

**Municipality/Organization:** Town of Westford, MA

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**EPA NPDES Permit Number:** MA041232

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**MADEP Transmittal Number:** W-035577

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**Annual Report Number** 13

**& Reporting Period:** April 1, 2015 -March 31, 2016

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## **NPDES PII Small MS4 General Permit Annual Report**

### **Part I. General Information**

Contact Person: Paul Starratt, P.E.

Title: Town Engineer

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Telephone #: 978-692-5520

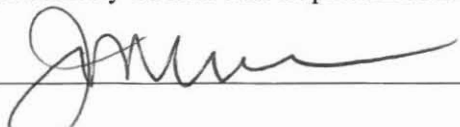
Email: stormwater@westfordma.gov

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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: Jodi Ross

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Title: Town Manager

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Date: April 26, 2016

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## **Part II. Self-Assessment**

As of the end of Permit Year 13, the town of Westford has achieved all measurable goals for the BMPs selected in the 2003 Notice of Intent as well as those BMPs added in subsequent years. Below are some highlights of the initiatives and stormwater related advancements made over the last year.

The town continued to develop a Stormwater Management Master Plan (SMMP) with our stormwater consultant, Tighe & Bond. Significant progress has been made over the past year and it is anticipated that the final SMMP report will be completed and published in the summer of 2016. The SMMP final report will be comprised of five separate volumes including: Volume 1 - Stormwater Assessment, Volume 2 - Capital Improvement Plan, Volume 3 - Operation & Maintenance Plan, Volume 4 - NPDES Stormwater Program Compliance Plan and Volume 5 - Evaluation and Financing Alternatives. The Evaluation and Financing Alternatives component of the SMMP was performed by the town's financial consultant, Raftelis Financial Consultants, Inc. The purpose of the analysis was to identify potential long-term funding strategies and solutions for Westford's future stormwater program. The results of this analysis were discussed at a Stormwater Management Program Funding Workshop attended by the town's stormwater advisory group and was also presented to the Board of Selectmen at their 2/9/16 televised public meeting.

The town received a \$30,000 Water Infrastructure Planning and Technical Assistance Grant from the Massachusetts Department of Environmental Protection (DEP) in permit year 13. The grant was awarded to the town to enhance the SMMP and to initiate the development of a stormwater asset management plan for the town's stormwater infrastructure. The scope of work for the grant included: digitizing record drawings, updating GIS mapping, field inspections of the various drainage structures and pipe segments, performing a rapid condition assessment of the town's stormwater infrastructure based on collected field data, characterization of the overall drainage system condition, O&M needs and risks of failure. The grant required a 25% match from the town which was satisfied through in-kind services performed by the Westford Engineering and GIS Department's. The results of the grant were presented at the New England Water Environment Association (NEWEA) 2016 Annual Conference & Exhibit by Westford's Assistant Town Engineer, Jeremy Downs, P.E.

The town used the field work conducted as part of the above mentioned grant as an opportunity to perform additional IDDE investigations across the town. The field inspections were performed by a certified pipe inspector from Tighe & Bond and Westford Engineering Department and were completed using a pole mounted zoom camera. During the course of the one-week long inspection period, a total of 74 drainage structures and 219 pipe segments were inspected in various representative areas across the entire town.

Written inspection forms were completed for each structure and a video recording was captured of each inspected pipe segment. Any potential illicit discharge connection to the stormwater system was noted for further investigation.

The Town of Westford continued its participation in the Northern Middlesex Stormwater Collaborative (NMSC) which is comprised of 13 communities within the Middlesex Country region. NMSC activities during permit year 13 included: regularly scheduled meetings with member communities, hosted and participated in multiple training events for municipal staff and officials, prepared several public educational and outreach materials, provided procurement support for stormwater related work, developed GIS tools and guidance documents for stormwater inventories and inspections, attended statewide stormwater collaborative meetings organized by MassDEP, and provided general stormwater related support to each member community. The NMSC also received a “Stormy Award” on 4/1/15 which “recognizes simple, imaginative, and inventive ways that are increasing employee capacity, funding, or political support for stormwater management programs”.

