

Municipality/Organization: City of Salem, Massachusetts

EPA NPDES Permit Number: MA041219

MassDEP Transmittal Number: W-040844

Annual Report Number & Reporting Period: Year 6
April 1, 2008 – March 31, 2009

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2009)

Part I. General Information

Contact Person: Jason Silva **Title:** Chief Administrative Aide

Telephone #: (978) 745-9595 ext. 5603 **Email:** jsilva@Salem.com

Mailing Address: Office of Mayor Kimberley Driscoll, 93 Washington Street, Salem, MA 01970

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: Kimberley Driscoll

Title: Mayor

Date: 4/27/09

Part II. Self-Assessment

As of the end of Year 6, the City 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 City and Salem Sound Coastwatch. The City is still in progress implementing some BMPs:

- Illicit discharge detection activities are ongoing (BMP 13 and 14), and these investigations have resulted in the disconnection of numerous illicit connections and other sources of pollution. To date, the City has focused efforts on priority areas as identified in their IDDE Plan but plans to investigate additional outfalls when budget and staff resources become available.
- While the City currently reviews construction site runoff (BMP 17) and post-construction stormwater management (BMP 19) practices for most development and redevelopment projects, the City plans to continue efforts to implement a new Ordinance that will formalize current expectations and, at a minimum, expand jurisdiction to all projects that disturb one acre or greater. The draft Ordinance was completed as a result of interdepartmental meetings held during this permit year, and it is now going through the review and approval process.

Planned activities for the next permit term have not been designated unless a BMP under this permit term was not completed or is still in progress for completion. Once the General Permit for the next five years is available from EPA, the City will prepare and submit a Notice of Intent to MassDEP and EPA for compliance with the new General Permit.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
1	Website	Dept. of Public Services through the efforts of Salem Sound Coastwatch (SSCW)	Maintain and update website (provided funding is available).	SSCW website was maintained and updated with volunteering opportunities and results of water quality monitoring in Salem.	Measurable goals for 2003 General Permit have been met.
Revised					
2	Informational brochures	Dept. of Public Services (through the efforts of SSCW)	Provide and maintain brochures at SSCW office. Distribute brochures at public events (provided funding is available).	Provided and maintained brochures at SSCW office and distributed brochures at public events during Permit Year 6. Brochures are also made available at the City offices on the 4 th floor at 120 Washington Street.	Measurable goals for 2003 General Permit have been met.
Revised					
3	Newsletter	Dept. of Public Services (through the efforts of SSCW)	Provide and maintain newsletters at SSCW office. Mail newsletters to dues paying SSCW members and others on a quarterly basis (provided funding is available).	Discontinued <i>Salem Sound Monitor</i> . Instead, sent out monthly e-newsletter, available at http://www.salemsound.org/newsletters.htm	Measurable goals for 2003 General Permit have been met.
Revised					

4	Public event displays	Dept. of Public Services (through the efforts of SSCW)	Post display annually at the Maritime Festival, and other public events if possible (provided funding is available).	SSCW, in conjunction with the Massachusetts Bays Estuary Association (MBEA), displayed 15-foot tall Stormy the Duck at the 3 rd Annual Swim n' Fin OceanFest on Saturday July 19, 2008 at Forest River Park. Stormy is the mascot for the <i>Think Again. Think Blue.</i> campaign	Measurable goals for 2003 General Permit have been met.
Revised					
5	Local newspaper articles	Dept. of Public Services (through the efforts of SSCW)	One article per year.	An Article was published by the Salem News on May 1, 2008 to announce SSCW's North River Awareness Week. An article titled What NOT to trash – Green Quick Fixes was published in the Salem News on September 24, 2008. This article discusses household hazardous waste and proper disposal of waste.	Measurable goals for 2003 General Permit have been met.
Revised					
6	Training of volunteers	Dept. of Public Services (through the efforts of SSCW)	Annually (provided funding is available).	The Clean Beaches and Streams Orientation and Training was conducted by SSCW staff in June 2008. Volunteers were trained to collect water quality samples every two weeks for the 2008 swimming season from June 19 through August 21 2008.	Measurable goals for 2003 General Permit have been met.
Revised					
7	Publish results of water quality monitoring	Dept. of Public Services (through the efforts of SSCW) and Board of Health	Year 1 – Publish upon receipt of results; Years 2 through 5 – Continue based on available funding.	Results of water quality monitoring performed during Permit Year 6 are published on SSCW's website (http://www.salemsound.org/clean_beaches.htm) Results of BOH beach water quality monitoring are published on the Massachusetts Department of Public Health – Bureau of Environmental Health website at: http://mass.digitalhealthdepartment.com/public_21/beaches.cfm?bID=12628&func=details	Measurable goals for 2003 General Permit have been met.
Revised					

