move forward on dry weathering sampling. It was noted that this would be able to count towards the upcoming draft permit. The Town moved forward and completed dry weather sampling. The following is a time line of events: 1. 2010 - 637 outfalls were located throughout Town. 51 outfalls had flow during dry weather. 2. 2011- Dry weather testing was complete on 51 outfalls. From this, 24 out of the 31 residential outfalls samples had hits that need further investigation, and 3 out of the 11 industrial outfall samples had hits that need further investigation. 9 locations had no flow, were sand bagged multiple times and no flow was found. These 9 locations will be periodically observed but it is believed when flow was observed, there were higher groundwater conditions and may have been natural run-off. 3. 2012 – Further investigation was completed on 27 outfalls. Both camera investigation and water quality testing was done. In summary, some of the outfalls were eliminated based on the Fluoride level's the Town was using for indicators. Other sources were determined to be over fertilization of the neighborhood. From these test results, 220 letters were sent to educate the residents in these neighborhoods about the effects of over-fertilization and referred them to further educational resources. The Town plans on retesting these outfalls in the future to see if the letters were effective. 4. 2013 – The DPW is in the process of setting up training for wet-weather outfall sampling in preparation for the anticipated upcoming task in the Small MS4 NPDES Permit. 5. 2014 – One of the DPW Project Manager attended training for wet weather outfall sampling in preparation for anticipation task in the small MS4 6. 2015 –Storm water systems mapping has been added to the outfall mapping data in the anticipation of the new Small MS4 NPDES Permit Overall, the Town has been actively testing and investigating outfalls as needed.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13
3E	Failing Septic Systems	Board of Health	- Review Title 5 Reports to identify problems - Use current reporting system to follow through with rectifying failed systems	Title 5 Inspection Reports are reviewed as submitted. When a failed septic system is identified, appropriate remediation action is taken to ensure repairs are performed in a timely manner and/or connection to municipal sewer system when available. Additionally, due to the completion of the Town's Master Sewer Program, fewer residents are on individual septic systems. The Town anticipates more residents tying into the municipal system in the future. A total of 178 properties connected into sewer between March 1, 2015 – March 1, 2016.

4. Construction Site Stormwater Runoff Control

This minimum control measure section will stay the same as it has in the past permitted years.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13
No ID # based on current permit.	SWPPPs and Land Disturbance Permits	DPW, Planning Board	- File with Site Plan Application	5 SWPPPs have been filed and approved for development in Town. 4 Land Disturbance Permits have been filed and approved for development in Town.

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

This minimum control measure section will stay the same as it has in the past permitted years.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13
5E	Sub-Division Regulations	Planning Board	- Review Current by-laws - Draft and present; adjust until accepted - Directly connected impervious road surfaces in new development and redevelopment areas will be reduced by 20% (relative to the traditional scenario in which curbs and gutters are used) over the course of the 5 year permit.	Previously, the DPW Engineering staff completed a list and map of all the detention ponds on private developments and public properties in order to keep track of its maintenance efforts and good housekeeping operations. This permit year the Town's Conservation Agent has been continuing to reviewing the O&Ms for these BMPs to determine the requirements are being met. The Conservation Agent and Town Engineer are in the process of compiling the information outlined above to develop an overall O&M plan for the publicly owned detention ponds for use by the DPW. Including in this process will be a cost estimate for the work needed to maintain the town-owned basins. The cost estimates will determine necessary funding. The DPW has been implementing a Driveway Permit town-wide to those who are creating or repaving a driveway/impervious surface. There has been a strong focus on the stormwater run-off from the driveways with an evaluation of the first inch of water from a storm to be redirected into the ground for recharge. Approximately 118 driveway permits were issued between March 1, 2015 – March 1, 2016. During the previous permit year, the Planning Board has approved various residential, commercial and mixed use developments that have incorporated stormwater BMPs into their designs. The Planning Board has been strongly encouraging the use of BMPs and low impact design to developers/builders. In the past permit year the Board has approved 11 site developments that include one or more of the following in their design: infiltration basins, subsurface infiltration chambers, bioretention ponds, wet ponds, and porous pavement. These all to contribute to groundwater recharge and bio treatment for stormwater runoff.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

This minimum control measure section will stay the same as it has in the past permitted years.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13
6A	CB/Drain System/Parking Lot Cleaning	DPW	- Clean 50% of Catch Basins annually - Clean 100% of parking lots annually - Clean 50% of streets annually	50% of Catch Basins were cleaned this year due to budget reductions. 100% of all municipal parking lots were cleaned this year. 100% of the streets in Town were cleaned this year. Currently, spring street sweeping has begun on a full time basis throughout Town.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13
6B	Training of All Municipal Employees	DPW, Board of Health	- 80% of employees trained - Housekeeping activities successfully implemented	Administration and Engineering staff has attended various trainings throughout the year. Training included as follow: • NEIPCC Stormwater Utility Workshop - Chelmsford, MA – March 26, 2015 • "Stormwater BMPs: Selection and Application" and "Regulated Stormwater in Massachusetts" – Dracut, MA – March 18, 2015 • "The Water Quality Standards Game – EPA and the States Up the Ante" - Live webinar – April 21, 2015 • "EPA Draft Stormwater Permit Training", "IDDE Training" and "Resources Required for a Successful Stormwater Program" – Littleton, MA – June 3, 2015 • "Training on DOER's culvert replacement program" – Lowell, MA – June 20, 2015 • "Cost Effective Community Stormwater Solutions" – Worcester, MA – November 18, 2015 • Attended meetings of the Northern Middlesex Stormwater Collaborative – Lowell, MA o June 10, 2015 o August 19, 2015 o November 18, 2015 o January 25, 2016 • Advancing Sustainable Landscape Designs – Webinar – March 1, 2016