Other stormwater related highlights from this past reporting year included: publication of a 2015 Lakes and Ponds monitoring report prepared by ESS Group, Westford Healthy Lakes & Ponds Collaborative (HLPC) sponsored an evening seminar on 4/2/15 on the current state of Westford’s recreational waters which included presentations from various water quality experts, Westford’s Stream Team published the results of their 2015 monitoring program, Westford’s Health Department held an informational and Q&A session for local residents and businesses regarding on-site septic system and private drinking water well care and maintenance on 4/30/15, Westford’s Health Department sponsored a free wastewater training day on 1/28/16 for Title V System Inspectors and Soil Evaluators and for the second consecutive year the Engineering Department was able to hire a summer intern to assist existing staff with IDDE field investigations and updates to GIS mapping.

### 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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Interim Period
1A	Stormwater Flyer for Residents	SuAsCo & Westford DPW	Flyers distributed to 75% of residents, compiled & considered “survey” results.	Flyers were mailed in year 1 to all residents. The same flyers were placed on display at the Town Hall. (SuAsCo). Be Stormwater Wise: Help Protect our Water message mailed to all Westford Residents in January 2016	Continue displaying flyers at public places. Join mailing opportunities with Town Clerk’s Office, Water Department and Town Manager’s Monthly Newsletter.
Revised				Census Newsletter & Stormwater article was included in the Westford Water Department’s InFLOWmation newsletter in the Fall of 2015.	
1B	Lesson Plan for 5 <sup>th</sup> Graders	SuAsCo & Westford DPW	Develop & distribute lesson plan, teach in one or more grade 5 classes.	The Westford Engineering Department continued to use the SuAsCo curriculum “Stormwater Matters” to teach an introductory lesson plan to all grade 5 classes during the 2015-2016 Living Lab program.	The Westford Engineering Department has elected to continue the lesson plan on an annual basis with assistance from local schools. Every 5 <sup>th</sup> grader in the Westford Public Schools participates.
Revised			Continued beyond Year 5 based on success of program.		
1C	Stormwater Flyer for Businesses	SuAsCo & Westford DPW	Flyers distributed to 50% of businesses, stormwater logo displayed by 25% of businesses.	<i>Stormwater Matters</i> local business flyer, as prepared by SuAsCo, mailed to 450 business addresses in Westford in Year 8.	Continue to promote stormwater awareness to the local business community.
Revised					
1D	Stormwater Media Campaign	SuAsCo & Westford DPW	Media information packet, 4 press releases generated.	Implemented SuAsCo Year 6 product Survey and display for Stormwater “Go Green” product at Special & Annual	Continue to implement and utilize SuAsCo Year 1-6 products and display products at Special & Annual

Revised				Town Meetings.	Town Meetings and at other appropriate community meetings.
1E	Stormwater Video	SuAsCo & Westford DPW	Show video at one public meeting and once on local cable.	Two new Public Service Announcements videos were prepared by Northern Middlesex Stormwater Collaborative (NMSC). Links to the videos are posted on the Westford stormwater website at <a href="mailto:stormwater@westfordma.gov">stormwater@westfordma.gov</a> .	Continue to post video links on Westford's stormwater website. Re-broadcast <i>Reining in the Storm</i> on local access TV.
Revised					
1F	Recycling/Trash Info. on Website	Recycling Commission	Update website regularly, display pamphlets in Town Clerk's Office	The Recycling Commission updated the website as needed. <a href="http://www.westfordrecycles.org/">www.westfordrecycles.org/</a> Collection calendar at Clerk's Office.	Continue website updates and display pamphlets in Town Clerk's Office.
Revised				Westford Litter League Green Team continues to remove trash across the town. Information can be found on Recycling Commission's website.	Continue to support Westford's Litter League. Information can be found on Recycling Commission's website.
1G	Recycling/Trash Mailing to Residents	Recycling Commission	Mail to 75% of residents and display pamphlets in Town offices.	Pamphlets were mailed to all residents and copies were made available at the Town Hall and on the town's website.	Continue mailings and displaying pamphlets at public places and on town website at <a href="http://www.westfordrecycles.org">http://www.westfordrecycles.org</a> .
Revised					
1H	Advertise HHW Info. in Community Phonebook	Recycling Commission	Copy of advertisement in the phonebook.	Information about the household hazardous waste collection was advertised in the local phonebook (2014 Westford Directory) and available on the Town's Recycling Commission's website.	Continue to advertise the proper method of disposal for hazardous household wastes.
Revised					
1I	Advertise Brush/Multi Collection on Cable and in Paper	Recycling Commission	Copy of advertisement on cable, website and local paper.	The brush and multi collection events were advertised on cable, website, the local paper, roadside signs and local	Continue advertising the brush and multi collection events.