31	North River Awareness Week	Dept. of Public Services (through the efforts of SSCW)	SSCW will sponsor the North River Awareness Week annually (provided funding is available) and discuss stormwater impacts on the river	<p>The 6th Annual SSCW North River Awareness Week was from May 4 through 10, 2008.</p> <p>On May 8, Barbara Warren gave a presentation titled “The Histories of the Great Rivers of Salem: Past and Present”</p> <p>On May 9, SSCW led the North River Awareness Walk and Talk along the banks of the river and presented key environmental issues.</p> <p>On May 10, SSCW held a Soaking up the Rain workshop, to discuss green roofs, rain gardens, and permeable paving stones.</p>	Measurable goals for 2003 General Permit have been met
----	----------------------------	--	---	---	--

32	Low Impact Development (LID) Outreach	Dept. of Public Services (through the efforts of SSCW)	Year 3 – SSCW Speakers Series will focus on LID Year 4 & 5 – Continue to promote LID techniques for stormwater management	<p>The City of Salem’s website contains a Water Conservation Brochure that offers water conservation tips, rain barrels at discounted prices and free water conservation devices to Salem Residents (www.salem.com).</p> <p>Advisory group met in May and June 2008 to review the 2005 draft Stormwater & LID Ordinance for modification (see BMPs 17 & 19).</p> <p>SSCW collaborated with Greenscapes to form a planning committee in January 2006 to set up workshops, contact landscapers, nurseries and garden centers, identify demonstration sites, and help with outreach to educate on the use of less pesticides and fertilizers and the affects of such chemicals on streams and other water bodies; focus is on stormwater quality. Salem has continued to renew membership. Workshops in Permit Year 6 included:</p> <ul style="list-style-type: none"> • <i>Soaking up the Rain</i>, on May 10, 2008. Topics included green roofs, rain gardens, and permeable paving stones. • <i>Lawn Care Basics and How to Phase out Chemicals</i> on May 13, 2008. Explained proper mowing techniques, how to select proper seed, how to control pests, when to water, and the basic steps to achieving a beautiful chemical free lawn that also conserves water and saves money; focus is on stormwater quality. • <i>Greenscapes 101 Presentation</i> on June 14, 2008. Presentation on how to greenscape, climate change, wind energy, and green remodeling. • <i>How Does your Garden (or Lawn!) Grown?</i> on March 28 2008. Information on composting, lawn care, building your soil, rain gardens, and how to use native plants to attract wildlife. 	Measurable goals for 2003 General Permit have been met
----	---------------------------------------	--	--	--	--

35	No Discharge Area Outreach	Dept. of Public Services (through the efforts of Salem Sound Working Group)	Year 4 – Use information from the 2005 survey to Improve Salem Sound Year 5 – Continue to promote Salem Sound Improvements	<p>The Salem Sound Working Group presented the Next Steps to a Salem Sound No Discharge Application (NDA) on January 18, 2007. SSCW submitted a Salem NDA application on behalf of the Sound Harbormasters and the five communities: Marblehead, Salem, Danvers, Beverly, and Manchester-by-the-Sea to MA Coastal Zone Management (CZM) and EPA Region 1. Public comments closed April 15, 2008.</p> <p>As of June 23, 2008, Salem Sound is a No Discharge Area (NDA). EPA Region 1 designated Salem Sound as an area where boaters with Marine Sanitation Device (MSD) type I & II no longer dump within 3 miles of shore. Information about what boaters need to know and a chart of NDA boundaries is available here: http://www.salemsound.org/SalemSoundNDAposter.pdf</p> <p>In addition, information is available on EPA’s website at http://www.epa.gov/region1/eco/nodiscrg/ma.html</p>	Measurable goals for 2003 General Permit have been met.
----	----------------------------	---	---	---	---

