

Municipality/Organization	North Andover, MA
EPA NPDES Permit Number:	MAR041214
MassDEP Transmittal Number:	W-034970
Annual Report Number & Reporting Period:	Year 13 April 1, 2015 – March 31, 2016

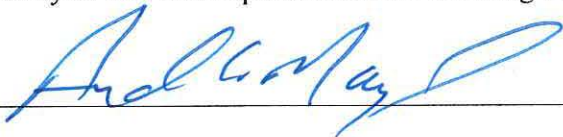
**NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2016)**

Part I. General Information

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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:	Andrew W. Maylor
Title:	Town Manager
Date:	4/28 /16

Part II. Self-Assessment

In Permit Year 13 (April 1, 2015 through March 31, 2016), 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 13, the Town has achieved nearly all of the measurable goals for the BMPs selected in the 2003 Notice of Intent and those 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. In previous years, some BMPs and measureable goals were improved. This year, BMPs and measureable goals continue to be appropriate.

Planned activities for the next permit term have not been designated unless a BMP under this permit was not completed or is still under progress for completion. The Town plans to reevaluate all BMPs when preparing the Notice of Intent and Stormwater Management Plan for compliance with the final 2016 General Permit requirements.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1a	Air stormwater messages on local cable	Division of Public Works/ Schools	Air one new message for two weeks quarterly	The Town has 11 stormwater messages to air on the local cable access channel and the school channel. These 11 messages are broken down into 1 to 2 public service announcements which air throughout the day. The cable access channel, North Andover CAM Access, and school channel, CAM-Ed, continued to air these messages periodically during Permit Year 13. The messages, which are targeted at homeowners, inform homeowners what they can do to prevent nonpoint source pollution, including reporting illicit discharges.	Measurable goals for 2003 General Permit have been met. The Town plans to continue airing the nonpoint source pollution public service announcements on the local cable access channel and school channel in Permit Year 14.
1b	Add stormwater information to Town's website	Division of Public Works	Complete update by end of second permit year	Links to information about stormwater included on the Town website during Permit Year 1 were maintained throughout Permit Year 13. 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. Information about protecting lakes from nonpoint source pollution included during Permit Year 1 also remains on the Town website. The stormwater messages that were prepared for the local cable access channel and added to the Town website in Year 3 were maintained throughout Year 13. The North Andover Annual Water Quality Report provides information on the proper disposal of animal waste, stormwater runoff, and stormwater	Measurable goals for 2003 General Permit have been met. Outreach through website and other media (as discussed herein) will be maintained and updated as needed.

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
				best practices. The Water Quality Report was mailed out to all businesses and residents in the Town and is also available on the Water Treatment Plant's webpage.	
1c	Distribute/post non-point source pollution posters	Community Development & Schools	Post in all school and Town-owned buildings	<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 13.</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. In Permit Year 13, Greenscapes provided the Town with three stormwater brochures, 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>Greenscapes partnered with the North Andover Wildlife Team to conduct a presentation at the library on May 19, 2015 regarding the benefits of native plants, as well as methods to maintain residential lawns using less chemicals and water.</p> <p>Greenscapes held a "Keeping Water Clean" workshop for fifth graders at the Sargent School in October 2015. This workshop aimed to engage students in hands-on activities that introduce them</p>	Measurable goals for 2003 General Permit have been met.

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
				<p>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 July 2015 issue of the <i>Community and Business Newsletter</i> included information about animal waste (pets and waterfowl) and water quality in North Andover's waterways and provided detailed information about recently installed dog waste stations. 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.</p>	
1d	Inform Residents of Town's recycling programs/schedules	Division of Public Works	Distribute information to all residents by website, mailings, etc.	<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 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</p>	Measurable goals for 2003 General Permit have been met.

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
				<p>program's inception.</p> <p>North Andover public schools participate 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>	

2. Public Involvement and Participation

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
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 13, on April 18, 2015 and again in October 17, 2015 from 9 a.m. to 1 p.m. at the TBI recycling facility. The Collection Days are advertised on the Town's website.	The North Andover Household Hazardous Waste Collection Day will be held in both April and October, 2016.
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.	North Andover continues to collect waste oil from residents twice per month.
2c	Develop Stormwater Hotline	Division of Public Works	Create phone number(s) & inform residents of hotline	<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>	<p>Measurable goals for 2003 General Permit have been met.</p> <p>North Andover continues to promote reporting of illegal dumping and illicit discharges.</p>
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>North Andover held their Annual Town-wide Earth Day Clean-up Event in the spring of Permit Year 13. Residents volunteered to pick up litter in a part of Town of their choosing.</p> <p>Friends of North Andover Trails partnered with the Shawsheen River Watershed Association to hold a land and river clean-up event on the Shawsheen River on April 25, 2015 from 9 a.m. to</p>	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The next North Andover Annual Town-wide Earth Day Clean-up will be held on April 30, 2016.</p> <p>A storm drain marking program</p>

