

Municipality/Organization: City of Salem, Massachusetts

EPA NPDES Permit Number: MA041219

MassDEP Transmittal Number: W-040844

**Annual Report Number
& Reporting Period:** No. 4: April 1, 2006 – March 31, 2007

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2007)

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: Kimberley Driscoll

Title: Mayor

Date: _____

Part II. Self-Assessment

The City of Salem, Massachusetts has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions. At this time, all of the BMPs selected in the 2003 Notice of Intent continue to be appropriate. City does not wish to subtract or replace any of the BMPs. There are some additional BMPs reported for Permit Year 4 to reflect unplanned stormwater activities by the City and Salem Sound Coastwatch.

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
1	Website	Dept. of Public Services (through the efforts of Salem Sound Coastwatch (SSCW))	Maintain and update website (provided funding is available).	Maintained an updated SSCW website with volunteering opportunities and results of water quality monitoring in the Salem	Continue to maintain and update website (provided funding is available).
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 including the SSCW Annual Meeting held on November 16, 2006. Brochures are also made available at the City offices on the 4 th floor at 120 Washington Street.	Continue to provide and maintain brochures at SSCW office and to distribute brochures at public events (provided funding is available).
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).	Provided and maintained newsletter, <i>Salem Sound Monitor</i> , which is distributed quarterly.	Continue to provide and maintain newsletter at SSCW office and to distribute newsletter (provided funding is available).
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 Swim n' Fin Festival on July 22, 2006 at Forest River Park. Stormy is the mascot for the <i>Think Again. Think Blue.</i> campaign	Continue to post display annually at the Maritime Festival and/or other public events, if possible (provided funding is available).
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 November 1, 2006 which heralded the installation of a 'duck bill' shaped rubber tide gate. This 'duck bill' covers the drain pipe at Juniper Beach and prevents seawater from washing back into the pipe at high tide. The result has been a dramatic drop in bacteria counts.	Continue to write one newspaper article or press release related to Salem's stormwater program (provided funding is available).
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 on May 24, 2006. Volunteers were trained to collect water quality samples throughout the 2006 swimming season.	Continue annual training of volunteers (provided funding is available).
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 4 are published on SSCW's website (www.salemsound.org). Results of BOH beach water quality monitoring are published on the MA DPH website.	Continue to publish results (provided funding is available for sampling).
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 4th Annual SSCW North River Awareness Week was from May 4 through 11, 2006.</p> <p>On May 4, North River and Peabody Brooks Stream Team Kickoff. A shore survey was completed to begin the process of revitalization of the 1998-2000 to continue to improve the quality of our river and the brooks that flow into the North River.</p> <p>On May 6, SSCW led the North River Awareness walk along the banks of the river and presented an overview of key environmental issues.</p> <p>On June 8, a meeting was held to discuss action planning using the results of the survey</p>	Continue the annual North River Awareness week (provided funding is available) and include stormwater as a discussion topic.
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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	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). Stormwater & LID Ordinance being reviewed internally by City Council and Mayor’s Office. Salem Sound Coastwatch collaborated with four groups to present Greenscapes North Shore an introduction showing that through greenscaping practices, people can reduce water usage, toxins and runoff and still have a beautiful lawns and gardens. A planning committee has been formed to set up workshops, contact landscapers, nurseries and garden centers, identify demonstration sites, and help with outreach.	Continue to promote LID techniques for stormwater management (provided funding is available).
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1a. Additions

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	January 18, The Salem Sound Working Group presented the Next Steps to a Salem Sound NDA Following on the 2005 survey information obtained from boaters in Salem Sound, this Group will begin implementation of ways to improve Salem Sound	Continue to Promote Salem Sound Improvements (provided funding is available) EPA New England has the goal for all New England to be a No Discharge Area by 2010. The Salem Sound Working Group will begin the next steps to making this a reality in Salem Sound.
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2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
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 2006.	Continue program (provided funding is available).
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 on September 9, 2006.	Coastsweep scheduled for September 2007.
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 Salem Academy Charter School partnered with SSCW for a service learning project to promote environmental awareness in Salem. They performed storm drain stenciling in Spring 2006.	The Salem Academy Charter School plans to continue this stenciling effort in the 2007 (provided funding is available).
30 Revised	Coastal Habitat Invasives Monitoring Program	Dept. of Public Services (through the efforts of SSCW)	Annually (provided funding is available).	Under SSCW's Coastal Habitat Invasives Monitoring Program, trained volunteers collected information on location and amount of invasive species.	Continue program (provided funding is available).

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 4 th Annual SSCW North River Awareness Week was from May 4 through 11, 2006. On May 4, North River and Peabody Brooks Stream Team Kickoff. A shore survey was completed to begin the process of revitalization of the 1998-2000 to continue to improve the quality of our river and the brooks that flow into the North River.	Continue the North River and Peabody Brooks Stream Team (provided funding is available).
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2a. Additions

37	South River Drainage Improvement Project	City of Salem	Year 4 – Collect information regarding the South River Basin. Year 5 – Begin implementation of the short-term measures for the Phase I South River Drainage Improvement Project (if funding is available)	Woodard & Curran conducted a number of interviews with public officials, past and present city employees, residents and business owners to discuss the flooding of the South River Basin. Woodard & Curran also participated in a community workshop on February 26, 2007 to understand the flooding issues.	Continue to keep the public informed regarding short-term measures that have been implemented.
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3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
11 Revised	Develop GIS database of the drainage system	Dept. of Public Services	Pending EOE A funding approval, begin digital mapping.	There were no planned activities for Permit Year 4.	Review the GIS database and update.
12 Revised	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 4.	No action is planned for Permit Year 5.
13 Revised	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).	Performed visual inspection of a representative number of outfalls during dry weather period.	Continue to inspect a representative number of outfalls annually (provided funding is available).
14 Revised	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 2006 swimming season. Results are published on SSCW's website (www.salemsound.org) and are attached.	Perform additional sampling and publish results (provided funding is available).
15 Revised	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 16 locations during the period from June 14 to Aug 30, 2006. Results are attached and published on the MA DPH website.	Continue to perform weekly sampling during summer months in accordance with DEP criteria.

