

Municipality/Organization **North Andover, MA**

EPA NPDES Permit Number: **MAR041214**

MassDEP Transmittal Number: **W-034970**

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

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

Part I. General Information

Contact Person: John Borgesi, P.E. **Title:** Assistant DPW Director/Town Engineer

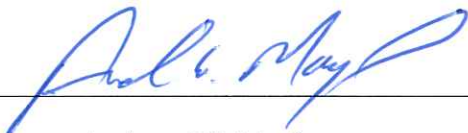
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Mailing Address: 384 Osgood Street, North Andover, MA 01845

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: Andrew W. Maylor

Title: Town Manager

Date: _____



Part II. Self-Assessment

In Permit Year 14 (April 1, 2016 through March 31, 2017), the Town of North Andover continued to implement its Stormwater Management Program. As part of developing the Annual Report, the Town evaluated compliance of the Stormwater Management Program with the conditions of the NPDES General Permit for Stormwater Discharges from Small MS4s, effective May 1, 2003, as required by Part II.D.1 of the permit. As of the end of Permit Year 14, the Town has achieved nearly all of the measurable goals for the BMPs selected in the 2003 Notice of Intent and added in subsequent years to reflect unplanned stormwater activities by the Town.

As part of the Annual Report development, the Town also evaluated the appropriateness of all BMPs in efforts towards achieving the defined measurable goals. This year, BMPs and measurable goals continue to be appropriate.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

Note that the “Planned Activities” column has been deleted from this Annual Report. In Fiscal Year 2018, the Town of North Andover will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies, and Town-wide stormwater-related programs, preparation of the Notice of Intent, and implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
1a	Air stormwater messages on local cable	Division of Public Works/ Schools	Air one new message for two weeks quarterly	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Town has aired multiple stormwater messages on the local cable access channel, North Andover CAM Access, and the school channel, CAM-Ed, in previous Permit Years. The messages, which are targeted at homeowners, inform homeowners what they can do to prevent nonpoint source pollution, including reporting illicit discharges.</p>
1b	Add stormwater information to Town’s website	Division of Public Works	Complete update by end of second permit year	<p>Measurable goals for 2003 General Permit have been met.</p> <p>Links to information about stormwater included on the Town website during Permit Year 1 were maintained throughout Permit Year 14. This includes a webpage of stormwater tips that provides information on illicit discharges and non-point source pollution. This information is directed at adults, educators, and children, and also includes information about local watershed associations (including Parker River Clean Water Association, Ipswich River Watershed Association, and Merrimack River Watershed Council). Information about protecting lakes from nonpoint source pollution included during Permit Year 1 also remains on the Town website.</p> <p>The North Andover Annual Water Quality Report provides information on the proper disposal of animal waste, describes stormwater runoff, and includes stormwater best practices. A notice with a link to the Water Quality Report, available on the Water Treatment Plant’s webpage, was mailed out to all businesses and residents in the Town.</p>

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
1c	Distribute/post non-point source pollution posters	Community Development & Schools	Post in all school and Town-owned buildings	<p>Measurable goals for 2003 General Permit have been met.</p> <p>Posters were distributed to and posted in the Town Library, Office of Community Development, Town Hall, and the Water Treatment Plant during Permit Year 1.</p> <p>The Town continued to display <i>Maintain Your BMPs</i> and <i>Stormwater and the Construction Industry</i> posters at the DPW and Community Development Offices, respectively, during Permit Year 14.</p> <p>The Town joined Greenscapes, a group promoting water conservation and protection, during Permit Year 12. A link to the Greenscapes website is included on the Town’s Conservation Department webpage. The Town continued to distribute three stormwater brochures in Permit Year 14, which discuss what stormwater is, what residents can do to be a “Greenscaper”, and how residents can reduce impervious cover at their homes and within Town.</p> <p>In October of 2016, the Conservation Department provided education to a local Brownie Girl Scout troop on watershed and water supply issues.</p> <p>Greenscapes held a workshop for fifth graders at the Atkinson School on November 21, 2016. This workshop aimed to engage students in hands-on activities that introduce them to the effect of the built environment on the natural water cycle, what happens to water that enters the storm drain, and how water flows in the local watershed.</p> <p>The Town has installed many dog waste stations consisting of plastic waste bags and a trash receptacle in previous Permit Years along walking trails, shorelines, and at other public open space areas. The Town regularly maintains the dog waste stations, including stocking the bags and emptying the trash receptacles, and repairs or replaces the stations as needed. Greenscapes provided the Town with “Scoop it!” brochures in Permit Year 13, which explain how pet waste can affect the local waterbodies, and include proper disposal practices. These brochures have been maintained at various municipal office during Permit Year 14.</p> <p>The North Andover Annual Water Quality Report includes information about how pet waste can contaminate local drinking water sources, including</p>

