

**Municipality/Organization:** Town of Salem, New Hampshire

---

**EPA NPDES Permit Number:** NHR041031

---

**Annual Report Number**

**& Reporting Period:** Year 12: April 1, 2014 – March 31, 2015

---

**NPDES PII Small MS4 General Permit  
Annual Report  
(Due: May 1, 2015)**

**Part I. General Information**

Contact Person: Richard Russell

Title: Director of Public Works

---

Telephone #: (603) 890-2154

Email: RRussell@ci.salem.nh.us


---

Mailing Address: Public Works, 21 Cross Street, Salem, New Hampshire 03079

---

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: Keith R. Hickey

---

Title: Town Manager

---

Date: 

---

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

The Town of Salem has completed the required self-assessment and has determined that our municipality is generally in compliance with the conditions of the permit. See Part III for status of BMPs.

Over the past year, the Town has taken a proactive approach in trying to implement some of the Best Management Practices that it anticipates will be required once the new MS4 Permit is issued later this year. The Town is currently working with their consultant, Weston & Sampson, to complete the following items:

- Develop new public education materials that focus on educating the four target audiences identified in the 2013 Draft MS4 Permit, with emphasis on providing educational information regarding the impact of stormwater discharges on impaired waters and waters with a TMDL.

- Revise the Town's existing bylaws to meet the anticipated requirements of the 2013 Draft MS4 Permit.

- Update the Town's Drainage GIS to meet the anticipated requirements of the 2013 Draft MS4 Permit, which includes adding unique identifiers to outfalls; incorporating unmapped drain manholes, catch basins and storm drain pipes; and delineating drainage catchments.

- Classify and rank drainage catchments for future Illicit Discharge Detection and Elimination efforts.

- Develop written operation & maintenance procedures for municipal activities and facilities identified in the 2013 Draft MS4 Permit.

- Develop a Stormwater Pollution Prevention Plan for the Town's DPW Facility and providing related municipal employee training.

In addition, the Town also hired FB Environmental Associates in conjunction with Environmental Canine Services, to conduct a preliminary bacteria investigation, including canine detection and water quality sampling, at Arlington Mill Reservoir, Captain's Pond, Hedgehog Pond and Millville Pond. This work is part of the Town's continuing efforts to meet the Waste Load Allocations and Waste Load Reductions identified in the TMDLs for these water bodies. The Town anticipates continuing work associated with this effort in 2015.

## Part III. Summary of Minimum Control Measures

### 1. Public Education and Outreach

<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 – Permit Year 13</b> (if applicable)
1-1	Maintain Existing Watershed Signs at Canobie Lake	Dept. of Public Works	Maintain signs throughout permit term	New uniform watershed signs are in the process of being put up around Canobie Lake, which will replace the previous signs. Installation of these signs will be complete in Summer 2015.	Complete installation of new watershed signs around Canobie Lake and continue to maintain these signs.
1-2	Broadcast Informational Stormwater Video on Local Television	Engineering Department	Broadcast video annually beginning with Permit Year 2	Two stormwater videos were broadcast on local cable television during Permit Year 12. These included the informational stormwater video entitled “Stormwater Runoff, There is No Away”, which aired 30 times between May and July 2014; and an outreach video on the use of canines to detect human wastewater in water quality samples collected from the Arlington Mill Reservoir, Captain’s Pond, Hedgehog Pond, and Millville Pond, which aired 7 times in November 2014. An article also ran in the Eagle Tribune on October 30, 2014, discussing the bacteria investigation including the canine detection and water quality sampling work completed.	Identify new stormwater videos/material to air on the local cable access channel.
1-3	Develop Stormwater Brochure	Engineering Department	Develop brochure by May 1, 2005	Copies of the EPA pamphlet/fact sheet “Protecting Water Quality from Urban Runoff” are available at the Town Hall front desk and at the DPW. The Town also keeps copies of the MS4 Annual Report at Town Hall and at DPW.	Continue to make copies of the EPA pamphlet/fact sheet “Protecting Water Quality from Urban Runoff”, and the Town’s MS4 Annual Report available at Town Hall and the DPW.
	Brochure Available for Distribution	Engineering Department	Make brochure available at Town Hall and DPW by May 1, 2006 and distribute to students annually in Permit Years 3 through 5		
1-4	Stormwater Information added to Engineering Department’s website	Engineering Department	Stormwater information added to Engineering Department website by May 1, 2005	<b>BMP Completed.</b>	<b>BMP Completed.</b>