Revised				phone directory.	
1J	Leaf Dumping Article in Paper	Conservation Commission	Copy of article in local paper once per year.	An article discussing the proper disposal of leaves and yard waste published in 2015-2016 Westford Directory.	Continue placing the leaf dumping article in the Westford Directory.
Revised			Posted on Cons-Comm website		
1K	Leaf Dumping Pamphlet to Public	Conservation Commission	Copy of pamphlet, # of residents reached.	Leaf disposal and compost notice published in local phone book (2015-2016 Westford Directory).	Continue publishing information on proper leaf disposal and composting.
Revised			Publish leaf disposal notice in local phone book		
1L	Leaf Dumping Pamphlet at Events	Conservation/ Water/ Board of Health	Pamphlet displayed at two events.	Conservation Resource Planner distributed pamphlets to various residents suspected of leaf dumping. Pamphlets displayed at 2015 Water Department Open House and Environmental Health and Wellness Expo (open house is held every other year).	Continue to distribute leaf dumping Pamphlets at various town events and to residents suspected of leaf dumping.
Revised					
1M	Fertilizer Pamphlet to Businesses	Water Department	Copy of pamphlet, distributed to all landscaping businesses.	Enforced town pesticide policy.	Continue to eliminate where possible and otherwise minimize the use of pesticides on town-owned land and to encourage the same on private-owned land. Continue to enforce Pesticide Policy.
Revised	Town of Westford Pesticide Policy		Develop Pesticide Policy for Town of Westford		
1N	Fertilizer Info. in Newsletter	Water Department/ Engineering	Copies of semi-annual newsletters discussing fertilizers.	Healthy Lawns for Healthy Families fertilizer information provided on Water Department's website. Fertilizer	Continue promoting Healthy Lawns for Healthy Families and include fertilizer information in newsletters

Revised				information also provided on Westford Healthy Lakes & Ponds Collaborative (WHLPC) website.	and posted on Water Department & WHLPC websites.
1O	Septic System Pamphlets in Water Department	Water Department	Pamphlets available at Water Department at all times.	Septic system Pamphlets were made available at the Water Department throughout the year.	Continue to make septic system pamphlets available.
Revised					
1P	Septic System Pamphlets at Events	Water Department/ Board of Health	Display pamphlets at two events.	The septic system educational pamphlet was made available at the Board of Health Department and Water Department. Additional septic system information provided on the Health Department's website.	Continue displaying pamphlet at the Board of Health and Water Department in addition to displaying at other town events. Continue to post septic system information on Health Department's website.
Revised					
1Q	Hazardous Material Bylaw Info. on Website	Board of Health	Maintain website regularly.	Hazardous Material Bylaw was updated and approved at 2014 Annual Town Meeting. Info on the updated bylaw is posted on the Town's Health Department website.	Continue postings information related to the Hazardous Material Bylaw and regulations on the Health Department's website.
Revised					

**1a. No additions at this time.**

## **2. Public Involvement and Participation**

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 12</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Interim Period</b>
2A	Stormwater Traveling Display	SuAsCo & Westford DPW		Completed in Year 1. SuAsCo "Go Green" display used at Annual Town Meeting and Special Town Meeting.	Continue using the displays and pamphlets Annual Town Meeting, Special Town Meeting, Water Department Open House and other appropriate public events.
Revised					