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
				<p>Lake Cochichewick, and the proper disposal of pet waste to prevent pollution.</p> <p>During Permit Year 14, the Planning Board distributed a Watershed Mailer to residents. This mailer discussed best practices to limit erosion and reduce pollutants in runoff to Lake Cochichewick, including items such as limiting fertilizers and using products with low or no phosphorous. The mailer also included tips for preserving buffer areas around the lake shoreline and tributaries.</p>
1d	Inform Residents of Town's recycling programs/schedules	Division of Public Works	Distribute information to all residents by website, mailings, etc.	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Town's website contains information on Town's recycling programs and schedules. Mixed stream, curb-side pickup has been available throughout the Town since Permit Year 7. The TBI recycling facility accepts drop-off of recyclables with the exception of waste oil. Waste oil is collected by the Town's DPW (see BMP 2a).</p> <p>North Andover Public Schools also offer an extensive recycling program. More information is available on the Town's website.</p> <p>The Town implemented a rain barrel program in Permit Year 8, which has been on-going since the program's inception.</p> <p>During Permit Year 14, a North Andover Middle School participated in The Green Team program sponsored by the Massachusetts EOEEA and MassDEP, which "empowers students and teachers to help the environment through waste reduction, reuse, recycling, composting, energy conservation, and pollution prevention."</p> <p>The North Andover High School also has an Environmental Club, which discusses different ways to recycle and help clean up North Andover, as well as educates others about the environment.</p>

2. Public Involvement and Participation

Note that the “Planned Activities” column has been deleted from this Annual Report. In Fiscal Year 2018, the Town of North Andover will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies, and Town-wide stormwater-related programs, preparation of the Notice of Intent, and implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
2a	Collect household hazardous waste from residents	Division of Public Works	Hold household hazardous waste collection day twice per year.	North Andover held Household Hazardous Waste Collection Days twice in Permit Year 14, on April 16, 2016 and October 15, 2016, from 9 a.m. to 1 p.m. at the TBI recycling facility. The Collection Days are advertised on the Town’s website and typically occur on the 3 rd Saturday of April and October.
2b	Collect & Recycle waste oil	Division of Public Works	Collect waste oil from residents twice per month	The DPW collects waste oil for recycling on the first and third Saturday of every month from 9 a.m. to noon at the DPW garage. Additionally, the Town website provides residents with alternative means of used motor oil disposal.
2c	Develop Stormwater Hotline	Division of Public Works	Create phone number(s) & inform residents of hotline	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Town continued to promote reporting of illegal dumping, with information including a 24-hour hotline (978-685-0950 ext. 44014) provided on the Town website and cable TV. Residents are able to call the Town Engineer and obtain information, ask questions, provide feedback, and report illegal dumping.</p> <p>The North Andover Annual Water Quality Report provides information about suspicious discharges, and includes a contact phone number for the Town’s Conservation Commission (978-688-9530) to promote reporting of suspicious discharges.</p>