	Maintain/update information on Engineering Dept. Website	Engineering Department	Update/maintain website during Permit Years 3 through 5	The Town continued to maintain links to stormwater resources on the Town's website. The Town also provided a NHDES Fact Sheet on their website regarding snow and ice removal by business owners. This fact sheet discusses the use of 'certified' snow removal contractors who are trained in efficient application of road salt, thereby reducing impacts to nearby receiving waters. It also encourages the use of mechanical snow removal as early as possible at storm onset; reducing the size of parking areas that are cleared if certain areas are not routinely used; annual calibration of salt spreaders; use of infrared thermometers to reduce potential salt application; covering salt and sand piles when not in use; and employing the use of drop type spreaders, anti-icing and pre-wetting measures to reduce salt usage.	Continue to maintain and update existing links, and new stormwater resources on the Town's website.
1-5	Identify locations for 3 kiosks with stormwater bulletins	Dept. of Public Works	Identify location for kiosks by May 1, 2004	<b>BMP Completed.</b>	<b>BMP Completed.</b>
	Design Kiosks	Engineering Dept.	Complete design of kiosks by May 1, 2005	<b>BMP Completed.</b>	<b>BMP Completed.</b>
	Install Kiosks	Dept. of Public Works	Install kiosks by May 1, 2006	<b>BMP Completed.</b>	<b>BMP Completed.</b>
	Maintain Kiosks	Dept. of Public Works	Maintain/update kiosks during Permit Years 4 through 5	Kiosks were maintained at Canobie Lake, Hedgehog Pond, and Michelle Memorial Park during Permit Year 12. Copies of the EPA pamphlet/fact sheet "Protecting Water Quality from Urban Runoff" are available at each kiosk.	Continue to maintain kiosks at Canobie Lake, Hedgehog Pond and Michelle Memorial Park; and update kiosks with new stormwater information including adding a pamphlet entitled "Pick It Up It's Your Doodie" to all locations. The Town also plans to add stormwater information to the kiosks located at the Town Forest and at Bill Valentine Memorial Park.
1-6	Approach Private Beaches and Mall at Rockingham Park about Installing Informational Kiosks	Dept. of Public Works	Approach private beach by May 1, 2006	The Salem Fire Dept. has pursued funding in the past to build additional kiosks at private beaches and Rockingham Park. However, they have been unable to secure this grant.	Continue to explore other funding opportunities for building additional kiosks. One of the Town's local watershed

	Coordinate Kiosk Installation if Approved	Dept. of Public Works	Kiosk installed within one permit year upon receiving approval		groups may be able to provide assistance with the installation of a kiosk near one or more of the following bacteria-impaired waters: Arlington Mill Reservoir, Captain's Pond, Hedgehog Pond, and/or Millville Pond.
--	--	--------------------------	---	--	--

## 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 – Permit Year 13</b> (if applicable)
2-1	Comply with State Public Notification Guidelines	Planning Board and other Town Departments	Post notices on all applicable meetings	The Town continued to comply with the required state meeting notification guidelines.	Continued compliance with the required state meeting notification guidelines.
2-2	Publicize and Maintain Public Complaint Hotline and DPW Website	Dept. of Public Works	Maintain hotline and continue to respond to complaints from website	During Permit Year 12, the Town continued to maintain a hotline on their website to respond to public work order requests. Work order requests go directly to DPW. The Town logs and tracks all work order requests. In 2014, the Town responded to 807 work orders.	Continue to maintain a hotline on the Town website to respond to public work order requests. Continue to log and track all work order requests.
2-3	Hold Annual Household Hazardous Waste Day	Dept. of Public Works	Household hazardous waste collection day held each year. Amount of household hazardous waste collected.	The Annual Household Hazardous Waste Collection Day was held on Saturday, September 6 <sup>th</sup> , 2014. Hazardous household waste consisting of aerosols, fire extinguishers, flammable liquids, paint related material, flammable solids, oxidizing liquids, organic peroxide, solid and liquid pesticides, corrosive liquids, mercury, antifreeze, batteries, and light bulbs was collected.	The Annual Household Hazardous Waste Collection Day is scheduled for Saturday, September 12 <sup>th</sup> , 2015.
2-4	Continue Mandatory Recycling Program	Dept. of Public Works	Continue existing recycling program throughout permit term.	The recycling program was maintained throughout Permit Year 12. Approximately 2,108 tons of recyclables were collected in 2014.	Continue existing recycling program.
2-5	Schedule Annual Town Roadside Litter Clean-up Day	Dept. of Public Works	Schedule clean-up day annually. Amount of roadside litter collected and properly disposed	The Town held their Annual Roadside Litter Clean-up from April 13 <sup>th</sup> through April 17 <sup>th</sup> , 2015. The clean-up covered 53 roadways and approximately 3.52 tons of trash was collected town-wide.	Continue to hold an Annual Roadside Litter Clean-up event in March/ April 2016.