2B	Poster Contest for Fifth Grader	SuAsCo & Westford DPW	Poster contest is held and entries are received, judged and displayed in year 2.	Conducted Water Department 4 <sup>th</sup> Grade Poster Contest with a water conservation and pollution prevention theme as part of the Water Department's open house in 2013 (open house is held every other year). Winning posters are displayed on the Water Department website.	Continue 4 <sup>th</sup> Grade Poster Contest.
Revised	<i>Revised to 4<sup>th</sup> Graders</i>	Westford Water Department			
2C	Poster Contest for High Schoolers	SuAsCo & Westford DPW	Poster contest is held and entries are received, judged and displayed in year 3.	NOI specified to begin this BMP in Permit Year 3. Eliminated from Year 3 product by SuAsCo. Water Department holds Poster Contest for 4 <sup>th</sup> Graders under BMP 2B. BMP 2B achieves the goals of this BMP previously determined to be infeasible.	BMP determined to be infeasible and was replaced by BMP 2B in Permit Year 3.
Revised		Eliminated from Year 3 product by SuAsCo.			
2D	Local Stormwater Summit Event	SuAsCo & Westford DPW	Hold local multi-community summit in year 4.	Completed in Year 4.	Continue information sharing with other stakeholders across the Nashoba Brook sub-basin.
Revised		SuAsCo W. C. C. Land and Habitat Working Group			
2E	Stormwater Super Summit Event	SuAsCo & Westford DPW	Municipal participation in the Super Summit, stormwater "survey" to 75% residents, compiled & considered results.	Stormwater Super Summit eliminated from SuAsCo Year 5 product	Reevaluate possibility of a future summit with SuAsCo.
Revised					
2F	Curbside Recycling	Department of Public Works	Continued Town service.	Curbside recycling was picked up every other week.	Continue Curbside Recycling program.
Revised					



2G	In Town HHW Drop-off	Department of Public Works	Hold at least one event per year.	Electronics Collection was on 5/9/15 & 9/19/15 at the Westford Highway Facility. Household hazardous waste collection event occurred on 11/8/14 (held every other year).	Hold HHW event in Westford in fall of 2016.
Revised			Every other year.		
2H	HHW Drop-off in Lexington	Department of Public Works	Advertise service on the Town website and in flyers.	Advertised on Recycling Commission website at www.westfordma.gov and in the 2015-2016 Westford Directory.	Continue to advertise and promote HHW collection opportunities.
Revised			Also advertise in local phone book.		
2I	Leaf Drop-off at Laughton's Nursery	Department of Public Works	Continue service of leaf drop-off.	Laughton's Nursery is no longer in business. Leaf pick up was available for drop-off at Red Wagon Landscaping (Lowell), Jones Farm (Chelmsford) and BMC Corp. (Tewksbury) for a fee. Leaf pickup in Westford was available through Acme Waste Systems for a fee on 11/7/15 & 12/5/15. All drop-off and pick up options were advertised on the town website.	Continue to advertise leaf drop-off and pick up options available on the town's website.
Revised			Advertise on the Town website.		
2J	Brush Drop-off in Westford	Department of Public Works	Hold one collection in April and October.	Brush chipping service provided on 4/25/15 & 10/17/15 at Westford Highway Facility.	Hold at least two collection events.
Revised					
2K	Multi-Collection Events	Dep't of Public Works/Board of Health	Hold one multi-collection event twice per year.	Electronic devices were collected at the Highway Department on 5/9/15 & 9/19/15.	Continue to collect electronic devices at events twice per year.
Revised					
2L	Mercury Drop-off at Board of Health	Board of Health	Collect mercury devices in the Board of Health office daily.	The Board of Health office was open daily to receive mercury-containing devices.	Continue mercury drop-off program.

Revised					
2M	Mercury Drop-off at Multi-Collection Event	Department of Public Works	Hold one multi-collection event twice per year.	Small mercury-containing devices were collected at the Board of Health Department counter. Mercury drop-off information available on the Westford Recycling Commission's website.	Continue Mercury Drop-off at Board of Health office and advertise on town website.
Revised			Mercury Drop-off available at Board of Health Office.		
2N	Public Meetings	Department of Public Works	Advertise and hold at least one public meeting every year for stormwater.	The 2/9/16 Selectmen meeting included an advertised agenda item to discuss stormwater in Westford. The meeting was focused on updating the Selectmen and general public on the town's stormwater program and outlining potential options for future funding.	Hold a public meeting to inform residents of the stormwater program.
Revised		Engineering Department			
2O	Stormwater Contact	Highway Department	Establish contact and include information in pamphlets and on the Town's website.	The Town Engineer was identified as the stormwater contact regarding pollution and complaints in Year 1. Information was posted on the town's website. Established stormwater email contact: <a href="mailto:stormwater@westfordma.gov">stormwater@westfordma.gov</a> .	Update information as needed and continue to include stormwater contact information on the town's website. Include contact information in educational pamphlets.
Revised	Procedure to Address Public Comment		Record of calls and issues addressed.		