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
8 Revised	Water quality monitoring program	Dept. of Public Services (through the efforts of SSCW)	Annually (provided funding is available).	Under SSCW’s Clean Beaches and Streams Program, trained volunteers collected samples from prioritized sites and performed testing every two weeks during summer 2008. Results are available on the SSCW website: http://www.salemsound.org/clean_beaches.htm	Measurable goals for 2003 General Permit have been met.
9 Revised	Beach cleanup program	Dept. of public Services (through the efforts of SSCW)	Conduct once per year, each summer (provided funding is available).	Under SSCW’s Beach Buddies / COASTSWEEP Program, volunteers removed marine debris and trash from coastal recreation areas twice at the end of September 2008.	Measurable goals for 2003 General Permit have been met.
10 Revised	Storm drain stenciling	Dept. of Public Services (through the efforts of SSCW); Salem State College (through the efforts of MA Community Water Watch)	Evaluate once per year. Perform stenciling (provided funding is available).	The Saltonstall School and Salem Academy partnered with SSCW for a service learning project to promote environmental awareness in Salem. They performed storm drain stenciling in Spring 2008. Also, SSCW provided education on stormwater runoff to the students.	Measurable goals for 2003 General Permit have been met.

30	Coastal Habitat Invasive Monitoring Program	Dept. of Public Services (through the efforts of SSCW)	Annually (provided funding is available).	Under SSCW's Coastal Habitat Invasive Monitoring Program, trained volunteers collected information on location and amount of invasive species. In December 2007, SSCW placed a settlement plate at a dock in Salem. Every three months the plate is pulled and examined for fouling organisms that have colonized the plates. More information is available on the SSCW website at: http://www.salemsound.org/chimp.htm	Measurable goals for 2003 General Permit have been met.
Revised					
33	North River Clean-up	Dept. of Public Services (through the efforts of SSCW)	Year 3 – Remove trash and other debris from the river and banks.	The 6 th Annual SSCW North River Awareness Week was from May 4 through 10, 2008. On May 9, SSCW held a <i>North River Awareness Walk and Talk</i> .	Measurable goals for 2003 General Permit have been met.
37	South River Drainage Improvement Project	City of Salem	Year 4 – Collect information regarding the South River Basin.	Began implementation of several short-term measures for the Phase I South River Drainage Improvement Project.	The initial goal for public participation was met in Year 4. The City plans to keep the public informed regarding project activities.
Revised			<i>Year 6 – No additional public participation goals this year</i> <i>Moved next phase of this BMP to Good Housekeeping Section as BMP 38</i>		

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
11	Develop GIS database of the drainage system	Dept. of Public Services	Pending EOEAs funding approval, begin digital mapping	All outfalls are located in GIS or on paper/Mylar maps. City GPS located 80% of their drainage structures from 2002 to 2003 and developed a GIS map. The City has paper/Mylar drainage maps in areas not included on the GIS map. City uses GIS as a tool to identify and track flooding problems.	Measurable goals for 2003 General Permit have been met. Continuing to GPS locate stormwater structures and approaching 100% completion.
Revised					
12	Salem Sound Shoreline Survey (Project No. 2002–01/604)	Health Dept.	Obtain copies of the quarterly progress reports, as well as other information pertinent to Salem	There were no activities planned for Permit Year 6.	Measurable goals for 2003 General Permit have been met.
Revised					
13	Visually inspect outfalls for dry weather flows	Dept. of Public Services (through the efforts of SSCW)	Inspect a representative number of outfalls annually (provided funding is available).	In June 2008, developed proactive IDDE Plan to locate illicit discharges to the MS4, including sampling procedures, and provided standard methods to remove/correct sources of illicit discharges. Formalized documentation actions. Begin to implement plan in priority areas. Inspected and sampled the drainage system near South River outlet, Derby Warf, and North River.	Measurable goals for 2003 General Permit have been met. Additional inspections and sampling in priority areas planned to begin in May 2009.
Revised					
14	Conduct water quality sampling at stormwater outfalls.	Dept. of Public Services (through the efforts of SSCW)	Year 1 – Publish results of sampling. Years 2 through 5 – Perform additional sampling (provided funding is available).	SSCW performed sampling every two weeks at various outfalls during the 2008 swimming season (April through the end of August). Results are published on SSCW’s website and attached (http://www.salemsound.org/clean_beaches.htm). Inspected and sampled the drainage system near South River outlet, Derby Warf, and North River. Illicit connections were located and eliminated in the South River drainage area and Derby Warf drainage area.	Measurable goals for 2003 General Permit have been met. Additional inspections and dry weather sampling in priority areas planned to begin in May 2009.
Revised					