### 2a. Additions

2-6	Hold Public Outreach Event Regarding Bacterial Source Tracking	Engineering Dept.	Hold one public outreach event in conjunction with the Senior Center.	A public demonstration was held at the Ingram Senior Center on October 29, 2014 to show how canine detection can be utilized to identify sources of bacteria in the storm drain system.	<b>BMP Completed.</b>
-----	--	-------------------	---	---	-----------------------

### 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 – Permit Year 13</b> (if applicable)
3-1	Continue inspection of new/updated sewer connections	Dept. of Public Works	Continue inspection of all new/updated sewer connections. Number of sewer connections inspected.	The Town inspected 41 new/updated sewer connections during Permit Year 12.	Continue inspection of new/updated sewer connections.
3-2	Identify Priority Areas	Dept. of Public Works	Priority Areas identified by May 1, 2004	<b>BMP Completed.</b>	<b>BMP Completed.</b>
3-3	Map Outfalls/Receiving Waters	Dept. of Public Works	Map completed by May 1, 2007	The Town-wide mapping of outfalls, drain manholes, and catch basins in GIS is complete. This work was originally completed as part of the Town's Stormwater Inventory and Assessment Project. Some updates to the map were made during Permit Year 12 to include new drainage structures resulting from new construction.	The Town will continue to keep their GIS drainage mapping up-to-date, mapping new drainage structures in GIS as a result of new construction. The Town is also working to add unique identifiers to all outfalls and to delineate all drainage catchments.
3-4	Complete Dry Weather Screening of Outfalls	Dept. of Public Works	One round of outfall screening completed by end of permit term	<b>BMP Completed.</b> All outfalls were inspected as part of the Stormwater Inventory and Assessment Project. Screening was conducted in conjunction with GIS mapping of outfalls although EPA's definition of dry weather conditions may have not been met at all outfalls. Samples were collected at four locations where dry weather flow was observed as part of a pilot project to test the protocols and processes established as part of the Town's draft Standard Operating Procedures (SOP) for performing stormwater sampling.	<b>BMP Completed.</b> Under the new permit, the Town plans to complete additional dry weather screening of outfalls, which includes revisiting those outfalls where the dry weather criteria may not have been met on the day of inspection.
3-5	Stormwater Ordinance	Dept. of Public Works	Draft stormwater ordinance/amendment language by May 1, 2007	The Town's existing municipal code prohibits illicit discharges to the storm drain system and outlines procedures and penalties for violations.	The Town is in the process of performing a comprehensive re-write of their existing municipal code. Under the new permit, the Town will amend their existing regulations as needed to meet the requirements of the new permit.
3-6	Develop and Implement System for Elimination of Illicit Discharges	Dept. of Public Works	Based on prioritized results in BMP#3-4, determine procedures to identify and remove illicit connections to drain; maintain records.	The Town developed a draft written protocol for identifying and removing illicit connections as part of their Stormwater Inventory and Assessment Project.	Under the new permit, the Town plans to finalize the written protocol they developed for identifying and removing illicit connections.

### 3a. Additions

3-7	Assess Water Quality at Bacteria Impaired Waters & Conduct a Shoreline Survey to Identify Potential Sources of Contamination	Engineering Dept.	Conduct preliminary assessment at Arlington Mill Reservoir, Captain's Pond, Hedgehog Pond, and Millville Pond	On October 28 <sup>th</sup> , and November 20 <sup>th</sup> and 21 <sup>st</sup> , 2014, water quality samples were collected from Arlington Mill Reservoir, Captain's Pond, Hedgehog Pond, and Millville Pond and storm drains tributary to these water bodies for bacteria analysis and for assessment of human wastewater using canine detection.	The Town intends to conduct additional bacteria source tracking investigations through additional sampling and canine detection in Permit Year 13. Information collected will also be utilized in prioritizing catchments for future illicit discharge detection and elimination work under the new MS4 permit.
-----	--	-------------------	---	--	---