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				<p>noon. On May 2, 2015 from 9 a.m. to noon, the Friends held a trail cleanup at Osgood Hill, which abuts Lake Cochichewick. A Shawsheen River Trail work day and cleanup day was held on August 1, 2015 from 9 a.m. to noon.</p> <p>On August 21, 2015, volunteers from L-Com Global Connectivity, a North Andover-based business, spent the morning cleaning up along the shores of Lake Cochichewick.</p> <p>On November 7, 2015, the Harbor Master, Public Works, Conservation, and Planning Departments coordinated a Lake Cleanup Day along the shores of Lake Cochichewick. Over 60 volunteers from the “Mack Gives Back” Program and the North Andover High School Environmental Club participated. The North Andover Country Club, Rolling Ridge Retreat and Conference Center, Brooks School, and Edgewood Retirement Community also coordinated cleanups along their shorelines on this day.</p> <p>The Town conducted a storm drain marking program at the high school with the school’s Environmental Club during Permit Year 12. The Town will evaluate the durability of the epoxy markers, and compare to that of stenciled markings.</p>	is planned for the middle school in Permit Year 14, pending the durability of the markers at the high school over the winter.
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	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.	Measurable goals for 2003 General Permit have been met.

3. Illicit Discharge Detection and Elimination

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3a	Map outfalls, receiving waters and storm drains	Division of Public Works	Complete mapping by end of fourth permit year	<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.</p>	<p>Measurable goals for 2003 General Permit have been met.</p> <p>The Town continues to refine mapping of the drainage system as needed.</p>
3b	Develop illicit discharge detection & elimination plan	Division of Public Works	Make recommendations for proposed plan	<p>The Final 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.</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> <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. At this time, 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>In Summer 2015, the Town's engineering</p>	Measurable goals for 2003 General Permit have been met.

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
				<p>consultant conducted an additional day of drainage inspections. As part of this effort, high-priority drainage structures were visually inspected for condition and evidence of illicit discharges/connections. The Town's existing GIS mapping was confirmed and updated as needed to reflect the existing conditions in the field. No evidence of an illicit discharge were observed.</p> <p>No other illicit discharges were found during Permit Year 13.</p>	
3c	Review existing bylaws and regulations	Division of Public Works	Determine whether existing bylaws/regulations are adequate	The Town finished reviewing their existing regulations with regard to illicit discharge detection and elimination in Permit Year 3.	Measurable goals for 2003 General Permit have been met.
3d	Develop/modify general illicit discharge bylaw	Division of Public Works	If necessary, propose recommendation for bylaw updates.	<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 3 applicants to include a "Prevention of Illicit Discharges Statement" in their Stormwater Report during Permit Year 13.</p>	Measurable goals for 2003 General Permit have been met.
3e	Present bylaw for Town meeting action	Division of Public Works	Make presentations for Town meeting action, if necessary.	North Andover adopted the Stormwater Management & Erosion Control Bylaw on May 12, 2009. The Regulations were adopted on February 15, 2011.	Measurable goals for 2003 General Permit have been met.

4. Construction Site Stormwater Runoff Control

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4a	Review existing bylaws and regulations	DPW/ Planning/Con Com	Determine whether existing bylaws/ regulations are adequate	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.	Measurable goals for 2003 General Permit have been met.
4b	Develop/modify bylaws for construction site runoff	DPW/ Planning/Con Com	If necessary, propose recommendations for bylaw updates	<p>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.</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>	Measurable goals for 2003 General Permit have been met.
4c	Present bylaw for Town meeting action	DPW/ Planning/Con Com	Make presentations for Town Meeting action, if necessary.	See BMP 4b above.	Measurable goals for 2003 General Permit have been met.

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4d	Review existing site inspection practices	DPW/ Planning/Con Com	Determine whether existing practices are adequate	<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.</p> <p>In Permit Year 13, the Town inspected 35 sites for erosion and sedimentation control. The Conservation Commission issued a total of 10 stop work orders and collected 1 fine for \$200. Inspection reports completed for every construction site larger than one acre in Permit Year 13 are maintained by Conservation Commission.</p>	Measurable goals for 2003 General Permit have been met.
4e	Develop/modify site inspection practices	DPW/ Planning/Con Com	If necessary, make recommendations for updating existing practices	<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>	Measurable goals for 2003 General Permit have been met.