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
2d	Coordinate an annual, voluntary waterways cleanup day	Division of Public Works/ Con Com	Hold waterways cleanup day once per year beginning in the Spring of 2005 (Permit Year 3)	<p>Measurable goals for 2003 General Permit have been met.</p> <p>North Andover held their Annual Town-wide Earth Day Clean-up Event on April 30, 2016. Residents volunteered to pick up litter in a part of Town of their choosing. This effort also included a Lake Cochichewick Shore Clean Up. Volunteers assisted with shore clean up from both the lake side and shore side. Boaters from the area provided watercraft to help clean up the shore from the lake side.</p> <p>On Friday, April 22, 2016, volunteers from the Clean River Project cleaned portions of wetlands in North Andover, near the intersection of Sutton Street and Main Street.</p> <p>Friends of North Andover Trails held a Shawsheen River Trail work day and cleanup day on September 3, 2016 from 9 a.m. to noon. Members of this group also participated in the annual Town-Wide Cleanup that took place on April 30, 2016. An additional Lake Cochichewick Shore Clean Up event was sponsored by Friends of North Andover Trails on November 5, 2016 from 8 a.m. to 1 p.m. Many volunteers from Merrimack College, North Andover High School, Town boards and commissions, local scout troops, and lakeshore residents participated in this event.</p> <p>The Town typically provides additional assistance for local cleanups by removing the bags of collected trash at the conclusion of the event.</p>
2e	Make SWMP available for public review/comment	Division of Public Works	Post SWMP on Town website, in library, in Division of Public Works office	<p>Measurable goals for 2003 General Permit have been met.</p> <p>Copies of the SWMP created for the Town were placed in the Town Library, at the DPW office, and the SWMP was posted on the Town website during Permit Year 1. The SWMP remained available at these locations through Permit Year 5 and is still available on the Town's website under the DPW page in 'DPW Documents' and on the Engineering page.</p>

3. Illicit Discharge Detection and Elimination

Note that the “Planned Activities” column has been deleted from this Annual Report. In Fiscal Year 2018, the Town of North Andover will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies, and Town-wide stormwater-related programs, preparation of the Notice of Intent, and implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
3a	Map outfalls, receiving waters and storm drains	Division of Public Works	Complete mapping by end of fourth permit year	<p>Measurable goals for 2003 General Permit have been met.</p> <p>Outfall mapping in urbanized areas was completed in 2008.</p> <p>The Town has developed an initial map of catchments within North Andover in anticipation of issuance of the new General Permit. There are approximately 110 catchments in Town, which were developed using USGS’s StreamStats program. This has been included in the Town’s GIS stormwater mapping. With the assistance of a consultant, the Town is updating the initial catchments to comply with the 2016 General Permit requirements.</p> <p>In Permit Year 14, the Town hired a consultant to complete additional mapping of the storm drain system. The consultant georeferenced as-built plans to update connectivity and attribute information in the Town’s GIS mapping.</p>
3b	Develop illicit discharge detection & elimination plan	Division of Public Works	Make recommendations for proposed plan	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Town’s IDDE Plan was completed in October 2010 by a working group comprised of multiple Town departments. The plan establishes actions, procedures, and a timeline for IDDE activities to comply with both the 2003 General Permit and many of the anticipated 2012 North Coastal Small MS4 General Permit requirements. The Town has hired a consultant to develop an updated IDDE Plan during Permit Year 14 that will include components required by the 2016 Final General Permit.</p> <p>In-stream water quality sampling continues to be conducted at several brooks discharging into Lake Cochichewick for parameters including total coliform, ammonia, and phosphorus.</p>

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
				<p>The “Sutton 06” outfall was investigated during Permit Years 11 and 12 for an illicit discharge per EPA’s NOV. One section of sewer in the catchment area on School Street was replaced due to continuous surcharging. During Permit Year 14, drainage improvements were completed in this area. Currently, there is no evidence of a direct illicit connection to the MS4, and the Town continues to work with EPA to resolve the NOV.</p> <p>No other illicit discharges or connections were found during Permit Year 14.</p>
3c	Review existing bylaws and regulations	Division of Public Works	Determine whether existing bylaws/regulations are adequate	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Town finished reviewing their existing regulations regarding illicit discharge detection and elimination in Permit Year 3. See BMPs 3d and 3e for additional information.</p>
3d	Develop/modify general illicit discharge bylaw	Division of Public Works	If necessary, propose recommendation for bylaw updates.	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Town developed a general illicit discharge bylaw that meets USEPA requirements during Permit Year 4. The Stormwater Management & Erosion Control Bylaw was adopted on May 12, 2009, which also adopts MA Stormwater Standard 10 to prohibit illicit discharges by reference.</p> <p>The Conservation Commission also required 6 applicants to include a “Prevention of Illicit Discharges Statement” in their Stormwater Report during Permit Year 14.</p>
3e	Present bylaw for Town meeting action	Division of Public Works	Make presentations for Town meeting action, if necessary.	<p>Measurable goals for 2003 General Permit have been met.</p> <p>North Andover adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009. The Regulations were adopted on February 15, 2011.</p>