#### 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 – Permit Year 13 (if applicable)</b>
4-1	Continue to Implement Land Use Control Regulations which Require Erosion and Sediment Control at Construction Sites	Engineering Department	Continue to enforce regulations throughout permit term. Number of proposed development plans reviewed each year.	The Town's Land Use Control regulations which require sediment and erosion control at construction sites were enforced during Permit Year 12.  In 2014, proposed subdivision and site development plans were submitted for review a total of 183 times. Both initial plan reviews and review of subsequent plan revisions are tracked and included in this total.	Continue to implement Land Use Control Regulations which require erosion and sediment control at construction sites. Under the new permit expected later this year, the Town will amend their existing regulations as needed to meet the requirements of the new permit.
4-2	Maintain Procedures for Site and Subdivision Plan Review	Engineering Department	Continue to enforce regulations throughout permit term. Number of site and subdivision plans reviewed each year.	The Town has procedures in place for certain departments and/or boards to perform site and subdivision plan reviews. Water quality impacts are assessed as part of these reviews. These procedures were enforced during Permit Year 12.  In 2014, proposed subdivision and site development plans were submitted for review a total of 183 times. Both initial plan reviews and review of subsequent plan revisions are tracked and included in this total.	Continue to maintain procedures for site and subdivision plan review. Under the new permit expected later this year, the Town will amend their existing regulations as needed to meet the requirements of the new permit.
4-3	Maintain Procedure for Collecting and Responding to Public Comments	Dept. of Public Works	Maintain hotline and continue to respond to complaints from website.	The Town maintained the hotline and continued to respond to public work order requests received via the Town website. These requests now go directly to DPW. All work order requests were logged and tracked.	Continue to maintain the hotline and respond to public work order requests received via the Town website. Continue to log and track all work order requests.
4-4	Maintain Construction Site Inspections for Erosion Control	Engineering Department	Maintain existing procedure throughout permit term. All construction sites inspected each Permit Year.	In accordance with their Land Use Control Regulations, the Town follows the required procedures for inspection of construction sites, which includes enforcing the use of erosion control measures. The Town completed inspections as required for all construction sites in 2014/2015.	Continue to maintain construction site inspections for erosion control.
4-5	Amend Land Use Control Regulations to include Construction Material Management	Engineering Department	Draft Amendment to regulations by May 1, 2005. Implement upon approval.	<b>BMP Completed.</b>	<b>BMP Completed.</b>

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

<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 – Permit Year 13 (if applicable)</b>
5-1	Maintain Land Use Control Regulations which Require Post-Construction Runoff Control for Construction Sites	Dept. of Public Works, Engineering Dept. & Planning Board	Continue to enforce regulations throughout permit term. Number of proposed development plans reviewed each year.	The Town's existing Land Use Control Regulations establish criteria for stormwater runoff in new developments. The Town continued to follow their existing policies during Permit Year 12.  In 2014, proposed subdivision and site development plans were submitted for review a total of 183 times. Both initial plan reviews and review of subsequent plan revisions are tracked and included in this total.	Continue to maintain Land Use Control Regulations which require post-construction runoff control for construction sites.
5-2	Amend Land Use Control Regulations to Require Developers to Submit O&M Plans for Private Structural BMPs	Dept. of Public Works, Engineering Dept. & Planning Board	Draft Amendment to regulations by May 1, 2005. Implement upon approval.	The Town developed a draft amendment to their existing Land Use Control Regulations, which would require developers to submit operation & maintenance plans for the long-term maintenance of any private BMPs for stormwater runoff control. During Year 10, the draft ordinance was updated and presented to the Planning Board for discussion/consideration on Feb 19, 2013, but was not adopted. As of Year 12, the Town is working on further revisions and updates in the hopes of obtaining Planning Board Approval. O&M notes for individual BMPs are still added to plan sets and O&M Manuals are required by the NHDES as part of the Alteration of Terrain Rules.	Under the new permit expected later this year, the Town will amend their existing regulations as needed to meet the requirements of the new permit.
5-3	Land Use Control Regulations Recommend a Structural BMP Manual for Use by Developers	Dept. of Public Works, Engineering Dept. & Planning Board	Maintain reference to BMP Manual throughout Permit Term.	The Town's Land Use Control regulations reference the "Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire" for use by developers. The reference to this Structural BMP Manual was maintained throughout Permit Year 12.	Maintain reference to Structural BMP Manual. Under the new permit expected later this year, the Town will amend their existing regulations as needed to meet the requirements of the new permit.