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

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5a	Review existing bylaws and regulations	DPW/ Planning/Con Com	Determine whether existing bylaws/ regulations are adequate	<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 13, 6 sites utilized LID techniques.</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 Conservation Commission records the Operation & Maintenance Plan (8 in Permit Year 13) and a perpetual condition on the deed.</p>	Measurable goals for 2003 General Permit have been met.
5b	Develop/modify bylaws for post-construction runoff	DPW/ Planning/Con Com	If necessary, propose recommendation for bylaw updates	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.	Measurable goals for 2003 General Permit have been met.

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
				During Permit Year 5, the bylaw was revised and selected information was pulled out to include in a separate regulation. The bylaw was revised with input provided from the Planning Department and Conservation Commission.	
5c	Present bylaw for Town meeting action	DPW/ Planning/Con Com	Make presentations for Town meeting action, if necessary	<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>	Measurable goals for 2003 General Permit have been met.
5d	Review existing site inspection practices	DPW/ Planning/Con Com	Determine whether existing practices are adequate	<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.</p> <p>The Planning Board approved the first Land Disturbance Permit in August 2011.</p>	Measurable goals for 2003 General Permit have been met.
5e	Develop/modify site inspection practices	DPW/ Planning/Con Com	If necessary, make recommendations for updating existing practices	<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</p>	Measurable goals for 2003 General Permit have been met.

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
				Commission now require applicants to provide a calculation of total square footage of increased impervious area as part of the as-built submission.	

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6a	Sweep streets	Division of Public Works	Sweep all Town streets once per year; Stevens Pond 2/yr.	During Permit Year 13, all Town roads were swept at least once, and Stevens Pond roads were swept twice.	Continue to sweep all Town streets once per year and Stevens Pond roads twice per year.
6b	Clean catch basins	Division of Public Works	Develop & implement cleaning schedule; Stevens Pond 1/yr.	<p>During Permit Year 13, the Town continued to clean catch basins mechanically. Approximately 300 catch basins were cleaned during Permit Year 13. Material from the catch basin cleaning is disposed of at the Cyr Recycle Center on Sharpener's Pond Road.</p> <p>Due to State licensure requirements, the Town experienced delays in its typical cleaning schedule. Operations staff performing catch basin cleaning must have a valid Hoisting Operator's License in Massachusetts. Typical maintenance activities were delayed as operators prepared for and received the appropriate licensure. This lost time resulted in fewer catch basins cleaned than during a typical Permit Year.</p>	Resume normal catch basin cleaning schedule using a Massachusetts licensed Hoisting Operator.
6c	Train municipal employees at each facility	Division of Public Works	Target all applicable municipal facilities	<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, Planning, 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 Department. The subcommittee met during</p>	<p>Measurable goals for 2003 General Permit have been met.</p> <p>Town staff will continue to attend Merrimack Valley Planning Commission workshops and training sessions.</p>

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
				<p>Permit Year 13.</p> <p>During Permit Year 13, Town staff from multiple departments attended the Merrimack Valley Planning Commission training workshop entitled “Stormwater Management Workshop Series: Stormwater Management and Infrastructure Maintenance” on April 10, 2015 from 8 a.m. to 11 a.m. Town staff also regularly attend the Merrimack Valley DPW/Stormwater Collaborative meetings.</p> <p>The Town’s Conservation Administrator has participated in various stormwater management webcasts during previous Permit Years.</p> <p>The Town’s Staff Engineer participated in a stormwater sampling training on March 3, 2016 from 7 p.m. to 9 p.m. that was hosted by the Town of Newbury’s Stormwater Committee. This training included the sampling method process and best practices for test kits.</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.	Through the NPDES Subcommittee, continue to periodically check with the Fire Department, School Department, Department of Public Works, and Youth Services to ensure that applicable stormwater best practices are being adhered to.
6e	Public Works Facility Good Housekeeping	Division of Public Works	Implement procedures and best management practices to prevent	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	The Town will continue to implement these Plans.

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
			stormwater pollution	Stormwater Pollution Prevention Plan (SWPPP) 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)

BMP ID#	BMP Description	Responsible Dept./Person Name	Measureable Goal(s)	Progress on Goal(s) – Permit Year 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities
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>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>Measurable goals for 2003 General Permit have been met.</p> <p>The Town will continue 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” (August 2002) is final and was approved in 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 following activities and BMPs will help reduce North Andover's bacteria contribution to the Shawsheen watershed and 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

N/A