4. Construction Site Stormwater Runoff Control

Note that the “Planned Activities” column has been deleted from this Annual Report. In Fiscal Year 2018, the Town of North Andover will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies, and Town-wide stormwater-related programs, preparation of the Notice of Intent, and implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
4a	Review existing bylaws and regulations	DPW/ Planning/Con Com	Determine whether existing bylaws/ regulations are adequate	Measurable goals for 2003 General Permit have been met. The Town finished reviewing the relevant sections of their Rules and Regulations governing the Subdivision of Land and the Zoning Bylaws in the Permit Year 4. See BMP 4b for additional information.
4b	Develop/modify bylaws for construction site runoff	DPW/ Planning/Con Com	If necessary, propose recommendations for bylaw updates	Measurable goals for 2003 General Permit have been met. In Permit Year 4, the Town completed the development of a bylaw for the control of construction site runoff. The Town adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009. The Regulations were adopted on February 15, 2011. In Permit Year 13, the Conservation Commission updated the Wetland Protection Regulations for consistency with the Stormwater Management & Erosion Control Bylaw and the updated State regulations. The revised Regulations were adopted at the March 23, 2016 Conservation Commission Public Hearing.
4c	Present bylaw for Town meeting action	DPW/ Planning/Con Com	Make presentations for Town Meeting action, if necessary	Measurable goals for 2003 General Permit have been met. See BMP 4b above.

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
4d	Review existing site inspection practices	DPW/ Planning/Con Com	Determine whether existing practices are adequate	<p>Measurable goals for 2003 General Permit have been met.</p> <p>During Permit Year 4, the Town completed the development of a bylaw for the control of construction site runoff, including requirements for construction period site inspections. See BMP 4b for more information.</p> <p>In Permit Year 14, the Town inspected 44 sites for erosion and sedimentation control. The Conservation Commission issued a total of 11 stop work orders and collected one fine for \$900. Inspection reports completed for every construction site larger than one acre in Permit Year 14 are maintained by Conservation Commission.</p>
4e	Develop/modify site inspection practices	DPW/ Planning/Con Com	If necessary, make recommendations for updating existing practices	<p>Measurable goals for 2003 General Permit have been met.</p> <p>During Permit Year 5, the Town made changes to their erosion/ sedimentation control and drainage submittal requirements, as well as their site inspection practices.</p> <p>The Conservation Commission maintains records of all inspections in their individual project files.</p>

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

Note that the “Planned Activities” column has been deleted from this Annual Report. In Fiscal Year 2018, the Town of North Andover will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies, and Town-wide stormwater-related programs, preparation of the Notice of Intent, and implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
5a	Review existing bylaws and regulations	DPW/ Planning/Con Com	Determine whether existing bylaws/ regulations are adequate	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Town finished reviewing the relevant sections of their Rules and Regulations governing the Subdivision of Land and the Zoning Bylaws during Permit Year 3.</p> <p>The Town adopted Regulations for the Stormwater Management & Erosion Control Bylaw on February 15, 2011. The Town continues to require operations and maintenance plans for post-construction stormwater treatment systems, and requires sites to keep five-year monitoring records for review.</p> <p>The Town also encourages and keeps track of sites that utilize Low Impact Development (LID) techniques. In Permit Year 14, 9 sites utilized LID techniques.</p> <p>In Permit Year 14, 6 Stormwater Pollution Prevention Plans (SWPPPs) were submitted.</p> <p>For any stormwater infrastructure, including BMPs, located outside of the Town’s right of way, the responsibility for operation and maintenance is assigned to the private owner or homeowners’ association through an Order of Conditions or the Planning Board approval process. The Planning Department records the Operation & Maintenance Plan (12 in Permit Year 14) and a perpetual condition on the deed.</p>