## 6. Pollution Prevention and Good Housekeeping in Municipal Operations

<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 – Permit Year 13 (if applicable)</b>
6-1	Continue Street Sweeping and Residual Disposal Practices	Dept. of Public Works	Sweep all streets in Town at least once per year	All streets were swept once. All residuals were disposed of at the Shannon Road landfill where they were monitored and tested.	Continue existing street sweeping and residual disposal practices.
6-2	Continue Catch Basin Cleaning and Residual Disposal Practices	Dept. of Public Works	Clean 33% of catch basins in Town each year. All CBs inspected and/or cleaned on a three rotating schedule.	The Town has 4,234 catch basins and approximately 313 basins were cleaned over the past year. In addition, there were another 60 catch basins that were cleaned while they were being repaired. The Town generally cleans 1/3 of their catch basins each year using Town forces or outside contractors if budget is available. All residuals are disposed of at the Shannon Road landfill where they are monitored and tested.	Continue existing catch basin and residual disposal practices. The Town has recently hired an outside contractor to complete catch basin cleaning and anticipates cleaning of all catch basins in Permit Year 13.
6-3	Continue Salting and Snow Removal Practices	Dept. of Public Works	Continue existing practices throughout Permit Term	The Town had been trying to secure state approval and funding of their “Scope and Plan” for Salt Mitigation, which includes construction of a sand/salt storage shed and the purchase of new equipment. (Currently, five of the fifteen salt trucks that the Town has are equipped with ground control spreaders.) The Town has had various meetings with the state in the last few years, and it does not look like the Town will be receiving any funding for this project from the state.	Since the Town is unable to secure state funding of the “Scope and Plan” for Salt Mitigation, which includes construction of a sand/salt storage shed, the Town is trying to budget to complete this work themselves at some point in the future, although no immediate plans exist.  The Town may receive assistance from the state in purchasing two additional trucks with ground control spreaders. The Town expects to receive these trucks later this year/early next year.
6-4	Continue Vehicle Maintenance Practices	Dept. of Public Works	Continue existing practices throughout Permit Term	Municipal vehicle maintenance is performed within the DPW garage. Practices include reducing the amount of solvents/chemicals used through recycle/reuse, using alternative products whenever possible, and having absorbing compounds available for employee use in the event of a spill.	Continue to follow existing vehicle maintenance practices.

6-5	Continue Vehicle Washing Practices	Dept. of Public Works	Continue existing practices throughout Permit Term	<p>Municipal DPW vehicles are currently washed over a leaching basin. The vehicles are washed with water only or biodegradable soap.</p> <p>The Town had been trying to secure state approval and funding of their “Scope and Plan” to construct a new truck wash down area. They have had various meetings with the state, and it does not look like the Town will receive any funding for this project from the state.</p>	Since the Town is unable to secure state funding of the “Scope and Plan” to construct a new truck wash down area, plans to construct a regional truck wash down facility in the future have been discussed, although no immediate plans exist.
6-6	Continue Maintenance Activities at Parks & Open Space	Dept. of Public Works	Continue existing practices throughout Permit Term	The Town uses organic fertilizers and does not employ the use of any pesticides.	Continue to use organic fertilizers when performing maintenance activities within parks and open space.
6-7	Continue Hazardous Waste Storage and Employee Training	Dept. of Public Works	Continue existing practices throughout Permit Term	The Town’s practices include proper storage of hazardous materials, and the Fire Department has a spill prevention and response plan. The DPW recently upgraded their storage cabinets, putting in non-flammable cabinets, to hold hazardous materials. They also recycle waste oil and meet oil storage requirements. From time to time, the Fire Dept. also completes hazardous materials management training for other departments.	Continue to follow the Town’s existing practices including proper storage of hazardous materials, and implementation of the spill prevention and response plan at the Fire Dept.
6-8	Develop/Implement Employee Education Program	Dept. of Public Works	4 hours of stormwater related training during permit term for each appropriate employee	In Year 12, on May 28, 2014, seven employees attended a Culvert Maintainer Certification Training Class on the maintenance and replacement of culverts that was held by NH DES.	The Town is in the process of developing a Stormwater Pollution Prevention Plan for their DPW Facility. The Town will be conducting training for DPW Staff on the Stormwater Pollution Prevention Plan and good housekeeping practices during Permit Year 13. The Town will also continue to explore other opportunities to provide stormwater related training to their employees.