**2a. No additions at this time.**

### 3. Illicit Discharge Detection and Elimination

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 12</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Interim Period</b>
3A	Storm Sewer Map	Highway Department/ GIS	Expand and field verify all outfalls by year 5.	Stormwater Map completed. The Stormwater Map includes the location of all drainage structures (catch basins, drainage manholes), outfalls, receiving waters and some connectivity.	Maintain GIS database and continue to improve Stormwater Mapping as additional information is collected.
Revised		Engineering Department/ GIS			
3B	Illicit Discharge Bylaw	Engineering/ Conservation	Present draft bylaw to public in year 4, adopt in year 5.	Illicit Discharge Bylaw completed and adopted in 2008.	Continue to enforce Illicit Discharge Bylaw.
Revised		Board of Health			
3C	Detection & Elimination Plan	Highway Department	Screen 25% of outfalls each year in 4 divided sections of Town.	The Engineering Dept. continued with the ongoing implementation of the town's written IDDE plan including field inspections and screening outfalls in critical areas of the town. Information and data collected was used to update GIS maps.	Continue to screen and inspect outfalls for illicit discharges. Continue to implement the IDDE plan developed by Woodard & Curran.
Revised			Prioritize areas of known water quality problems for inspections and removal of illicit discharges.		
3D	Illicit Discharge Education for Public	SuAsCo/Public Works/ Highway/ Water/ Board of Health	Continued public education under Control Measures 1 and 2.	Be Stormwater Wise: Help Protect our Water message mailed to all Westford Residents in January 2016 Census Newsletter & Stormwater article was included in the Westford Water	Continue public education during the SMMP development process. Support and encourage public participation and involvement in local Stream Teams and groups that

Revised			Partner with Westford Environmental News and Action Committee (WENAC) and the Organization for the Assabet River (OAR).	Department's InFLOWmation newsletter in the Fall of 2015.	promote environmental awareness and activism.
3E	Illicit Discharge Education for Municipal Employees	Highway Department	Education for employees under BMP 6H.	Westford hired Woodard & Curran to conduct a Stormwater Sampling Training seminar on June 19 <sup>th</sup> , 2014. The seminar focused on identifying illicit discharges as well as providing instructions on how to collect and analyze field samples aimed at detecting pollutants. The seminar was designed to support the 2012 IDDE Plan prepared by Woodard & Curran for Westford. Other local communities were also invited to attend the seminar. A custom Stormwater Sampling Manual was also prepared for the town and provided to all attendees.	Continue municipal employee training programs.
Revised					

**3a. No additions at this time.**

#### 4. Construction Site Stormwater Runoff Control

<b>BMP ID #</b>	<b>BMP Description</b>	<b>Responsible Dept./Person Name</b>	<b>Measurable Goal(s)</b>	<b>Progress on Goal(s) – Permit Year 12</b> (Reliance on non-municipal partners indicated, if any)	<b>Planned Activities – Interim Period</b>
4A	Wetlands Bylaw	Conservation Commission	Continue to implement existing Wetlands Bylaw.	The Town of Westford Conservation Commission enforced the Westford Wetlands Bylaw and Regulations.	Continue enforcement of Wetlands Bylaw and Regulations.
Revised					
4B	Construction Site Runoff Bylaw	Engineering/ Planning/ Conservation	Present draft bylaw to public in year 4, adopt in year 5.	Stormwater Management Bylaw adopted at Special Town Meeting on May 10, 2008 and approved by Attorney General on August 5, 2008. Stormwater Management Regulations adopted by the Planning Board in November 2012. During Permit Year 13, Town continued to implement permitting process defined in bylaw and require projects to manage stormwater runoff during construction.	Continue enforcement of Stormwater Management Bylaw and Stormwater Management Regulations.
Revised					
4C	Erosion, Sediment & Waste Controls	Engineering/ Planning/ Conservation	Copies of meeting minutes and memos. Improved site controls in year 4.	Stormwater Management Bylaw adopted at Special Town Meeting on May 10, 2008 and approved by Attorney General on August 5, 2008. Stormwater Management Regulations adopted by the Planning Board in November 2012. The Bylaw and Regulations include requirements to control constructions wastes (e.g. building materials, litter, sanitary waste).	Continue enforcement of Stormwater Management Bylaw and Stormwater Management Regulations.
Revised					