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
5b	Develop/modify bylaws for post-construction runoff	DPW/ Planning/Con Com	If necessary, propose recommendation for bylaw updates	<p>Measurable goals for 2003 General Permit have been met.</p> <p>During Permit Year 4, the Town developed a post-construction stormwater management bylaw that met EPA requirements and references MA Stormwater Management Standards. This post- construction stormwater management bylaw was presented for Town Meeting action. However, the bylaw did not pass.</p> <p>During Permit Year 5, the bylaw was revised with input provided from the Planning Department and Conservation Commission. See BMP 5c for additional information.</p>
5c	Present bylaw for Town meeting action	DPW/ Planning/Con Com	Make presentations for Town meeting action, if necessary	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Town adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009. The Regulations were adopted on February 15, 2011. The Town posted the Stormwater Management & Erosion Control Bylaw and Regulations on the Town's website in April 2011.</p> <p>In Permit Year 13, the Conservation Commission updated the Wetland Protection Regulations for consistency with the Stormwater Management & Erosion Control Bylaw and the updated State regulations. The revised Regulations were adopted at the March 23, 2016 Conservation Commission Public Hearing.</p>
5d	Review existing site inspection practices	DPW/ Planning/Con Com	Determine whether existing practices are adequate	<p>Measurable goals for 2003 General Permit have been met.</p> <p>During Permit Year 4, the Town completed a review of their existing site inspection and maintenance practices to determine whether they comply with EPA's stormwater management plan requirements. See BMP 5e for additional information.</p> <p>The Planning Board approved the first Land Disturbance Permit in August 2011.</p>

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
5e	Develop/modify site inspection practices	DPW/ Planning/Con Com	If necessary, make recommendations for updating existing practices	<p>Measurable goals for 2003 General Permit have been met.</p> <p>During Permit Year 5, the Town made changes to their existing site inspection and maintenance practices to meet EPA's stormwater management plan requirements.</p> <p>The Planning Board and the Conservation Commission now require applicants to provide a calculation of total square footage of increased impervious area as part of the as-built submission.</p>

6. Pollution Prevention and Good Housekeeping in Municipal Operations

Note that the “Planned Activities” column has been deleted from this Annual Report. In Fiscal Year 2018, the Town of North Andover will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies, and Town-wide stormwater-related programs, preparation of the Notice of Intent, and implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
6a	Sweep streets	Division of Public Works	Sweep all Town streets once per year; Stevens Pond 2/yr.	During Permit Year 14, all Town roads were swept at least once using a broom sweeper.
6b	Clean catch basins	Division of Public Works	Develop & implement cleaning schedule; Stevens Pond 1/yr.	During Permit Year 14, the Town continued to clean catch basins mechanically. Approximately 750 catch basins were cleaned during Permit Year 14. Material from the catch basin cleaning is disposed of at the Cyr Recycle Center on Sharpener's Pond Road.
6c	Train municipal employees at each facility	Division of Public Works	Target all applicable municipal facilities	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Town started to periodically train employees at all applicable municipal facilities during the fourth permit year. Municipal employees from the Fire Department, School Department, Conservation Department, Planning Department, Department of Public Works, and Youth Services have been/are invited to specific trainings as necessary.</p> <p>The Town has formed a NPDES Subcommittee, which is comprised of members of the Planning, Conservation, Water & Sewer, Engineering, Facilities, GIS, Community Development, and School Departments. The subcommittee met during Permit Year 14.</p> <p>During Permit Year 14, Town staff from multiple departments continued to attend monthly Merrimack Valley DPW/Stormwater Collaborative meetings. Three of these meetings included information about the 2016 General Permit, and stormwater management topics are sometimes discussed.</p> <p>The Town’s Conservation Administrator has participated in various stormwater management webcasts during previous Permit Years.</p>