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

*There are currently four approved TMDLs which apply to Salem:*

*One is for Policy-Porcupine Brook, which is impaired for chloride. Identified sources of chloride to Policy-Porcupine Brook include water softeners (2%), food waste (1%), atmospheric deposition (1%), state roads (9%), municipal roads (27%), private roads (3%), parking lots (50%), and salt piles (7%).*

*Another is the New Hampshire Statewide Bacteria (387 segments) TMDL, which includes 387 bacteria-impaired waters on NH's 2008 303(d) list. In Salem, these waters include Captain's Beach and Camp Otter Swim Area at Captains Pond, where the impairment is for e-coli.*

*The third one is the Bacteria-Impaired Waters (58 segments) TMDL, which includes 58 bacteria-impaired waters on NH's 2010 303(d) list. In Salem, these waters include the Arlington Mill Reservoir and Millville Lake. Again, the impairment is for e-coli.*

*The last one is the 44 Bacteria-Impaired Waters TMDL, which includes 44 bacteria-impaired waters on NH's 2012 303(d) list. In Salem, these waters include the Arlington Mill Reservoir – Arlington Pond Improvement Assoc. and Salem Town Beach – Hedgehog Pond. Again, the impairment is for e-coli.*

*Many of the BMPs that the Town is currently implementing as part of their Stormwater Management Program meet these approved TMDLs. These include BMP #1-2, 1-3, 2-2, 2-6, 3-1, 3-4, 3-5, 3-6, 3-7, 6-1, 6-2 and 6-3. In addition, the Town has also implemented the following BMPs which are aimed at meeting the TMDL Waste Load Allocations:*

<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 – Permit Year 13 (if applicable)</b>
7-1	Involve Watershed Groups: Arlington Pond Protective Assn., Millville Lake Protective Assn., Captain's Pond Protective Assn.,	Local Groups & Dept. of Public Works & Engineering	Continue to hold regular meetings and disseminate information to the public	During Permit Year 12, the Arlington Pond Protective Assn., the Millville Lake Protective Assn., and the Arlington Park Improvement Assn. remained active in improving the water quality of the Arlington Mill Reservoir and Millville Lake. The Millville Lake Protective Association continues to provide information on their website on how to improve lake water quality by reducing sources of phosphorus, bacteria and sediment. They also held an annual clean-up day on May 4, 2014. The Arlington Park Improvement Association held a beach clean-up day on May 17, 2014. The Arlington Pond Protective Association held an island clean-up on July 13, 2014. They also posted information on their website regarding the work the Town recently completed using canines to screen for bacteria along Arlington Pond.	These local protective associations will continue to remain active in educating the public and improving water quality.
Revised	Added Arlington Park Improvement Assn.				

## 7a. Additions

7-2	Assess Water Quality at Water Bodies with Bacteria Impairments & Conduct a Shoreline Survey to Identify Potential Sources of Contamination	Engineering Dept.	Conduct preliminary assessment at Arlington Mill Reservoir, Captain's Pond, Hedgehog Pond, and Millville Pond	On October 28 <sup>th</sup> , and November 20 <sup>th</sup> and 21 <sup>st</sup> , 2014, water quality samples were collected from Arlington Mill Reservoir, Captain's Pond, Hedgehog Pond, and Millville Pond and storm drains tributary to these water bodies for bacteria analysis and for assessment of human wastewater using canine detection.	The Town intends to conduct additional bacteria source tracking investigations through additional sampling and canine detection in Permit Year 13. Information collected will also be utilized in prioritizing catchments for future illicit discharge detection and elimination work under the new MS4 permit.
7-3	Prohibit Use of Calcium Chloride for Dust Control on Town Road Construction Projects Within the Policy/Porcupine Brook Watershed	Dept. of Public Works & Engineering	Continue to Prohibit Use of Calcium Chloride for Dust Control on Town Road Construction Projects Within the Policy/Porcupine Brook Watershed	Use of calcium chloride was prohibited within the watershed for Policy/Porcupine Brook on Town road construction projects as a dust control measure. Only water is allowed to be used.	Continue to Prohibit Use of Calcium Chloride for Dust Control on Town Road Construction Projects Within the Policy/Porcupine Brook Watershed