15	Conduct water quality sampling at beaches	Health Dept.	Perform weekly beach sampling during summer months in accordance with DEP criteria	Weekly beach sampling was performed at 15 locations during the period from June 19 to Aug 21, 2008. Results are published on the MA Department of Public Health (DPH) website.	Measurable goals for 2003 General Permit have been met.
Revised					
16	Develop Stormwater Ordinance	Dept. of Public Services	Year 1 – Review existing bylaws & regulations; Year 2 – Propose changes; Year 3 – Implement changes, subject to City approval	No further action is necessary to fulfill the requirements of the General Permit under this BMP.	Measurable goals for 2003 General Permit have been met.
Revised					
29	Perform study to identify contamination sources(s)	Dept. of Public Services	Year 1 – Submit grant application to CZM; Year 2 – Initiate study (provide funding is available). Year 3 to 5 – Implement Recommendations	Continued to monitor the effectiveness of the Juniper Beach outfall tide gate and improved trash collection at Willows Park through beach and outfall water quality monitoring. Juniper Beach sampling showed much improvement in water quality from 2005, following installation of the tide gate, to 2007. Willows Park has also showed improvement. The City has a total of 9 solar trash bins that are placed around the City, including Willows Park. City submitted grant proposal to implement BMPs at Willows Park/Winter Island, but was not awarded funding.	Measurable goals for 2003 General Permit have been met.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
17	Develop an ordinance requiring developers to prepare an Erosion & Sediment Control Plan for all sites disturbing one acre or greater	Dept. of Public Services; Planning Board; Conservation Commission	Year 1 – Review existing bylaws and regulations. Year 3 – Develop Ordinance. Year 4&5 - Implement changes, subject to City approval	Advisory Group met to review and modify the 2005 draft Stormwater & LID Ordinance based on changes in the Massachusetts Stormwater Management Policy, evolving BMPs, and applicability to the City’s current needs. Advisory Group meetings were held in May and June 2008.	Although the City currently reviews construction site runoff controls for most projects, the City will continue efforts to implement the new Ordinance to formalize current expectations and, at a minimum, expand jurisdiction to all projects that disturb one acre or greater.
Revised				Draft ordinance was completed and is going through review and approval process. Draft was sent to the Legal Department, Planning Board, and Conservation Commission for review. Review will continue through 2009.	
18	Periodically check erosion control measures and construction material management on site inspections	Dept. of Public Services; Planning Board, Conservation commission	Monitor and track violations	Continued to monitor sites and inspect erosion control measures and construction material management as part of regular City inspections.	Measurable goals for 2003 General Permit have been met.
Revised					

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

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
19	Develop an ordinance requiring stormwater controls for all new and redevelopment projects disturbing one acre or greater	Dept. of Public Services; Planning Board; Conservation Commission	Year 1 – Review existing bylaws & regulations; Year 2 – Propose changes; Year 3 – Develop Ordinance. Year 4&5 - Implement changes, subject to City approval	Advisory Group met to review and modify the 2005 draft Stormwater & LID Ordinance based on changes in the Massachusetts Stormwater Management Policy, evolving BMPs, and applicability to the City’s current needs. Advisory Group meetings were held in May and June 2008. Draft ordinance was completed and is going through review and approval process. Draft was sent to the Legal Department, Planning Board, and Conservation Commission for review. Review will continue through 2009.	Although the City currently reviews stormwater management practices for most projects, the City will continue efforts to implement the new Ordinance to formalize current design expectations and, at a minimum, expand jurisdiction to all projects that disturb one acre or greater.
Revised					