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 MCM.	No action is planned for Permit Year 5.
Revised					
29	Perform study to identify contamination sources(s) [<i>BMP added in Permit Year 2</i>]	Dept. of Public Services	Year 1 – Submit grant application to MCZM; Year 2 – Initiate study (provide funding is available). Year 3 to 5 – Implement Recommendations	Installed a “duckbill” tide gate on the Juniper Beach outfall pipe to mitigate suspected sources of pathogens. Used SSCW and BOH sampling data to monitor results, which showed improved water quality. Installed 3 BigBelly solar trash compactors at Willows Park to reduce availability of food to foraging animals and limit population based on findings of NPS study by Woodward & Curran in FY 2004.	Continue 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. Conduct public education at Willows Park to discourage bird/animal feeding and minimize pet waste if funding is available. Conduct cleaning and inspection of drainage system at Willows Park.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
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	The Ordinance was introduced to the City Council on February 8 th . Held a meeting with the new Mayor on March 2 nd to discuss adopting this Ordinance.	Continue internal review of the Ordinance in preparation for future adoption. Begin process of implementation, subject to Mayor and City Council approval.
Revised					
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	Monitored sites to inspect erosion control measures and construction material management.	Continue to monitor and track violations.
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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
19	Develop an ordinance requiring stormwater controls for all new and redevelopment projects disturbing more than 1-acre	Dept. of Public Services; Planning Board; Conservation Commission	Year 1 – Review existing bylaws & regulations; Year 2 – Propose changes; Year 3 – Implement changes, subject to City approval	The Ordinance was introduced to the City Council on February 8 th . Held a meeting with the new Mayor on March 2 nd to discuss adopting this Ordinance.	Continue internal review of the Ordinance in preparation for future adoption. Begin process of implementation, subject to Mayor and City Council approval.
Revised	...disturbing one acre or greater		Year 3 – Develop Ordinance. Year 4&5 - Implement changes, subject to City approval		

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
20 Revised	Street Sweeping	Dept. of Public Services	Sweep streets between April & November (provided funding is available).	Completed annual sweeping program.	Continue program (provided funding is available).
21 Revised	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.	Continue program (provided funding is available).
22 Revised	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.	Continue annual inspection of problem areas and cleaning as needed (provided funding is available).
23 Revised	Trash collection program	Health Dept.; Dept. of Public Services; Parks & Recreation	Weekly curbside pickup (provided funding is available).	Completed weekly curbside trash collection program. With support from various volunteer groups, continue to pickup trash and empty trash receptacles at bus stops in the downtown area, and at City parks, such as Willows Park, at varying frequency depending on park activity.	Continue program (provided funding is available).
24 Revised	Recycling Program	Dept. of Public Services	Bi-weekly curbside pickup (provided funding is available).	Completed bi-weekly curbside recycling program.	Continue program (provided funding is available).

25	Yard Waste Program	Dept. of Public Services	Curbside pickup several 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.	Continue program (provided funding is available).
Revised					
26	Household hazardous waste program	Health Dept.	Hold twice over the 5-year permit term (provided funding is available).	The household hazardous waste program was not held this year.	Since one hazardous waste collection program occurred in June 2004, the next hazardous waste collection is scheduled for June 2007.
Revised					
27	Animal Control Program	Police Dept. Animal control Officer	Track the number of animals collected (provided funding is available).	Completed tracking of animals collected.	Continue program (provided funding is available).
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 2006.	Continue to clean beaches in the spring and summer of each year (provided funding is available).
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 residents are now 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.	Continue the Appliance Sticker Program.

6a. Additions

38	South River Drainage Improvement	City of Salem	Year 4 – Collect information regarding the South River Basin. Year 5 – Begin implementation of the short-term measures for the Phase I South River Drainage Improvement Project	Woodard & Curran prepared the Phase I Report for the South River Drainage Improvement Project in April 2007.	If funding is available, begin implementation of the short-term measures from the report which include: institutional controls to protect the floodplain, the Operations and Maintenance Program, inspection and cleaning of the South River Conduit, inspect Rosie's bypass, vegetation and sediment removal, and temporary repairs to the brooks street levee.
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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.

Part IV. Summary of Information Collected and Analyzed

A summary of water quality monitoring results is attached. The summary, prepared by Salem Sound Coastwatch, includes the results from monitoring by Salem Sound Coastwatch (BMP#14) and from the City of Salem Board of Health (BMP #15). During 2006, the following beaches experienced closings:

- Mackey
- Pioneer
- Ocean Avenue
- Willow Avenue
- Willows Pier
- Tractor
- Back
- Whalley