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13
6C	Capital Planning and Budgeting	DPW	- Capital planning for funds to construct salt storage facility	The DPW has continued to implemented a Capital Improvement Plan (CIP) for fiscal planning for identification, funding and years for the implementation of various projects. During this permit period, the Town has made $700,000 worth of expenditures and improvements. This includes the construction of a new salt storage facility which will increase the storage capacity and provide protection from stormwater runoff. The parking lot of the Town Hall including Town Hall Ave and the Annex Building were all repaved and regraded to improve drainage of runoff to the catch basins and the drainage system. Due to budgetary constraints town wide catch basin repair contract was not executed. The DPW repaired 20 catch basins throughout the permit year. As part of the Long Pond 319 Non-Point Source Pollution Grant, approximately 23BMPs were constructed at various locations around the Long Pond Watershed. The DPW will be responsible for the maintenance of most of these BMPs. The Town is working with residents and volunteer groups who are interested in adopting BMPs in which they will be responsible for maintaining. O&M Manuals & SWPPPs have been previously developed for all municipal buildings and park facilities through funding appropriated in 2012
6D	Stormwater Pollution Prevention Plan (SWPPP)	DPW	- Compliance with Town's SWPPP	The Town abides by our SWPPP on an ongoing daily basis.
6E	Housekeeping Policies	DPW	-Publication of housekeeping document -Performance of items in document	Components of a housekeeping document have been completed and are being implemented.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13
6F	Hazardous Material Storage	DPW	-Inspection Reports of Storage areas -Review of current storage procedures	All reports are kept in the DPW Superintendent's office and are in compliance with DEP regulations.
6G	Used Oil Recycling	DPW	-DPW will participate in Town recycling program -DPW will track amount of oil recycled	Due to budget restraints, this program was discontinued by the DPW in 2012. The DPW's staff has made arrangements with a local garage for residents to drop off their used oil. The DPW has followed up with the local garage and found out that this drop-off service is being used by the residents on a consistent basis.
6I	Road Salt Application and Storage	DPW	-Maintain Storage shed/area -Keep pile covered	Storage shed is maintained and utilized keeping the Town's road salt covered. A new salt storage shed is being constructed and will supplement the storage capacity of the existing shed.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 13
6J	Spill Response and Prevention	DPW	-Develop plans describing spill prevention and control procedures by the end of year 1 -Conduct annual spill prevention and response training sessions for all municipal employees	The Town of Tewksbury contracted AECOM to prepare an updated Spill Prevention Control and Countermeasure (SPCC) Plan. This Plan was finalized in November of 2013 and training was held for DPW staff in December 2013.The DPW implements the SPCC Plan on an ongoing basis.
6K	Illegal Dumping and Storage	Board of Health	-Investigate as reported	The Town continues to investigate and track complaints. Complaints of illegal dumping are investigated and appropriate action is taken. The town has installed surveillance cameras at the former dog pound, which had been a haven for illegal dumping. Town wide there were ten Illegal Dumping complaints were filed with the Board of Health
6M	Hazardous Waste Collection	Board of Health	-Annual Collection Day, as funded -Record and track amount collected	The Town Manager's office is currently working to investigate and establish regional Household Hazardous Waste Days.

Part IV. Summary of Information Collected and Analyzed

- No data was collected during this permit year.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures	($)	700,000

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	100%
Stormwater management committee established	(y/n)	Y
Stream teams established or supported	(# or y/n)	N
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	N
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	0
▪ community participation	(%)	N/A
▪ material collected	(tons or gal)	N/A
School curricula implemented	(y/n)	N

Legal/Regulatory

	In Place Prior to Phase II	Under Review	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

▪ Post-Development Stormwater Management				X

Mapping and Illicit Discharges

Outfall mapping complete	(%)	100
Estimated or actual number of outfalls	(#)	637
System-Wide mapping complete	(%)	100
Mapping method(s)		
▪ Paper/Mylar	(%)	100
▪ CADD	(%)	100
▪ GIS	(%)	100
Outfalls inspected/screened	(%)	100
Illicit discharges identified	(#)	2
Illicit connections removed	(#) (est. gpd)	1
% of population on sewer	(%)	~ 69
% of population on septic systems	(%)	~ 31

Construction

Number of construction starts (>1-acre)	(#)	12
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100
Site inspections completed	(%)	100
Tickets/Stop work orders issued	(# or %)	9
Fines collected	(# and $)	0
Complaints/concerns received from public	(#)	>10

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100
Site inspections completed	(# or %)	>25

Estimated volume of stormwater recharged	(gpy)	Unknown

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	(#)	~ 1600
Storm drain cleaned	(LF or mi.)	0
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	Unknown
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Landfill
Cost of screenings disposal	($)	Unknown
Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	>1
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	>1
Qty. of sand/debris collected by sweeping	(lbs. or tons)	300 Tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Landfill
Cost of sweepings disposal	($)	3200
Vacuum street sweepers purchased/leased	(#)	0
Vacuum street sweepers specified in contracts	(y/n)	N
Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	10
▪ Herbicides	(lbs. or %)	100
▪ Pesticides	(lbs. or %)	100

Anti-/De-Icing products and ratios	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	80 % 20 %

Pre-wetting techniques utilized	(y/n)	N
Manual control spreaders used	(y/n)	Y in some trucks
Automatic or Zero-velocity spreaders used	(y/n)	Y
Estimated net reduction in typical year salt application	(lbs. or %)	NA
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	Y