## 7b. WLA Assessment

The Waste Load Allocations for Policy-Porcupine Brook, as included in the Final TMDL and as they relate to Salem, are as follows:

Source	FY07 Salt Imports (tons salt/yr)	Allocation of Loads (tons salt/yr)
Municipal Roads	1,247.9	997.9
Private Roads	119.6	95.6
Parking Lots	2,379.1	1,902.5
Salt Piles	315.2	0.0

The Waste Load Reductions for Bacteria Impaired Waters, as included in the Final TMDL and as they relate to Salem, are as follows:

Waterbody	% Reduction in E. coli to meet TMDL	
	Geometric Mean	Single Sample
Captain Pond – Captain's Beach	complies	1%
Captain Pond – Camp Otter Swim Area Beach	51%	No data
Arlington Mill Reservoir – Second St. Beach	complies	65%
Millville Lake – Town Beach	25%	63%

Arlington Mill Reservoir – Arlington Pond Improvement Assoc.	56%	78%
Salem Town Beach – Hedgehog Pond	76%	78%

The Town is making progress in meeting the Waste Load Allocations and Waste Load Reductions identified above through implementation of existing BMPs identified herein.

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

*The only additional information that has been collected outside of what was listed in Part III above includes sampling at pipes outlets and treatment swale discharge points that collect stormwater runoff from the Shannon Road landfill. Samples are collected quarterly at up to 10 locations during major rain events. Samples are analyzed for TSS.*

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

(Since beginning of permit coverage unless specified otherwise by a \*\*, which indicates response is for period covering April 1, 2014 through March 31, 2015)

##### Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed	(y/n)	<b>N</b>
Annual program budget/expenditures **	(\$)	
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		<b>General Fund</b>

##### Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	<b>N</b>
Stream teams established or supported	(# or y/n)	
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	<b>1</b>
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	

## Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with “X”)					
▪ Illicit Discharge Detection & Elimination					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					
Accompanying Regulation Status (indicate with “X”)					
▪ Illicit Discharge Detection & Elimination					
▪ Erosion & Sediment Control					
▪ Post-Development Stormwater Management					

## Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	<b>98%</b>
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	<b>98%</b>
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	<b>98%</b>
Outfalls inspected/screened **	(# or %)	<b>98%</b>
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(# ); and (est. gpd)	
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	<b>40%</b>
% of population on septic systems	(%)	<b>60%</b>

## Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	



Site inspections completed **	(# or %)	
Tickets/Stop work orders issued **	(# or %)	
Fines collected **	(# and \$)	
Complaints/concerns received from public **	(#)	

### Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	
Site inspections (for proper BMP installation & operation) completed **	(# or %)	
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	
Low-impact development (LID) practices permitted and encouraged	(y/n)	

### Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	< 1/yr
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	< 1/yr
Qty of structures cleaned **	(#)	
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	landfill

Basin Cleaning Costs		
Annual budget/expenditure (labor & equipment)**	(\$)	
Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
Disposal cost**	(\$)	
Cleaning Equipment		
Clam shell truck(s) owned/leased	(#)	
Vacuum truck(s) owned/leased	(#)	

Vacuum trucks specified in contracts	(y/n)	
% Structures cleaned with clam shells **	(%)	
% Structures cleaned with vactor **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	<b>1/yr</b>
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	<b>landfill</b>
Annual Sweeping Costs		
Annual budget/expenditure (labor & equipment)**	(\$)	
Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
Disposal cost**	(\$)	
Sweeping Equipment		
Rotary brush street sweepers owned/leased	(#)	
Vacuum street sweepers owned/leased	(#)	
Vacuum street sweepers specified in contracts	(y/n)	
% Roads swept with rotary brush sweepers **	%	
% Roads swept with vacuum sweepers **	%	

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	
▪ Herbicides	(lbs. or %)	
▪ Pesticides	(lbs. or %)	<b>100%</b>
Integrated Pest Management (IPM) Practices Implemented	(y/n)	

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used **  (also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	% NaCl % CaCl <sub>2</sub> % MgCl <sub>2</sub> % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	<b>33% of spreaders</b>
Zero-velocity spreaders used **	(y/n or %)	
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/lb mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/lb mi. or %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	
Storage shed(s) in design or under construction	(y/n or #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	

### Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	
Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	