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 6 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
20	Street Sweeping	Dept. of Public Services	Sweep streets between April & November (provided funding is available)	In April and May 2008, swept all streets. In November 2009, swept major routes. Purchased new vactor truck in 2008.	Measurable goals for 2003 General Permit have been met.
Revised					
21	Clean Sweep Program	Dept. of Public Services	Conduct sidewalk cleanup program each year for 1 week in May (provided funding is available).	Completed annual sweeping program.	Measurable goals for 2003 General Permit have been met.
Revised					
22	Catch basin cleaning	Dept. of Public Services	Inspect problem areas annually, and clean as needed (provided funding is available)	Completed inspection of problem areas and performed catch basin cleaning as needed. Replaced and restored approximately 50 catch basins and storm drains this past year, including frames, covers, and sumps. Cleaned approximately 2,400 of City's 3,000 catch basins. Focused on downtown/harbor areas.	Measurable goals for 2003 General Permit have been met.
Revised					
23	Trash collection program	Health Dept.; Dept. of Public Services; Parks & Recreation	Weekly curbside pickup (provided funding is available).	Completed weekly curbside trash collection program.	Measurable goals for 2003 General Permit have been met.
Revised					
24	Recycling Program	Dept. of Public Services	Bi-weekly curbside pickup (provided funding is available).	Completed bi-weekly curbside recycling program.	Measurable goals for 2003 General Permit have been met.
Revised					

25	Yard Waste Program	Dept. of Public Services	Curbside pickup 6 times per year (provided funding is available). Allow residents to drop off yard waste at City's transfer station year round.	Completed yard waste collection program.	Measurable goals for 2003 General Permit have been met.
Revised					
26	Household hazardous waste program	Health Dept.	Hold twice over the 5-year permit term (provided funding is available).	Household hazardous waste program was not planned to be held this year. Household hazardous waste program was held twice over the 5-year permit term in June 2004 and October 2007.	Measurable goals for 2003 General Permit have been met.
Revised					
27	Animal Control Program	Police Dept. Animal control Officer	Track the number of animals collected (provided funding is available).	Completed tracking the number of animals collected.	Measurable goals for 2003 General Permit have been met.
Revised					
28	Beach Cleanup Program	Parks & Recreation	Clean Beaches every week between May and September (provided funding is available).	Beaches were cleaned several times during the spring and summer of 2008.	Measurable goals for 2003 General Permit have been met.
Revised					
34	Appliance Sticker Program for Curbside Pickup	Dept. of Public Services	Conduct curbside pickup of appliances twice per month (provided funding is available).	Salem's recycling and trash pickup policy changed, but residents continue to be able to purchase stickers for curbside collection of computer monitors, TVs, light ballasts and freon-based appliances such as air conditioners, dehumidifiers, and refrigerators. Items are collected on the second and fourth Saturday of each month.	Measurable goals for 2003 General Permit have been met.

38	South River Drainage Improvement Project	City of Salem	Year 5 – Begin implementation of the short-term measures for the Phase I South River Drainage Improvement Project (if funding is available)	Began implementation of several short-term measures for the Phase I South River Drainage Improvement Project outlined in the April 9, 2007 report, including the Condition Assessment of the South River Conduit (Salem Harbor to Salem State College). The project will involve an initial inspection, sediment sampling and analysis for disposal, cleaning and inspection of the conduit, and illicit discharge inspection/sampling.	Project is ongoing. Measurable goals for 2003 General Permit have been met.
Revised					
39	Public Works Facility Environmental Compliance Assessment, Stormwater Pollution Prevention Plan (SWPPP), and Training	City of Salem	Year 5 – Conduct public works assessment, prepare SWPPP, and provide staff training	Conducted DPW Facility assessment in April 2008. SWPPP prepared in June 2008. Implemented some recommendations in SWPPP, and will continue to do more as funding allows. Seeking funding for implementation of other SWPPP recommendations. Provided 2-hour staff training on June 10, 2008.	Measurable goals for 2003 General Permit have been met.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) Not Applicable - None of Salem’s receiving waters have approved TMDL reports at this time. A Draft Pathogen TMDL Report was developed for the North Coastal Watersheds. This TMDL is not final.

Part IV. Summary of Information Collected and Analyzed

- Salem Sound Coastwatch’s Clean Beaches and Streams sampling results (BMP#14) are available at their website. No summary report was prepared for the 2008 swimming season. http://www.salemsound.org/clean_beaches.htm
- City of Salem Board of Health (BMP #15) maintains records of sampling results and beach closings.
- Results of illicit discharge investigations conducted by the Engineering Department and MassDEP, and subsequent work to correct the identified illicit discharges, is available at the Engineering Office at 120 Washington Street.