4D	Site Plan Review Procedures	Engineering/ Planning/ Conservation	Improved site plan review procedures in year 4.	Site plans are currently reviewed by the Engineering Department and Conservation Commission for erosion and construction site runoff BMPs as well as for compliance with the Stormwater Management Standards. Site Plans are also reviewed and discussed with a Technical Review group comprised of town staff from various Departments along with developers.	Continue to review Site Plans in accordance with Site Plan Review Bylaw, Wetlands Bylaw & Stormwater Management Bylaw procedures. Also continue to hold Technical Review meetings with developers and designers to evaluate site plan criteria and incorporate Stormwater Regulations during early stages of design.
Revised					
4E	Site Inspection & Enforcement	Engineering/ Planning/ Conservation	Records of current enforcement actions, site inspection procedures for all land disturbance >1 acre.	Site inspection procedures for land disturbances > 1 acre enforced as outlined in the Stormwater Management Regulations and in accordance with the mandatory SWPPP. Active sites are inspected on a daily to weekly basis depending on site activity and weather conditions.	Continue enforcement of Stormwater Management Bylaw & Stormwater Management Rules & Regulations.
Revised					
4F	Construction Site Contact	Highway Department	Establish contact and include information in pamphlets and on the Town's website.	The Town Engineer was identified as the stormwater contact regarding pollution prevention, complaints and construction runoff in Year 1. Established stormwater email contact at <a href="mailto:stormwater@westfordma.gov">stormwater@westfordma.gov</a> .	Update information as needed and continue to include stormwater contact information on the town's website. Include contact information in educational pamphlets and stormwater related mailings.
Revised	Procedure to Address Public Comment		Record of calls and issues addressed.		

**4a. No additions at this time.**

## 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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Interim Period
5A	Post-Construction Site Runoff Bylaw	Engineering/ Planning/ Conservation	Present draft bylaw to public in year 4, adopt in year 5.	Planning Board continued to issue Stormwater Management Permits under the Stormwater Management Bylaw & Stormwater Management Regulations, including SWPPP with O&M requirements.	Continue enforcement of Stormwater Management Bylaw and Regulations.
Revised					
5B	Structural & Non-Structural BMPs	Engineering/ Planning/ Conservation	BMP design standards specific to the Town of Westford.	BMP design standards were incorporated in the Stormwater Management Rules & Regulations as adopted on November 5, 2012.	Hold meetings with local developers and project designers to evaluate BMPs and design standards.
Revised	BMP Design Standards				
5C	Long-Term Operation & Maintenance	Engineering/ Planning/ Conservation	O&M Plan/template and procedures required for new and redevelopment	O&M standards were incorporated in the Stormwater Management Regulations, including a requirement to record applicable Operation & Maintenance agreements. The Regulations also include provisions to require continuing inspection and maintenance and submitting reports on inspections to the Planning Board.	Oversee compliance of O&M plans for all projects subject to the Stormwater Management Rules & Regulations.
Revised					
5D	Structural BMP Implementation Procedures	Engineering/ Planning/ Conservation	Inspection and enforcement procedures to ensure BMPs are installed properly.	Structural BMP's installed and inspected for compliance with the Stormwater Management Rules & Regulations.	Continue inspections for compliance.
Revised					

5a. No additions at this time.

## 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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Interim Period
6A	Catch Basin Schedule	Highway Department	Clean all catch basins and prioritize locations for cleaning.	All catch basins were cleaned in town at least once and twice on hills. Catch basins are visually inspected during cleaning to ensure proper function of the drainage system and to identify any potential illicit discharge connections. The need for any repairs or maintenance were also identified and recorded during cleaning operations.	Continue catch basin cleaning and inspection program annually. Continue documenting structure conditions and sediment data for future cleaning and maintenance priorities. Continue to identify illicit discharge connections.
Revised					
6B	Regular Street Sweeping	Department of Public Works	Sweep streets a minimum of twice per year.	All streets were swept twice a year in town.	Continue street sweeping program annually.
Revised		Highway Department			
6C	Sand/Salt Covered	Highway Department	Sand and salt storage is covered.	Sand and salt storage continued to be covered.	Continue to cover sand and salt.
Revised					
6D	Used Oil is Recycled	Highway Department	Waste oil recycling at the Highway Facility is permitted.	The Highway Department maintained permit compliance for the waste oil heater and recycling operation. The Highway Facility was also inspected by the Health Department under the town's Hazardous Materials Storage Bylaw.	Continue existing practices for waste oil recycling to maintain permit compliance.
Revised					