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
				<p>The Town Engineer and Staff Engineer participated in two additional stormwater trainings during Permit Year 14, hosted in Essex, MA and at Northern Essex Community College.</p> <p>Multiple Town staff attended presentations about GIS mapping during the New England Water Works Association spring conference in Worcester, MA in April 2017.</p>
6d	Perform follow-ups to ensure required practices are met	Division of Public Works	Target all applicable municipal facilities	The Engineering Department monitors practices at municipal facilities through day-to-day activities and communications.
6e	Public Works Facility Good Housekeeping	Division of Public Works	Implement procedures and best management practices to prevent stormwater pollution	In Permit Year 9, the Town hired a consultant to perform an environmental compliance assessment at the Department of Public Works Facility on Osgood Street. As a result, the Town prepared a Stormwater Pollution Prevention Plan and an Oil Spill Prevention Control and Countermeasure (SPCC) Plan for the facility in June 2012. DPW and Facilities staff have been trained on the SWPPP and SPCC Plan.

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

Note that the “Planned Activities” column has been deleted from this Annual Report. In Fiscal Year 2018, the Town of North Andover will focus on compliance with the new requirements of the 2016 MA Small MS4 General Permit, including assessment of existing stormwater practices, policies, and Town-wide stormwater-related programs, preparation of the Notice of Intent, and implementation of Best Management Practices to address the permit requirements for each Minimum Control Measure.

BMP ID#	BMP Description	Responsible Dept./ Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 14 (Reliance on non-municipal partners indicated, if any)
TMDL-1	Check current impairments	Division of Public Works	Check current MA Integrated List of Waters each year for newly listed or delisted receiving waters in North Andover	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Fecal Coliform TMDL for the Shawsheen River Basin (MA83-01-2002-24) has been in effect since September 2002. See 7b, WLA Assessment, for BMPs that will reduce North Andover’s bacteria contribution to the watershed.</p> <p>Other waters in North Andover listed as Category 5 on the MA 2014 Integrated List of Waters include:</p> <ul style="list-style-type: none"> • Salem Pond (turbidity) • Lake Cochichewick (mercury in fish tissue) • Stevens Pond (mercury in fish tissue) • Merrimack River (<i>E. coli</i>, PCBs in fish tissue, total phosphorus) • Shawsheen River (dissolved oxygen, fecal coliform) <p>Note: Mercury and PCBs are legacy pollutants and not considered stormwater pollutants.</p> <p>The Town continues to monitor the status of receiving waters and pursue projects that aid the reduction of pollutants of concern, particularly bacteria levels in the Shawsheen River.</p>

7b. WLA Assessment

The Report “Bacteria TMDL for the Shawsheen River Basin: Report MA83-01-2002-24” is final and was approved in August 2002. There was only one monitoring station indicated for the Town of North Andover – Shawsheen River station SH17.8. The Shawsheen River is just downstream of Massachusetts Avenue and had high fecal coliform counts during both dry and wet weather sampling in 1997.

The TMDL sets allowable bacteria levels for urban runoff and point sources equivalent to the water quality standard; for sewer leaks, sanitary sewer overflows, illicit connections, and failing septic systems, the allowable levels are set equal to zero. The following table summarizes the WLA for the Shawsheen River:

Fecal Coliform Wasteload Allocations (WLAs) and Load Allocations (LAs) for the Shawsheen River and Identified Tributary Streams

Bacteria Source Category	WLA (organisms/100ml)	LA (organisms/100ml)
Point Source	Geomean \leq 200 10% \leq 400	
Sewer leaks	0	0
Sanitary Sewer Overflow	0	0
Illicit Sewer Connections	0	
Failing Septic Systems	0	0
Direct Wildlife		Geomean \leq 200 10% \leq 400
Urban Stormwater Runoff	Geomean \leq 200 10% \leq 400	Geomean \leq 200 10% \leq 400

The TMDL does not dictate or require any specific individual controls at a particular outfall or site in North Andover.

The Town completes the following activities and BMPs, which help reduce North Andover's bacteria contribution to the Shawsheen watershed and help meet the applicable WLAs:

- Street Sweeping and Catch Basin Cleaning.
- Municipal Pollution Prevention Trainings.
- Pet Waste Signage.
- Illicit Discharge Investigation and Elimination.

Part IV. Summary of Information Collected and Analyzed

No additional information was collected or analyzed this Permit Year.