6E	Municipal Hazardous Material Stored Inside	Highway Department	All hazardous materials are stored indoors.	The Highway Department stored all hazardous materials indoors.	Continue to store all hazardous materials indoors.
Revised					
6F	Implement SWPPP at Garage	Highway Department	SWPPP implemented and maintained.	The Highway Department implemented BMPs outlined in the Garage SWPPP.	Continue existing practices for pollution prevention and good housekeeping.
Revised	Implement SWPPP BMPs at Garage		SWPPP BMPs implemented.		
6G	Increase Vehicle Fueling Cover	Highway Department	Increase cover until new facility is constructed.	Occupied new facility in September 2006. Facility includes a covered fueling station.	Utilize covered fueling station at the new DPW Facility.
Revised					
6H	Municipal Employee Training	Highway Department	All Highway Department employees trained annually, record of attendance sheet. Copy of training program	An Illicit Discharge Detection and Elimination (IDDE) and Good Housekeeping & Pollution Prevention training workshop was conducted by Nobis Engineering, Inc. at the Westford Highway Facility on May 12, 2014.	Continue providing training programs, incorporate new topics, and expand programs as appropriate.
Revised					
6I	Municipal Operation/Maintenance Plan	Highway Department	Improved operations at municipal facilities and throughout Town.	The town's Hazardous Materials Storage Bylaw was updated and approved at 2014 Annual Town	Continue to follow the requirements of the updated Hazardous Materials Storage Bylaw as well as the new

Revised				Meeting. The updated bylaw now requires improved reporting & record keeping, regular inspections, yearly permitting and more stringent storage practices. Municipal facilities are also evaluated on a regular basis for pollution issues.	supporting regulations once completed and approved.  The SMMP will include a comprehensive inventory and evaluation of municipal activities and facilities and a plan with recommendations/SOPs for pollution prevention practices.
6J	Mosquito Control Project & Drainage System Maintenance	Engineering/Conservation	Record of improved drainage system inspection and maintenance.	Through the efforts of the Central Massachusetts Mosquito Control Project, brush and other accumulated debris was removed from culverts and streams to ensure proper flow conditions and reduce the amount of stagnant water available for mosquito breeding.	Continue mosquito control program.
Revised					

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

Not Applicable - There are no final TMDLs at this time, however Westford continues to evaluate the impairment status of receiving waters. See below.

### 7a. No additions at this time.

## **7b. WLA Assessment**

Forge Pond and Nabnasset Pond are classified as Category 4A Waters “TMDL is complete” and Beaver Brook, Deep Brook, Heart Pond, Nashoba Brook, Stony Brook, and Tadmuck Brook are classified as Category 5 Waters “Waters requiring a TMDL” based on the Final Massachusetts Year 2012 Integrated List of Waters.

In 2012 Woodard and Curran prepared a “Receiving Waters Impairment and TMDL Update” report which served as an update to the Watershed Action Plan (WAP) developed for the town in 2007. The update provided a summary of water quality impairments in Westford including pollutant sources, applicable TMDLs and respective waste load allocations, and classification under the State Surface Water Quality Standards. The update also outlined the EPA’s General Permit requirements applicable to impaired waterbodies and TMDLs. The report also summarized recommended BMPs for pollutants of concern for each impaired waterbody.

Water quality concerns associated with the town’s impaired waters are and will continue to be addressed through the implementation of recommended BMPs as well as the implementation of BMPs specified under the six minimum control measures for Phase II, as outlined in the Westford Stormwater Management Plan (SWMP). The Stormwater Management Master Plan (SMMP) currently being developed by Tighe & Bond will review the status of surface waters within the town and provide further recommendations on addressing existing impairments. Tighe & Bond will also provide the town with TMDL recommendations including the potential need and costs for future retrofit projects.

## **Part IV. Summary of Information Collected and Analyzed**

As mentioned above in Part II. Self-Assessment, the town dedicated an entire week to inspecting both drainage structures (catch basins & manhole) and drainage pipes across the town as part of a DEP grant. In total 74 structures and 219 pipe segments were inspected which represents about 1% of the total number of structures and 5% of the total number of pipes within Westford’s overall drainage infrastructure system. Individual inspection forms were completed for each drainage structure and a video recording was captured for each pipe inspection that will eventually be incorporated into the town’s GIS system. The results of the field inspection work will be incorporated into the final SMMP report.

Approximately 74 additional drainage structures/pipes were also inspected for illicit discharges as part of the town’s IDDE plan during permit year 13. Catch basins were also inspected by the Westford Highway Department during catch basin cleaning activities

and the Engineering Department was notified of any suspicious pipes or connections observed. The Engineering Department also performed smoke testing at various school properties and along Main Street to aid in determining system connectivity and to investigate potential illicit discharge connections to the town's drainage system.

## Part V. Program Outputs & Accomplishments (OPTIONAL)

A summary of the significant program outputs and accomplishments can be found under the Part II. Self-Assessment section of this report.

### Programmatic

Stormwater management position created/staffed	(y/n)	No
Annual program budget/expenditures (Fiscal Year)	(\$)	\$86,000****

### Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	Households*
Stormwater management committee established	(y/n)	Yes**
Stream teams established or supported	(# or y/n)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	2.5 Miles***
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	See Section 2G
▪ community participation	(%)	U.K.
▪ material collected	(tons or gal)	U.K.
School curricula implemented	(y/n)	Yes: 5 <sup>th</sup> Grade
* 2016 Census Newsletter mailing sent to every Westford Household. ** Northern Middlesex Stormwater Collaborative, Healthy Lakes & Ponds Collaborative & Stormwater Management Master Plan Advisory Group (SwAG). *** Nabnasset Improvement Association & Friends of Forge Pond Annual Clean Up **** Does not include \$194k Stormwater Management Master Plan multi-year contract reported in year 11 report or \$30k DEP Technical Assistance Grant		

## 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	(#)	616
System-Wide mapping complete	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened	(# or %)	100%*
Illicit discharges identified	(#)	4

Illicit connections removed	(# ) (est. gpd)	4 (U.K.)
% of population on sewer	(%)	0%
% of population on septic systems	(%)	100%
*The Westford Highway Department inspects stormwater outfalls on an annual basis for drainage and erosion problems. The Engineering Department is systematically inspecting outfalls for illicit discharge detection and elimination.		

### Construction

Number of construction starts (>1-acre)	(#)	5
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100%
Site inspections completed	(# or %)	100%
Tickets/Stop work orders issued	(# or %)	1
Fines collected	(# and \$)	0
Complaints/concerns received from public	(#)	5

### Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100%
Site inspections completed	(# or %)	U.K.
Estimated volume of stormwater recharged	(gpy)	Not Assessed

### 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)	1-2/yr <sup>1</sup>
Total number of structures cleaned	(#)	3,201
Storm drain cleaned	(LF or mi.)	600 LF +/-
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	178.9 Tons
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Disposal
Cost of screenings disposal	(\$)	\$7,067
1. Drainage structures in hilly areas are cleaned more frequently based on the rate of sediment accumulation.		

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)	2
Qty. of sand/debris collected by sweeping	(lbs. or tons)	423.72 Tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Disposal
Cost of sweepings disposal	(\$)	\$16,736
Vacuum street sweepers purchased/leased	(#)	1 owned*
Vacuum street sweepers specified in contracts	(y/n)	Y*
*The town owns 1 mechanical sweeper and contracts another sweeper when needed.		

Reduction in application on public land of: (“N/A” = never used; “100%” = elimination)		
▪ Fertilizers	(lbs. or %)	0%
▪ Herbicides	(lbs. or %)	95%*
▪ Pesticides	(lbs. or %)	95%*
* Town of Westford Pesticide Policy requires 100% elimination except in emergencies. Estimated 5% emergency applications.		



Anti-/De-Icing products and ratios  <i>Ice-Ban (MgCl<sub>2</sub>) is applied to salt (NaCl) with a sprayer for use in de-icing activities. The town follows MassDOT guidelines for anti/de-icing material application.</i>	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	U.K.
Pre-wetting techniques utilized	(y/n)	Yes
Manual control spreaders used	(y/n)	Yes
Automatic or Zero-velocity spreaders used	(y/n)	Auto
Estimated net reduction in typical year salt application	(lbs. or %)	Not Assessed
Salt pile(s) covered in storage shed(s)	(y/n)	Yes
Storage shed(s) in design or under construction	(y/n)	No