Municipality/Organization:	**City of Salem, Massachusetts**
EPA NPDES Permit Number:	**MA041219**
MassDEP Transmittal Number:	**W-040844**
Annual Report Number & Reporting Period:	**No. 5: April 1, 2007 – March 31, 2008**

NPDES PII Small MS4 General Permit Annual Report
(Due: May 1, 2008)

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:

Part II. Self-Assessment

From April 1, 2007 – May 1, 2008, the City of Salem made progress implementing BMPs and meeting the General Permit for Permit Year 5 requirements.

As of the end of Year 5, all of the BMPs selected in the 2003 Notice of Intent and those added in Permit Year 4 to reflect unplanned stormwater activities by the City and Salem Sound Coastwatch were appropriate. The City is still in progress implementing a few BMPs, including those related to illicit discharge detection (BMP 13), the regulatory mechanisms for Construction Site Stormwater Runoff Control (17) and Post-Construction Stormwater Management in New Development and Redevelopment (19), and Good Housekeeping SWPPP and Training (39). During the permit term, the City held several inter-departmental meetings on regulatory mechanisms for construction and post-construction and developed a Stormwater & LID ordinance. The Stormwater & LID ordinance is currently being reviewed for the City's current needs, consistency with the updated Massachusetts Stormwater Management Policy, and evolving BMP practices. A DPW facility assessment was completed in April 2008; SWPPP and Training are scheduled for Spring 2008.

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 5 (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).	Maintained and updated SSCW website with volunteering opportunities and results of water quality monitoring in Salem.	BMP Complete.
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 approximately 10 public events during Permit Year 5. Brochures are also made available at the City offices on the 4th floor at 120 Washington Street.	BMP Complete.
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, *Salem Sound Monitor*, currently distributed annually.	BMP Complete.
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 2nd Annual Swim n' Fin OceanFest on July 28, 2007 at Forest River Park. Stormy is the mascot for the *Think Again. Think Blue.* campaign	BMP Complete.

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 April 27, 2007 to announce SSCW's May 9, 2007 workshop "Shedding Light on the North River: Land Use, Rivers and Flooding Workshop" at Salem State College. Article discussed stormwater issues and factors that contribute to the flooding problems on the North River that plague Peabody and Salem.	BMP Complete.
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 April 2, 2007. Volunteers were trained to collect water quality samples every two weeks for the 2007 swimming season from April 11, 2007 to August 30, 2007.	BMP Complete.
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 5 are published on SSCW's website (http://www.salemsound.org/clean_beaches.htm) Results of BOH beach water quality monitoring are published on the MA DPH website at: http://mass.digitalhealthdepartment.com/public_21/beaches.cfm?bID=12628&func=details	BMP Complete.
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	The 5th Annual SSCW North River Awareness Week was from May 7 through 12, 2007. On May 9, SSCW sponsored a free seminar titled *Shedding Light on the North River: Land Use, Rivers, and Flooding* which looked at flooding issues from a holistic watershed approach. On May 10, SSCW held a *North River Stream Team Meeting* to review past sampling efforts of the river and plans for Summer 2007 sampling. On May 12, SSCW led the *North River Awareness Walk, Talk, and Pickup* along the banks of the river and presented an overview of key environmental issues.	BMP Complete.

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). Advisory group will meet in Spring 2008 to review the 2005 draft Stormwater & LID Ordinance for modification (see BMPs 17 & 19). 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 5 included: • *How to Phase Out Chemicals and Phase in Organics* on June 5, 2007, which explained the basics and the step-by-step process of transforming a conventional lawn or garden into a beautiful and environmentally friendly landscape. Greenscapes educates people to reduce water usage, toxins, and runoff and still having a beautiful lawn and garden; focus is on stormwater quality. • *Water Conservation Matters* on July 17, 2007, which explained lawn care and water conservation including rainwater harvesting systems to address stormwater management.	BMP Complete.

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	Following on the Salem Sound Coastwatch Marine Sanitation Needs Assessment in 2005, which collected survey information from boaters in Salem Sound, this Group began prioritizing recommendations and implementing those recommendations in an effort to improve Salem Sound. 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. Goal is to have boats docked in Salem discharge into pump out facilities or go 3 miles out; no direct discharges into harbor.	BMP Complete.

1a. Additions

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Term
8	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 2007. Results are available on the SSCW website: http://www.salemsound.org/clean_beaches.htm	BMP Complete.
Revised					
9	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 in September 2007.	BMP Complete.
Revised					
10	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 Boys & Girls Club and Saltonstall School partnered with SSCW for a service learning project to promote environmental awareness in Salem. They performed storm drain stenciling in Spring 2007 and Fall 2007.	BMP Complete.
Revised					

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. 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	BMP Complete.
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 5th Annual SSCW North River Awareness Week was from May 7 through 12, 2007. On May 12, SSCW held a *Walk, Talk, and Pickup* of the North River.	BMP Complete.
37	South River Drainage Improvement Project	City o f 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)	Phase I South River Drainage Improvement Project Report was completed and funding request submitted to City Council for $4.35 million for improvements. Upon approval from Council, work will continue. Vegetation and sediment were removed from the South River Drainage Basin in Summer 2007.	BMP Complete.

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5 (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 EOEA 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.	BMP Complete.
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 5.	BMP Complete.
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).	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.	Implement IDDE Plan.
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 2007 swimming season (April through the end of August). Results are published on SSCW's website and attached (http://www.salemsound.org/clean_beaches.htm.	BMP Complete.
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 20 to Aug 29, 2007. Results are published on the MA Department of Public Health (DPH) website.	BMP Complete.
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.	BMP Complete.
Revised					
29	Perform study to identify contamination sources(s) [*BMP added in Permit Year 2*]	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. Conducted public education at Willows Park to discourage bird/animal feeding and minimize pet waste.	BMP Complete.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 5 (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	Created Advisory Group 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 meeting to be held in Spring 2008.	Modify and implement a stormwater ordinance to control construction site and post-construction stormwater runoff.
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 as part of regular City inspections.	BMP Complete.
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 5 (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 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	Created Advisory Group 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 meeting to be held in Spring 2008.	Modify and implement a stormwater ordinance to control construction site and post-construction stormwater runoff.
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 5 (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)	Completed annual sweeping program.	BMP Complete.
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.	BMP Complete.
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.	BMP Complete.
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. 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.	BMP Complete.
Revised					
24	Recycling Program	Dept. of Public Services	Bi-weekly curbside pickup (provided funding is available).	Completed bi-weekly curbside recycling program.	BMP Complete.
Revised					

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.	BMP Complete.
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 held on Saturday, October 6, 2007, from 8:00 am to 1:00 pm.	BMP Complete.
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.	BMP Complete.
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 2007.	BMP Complete.
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 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.	BMP Complete.

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	Phase I South River Drainage Improvement Project Report was completed and funding request submitted to City Council for $4.35 million for improvements. Upon approval from Council, work will continue. Vegetation and sediment were removed from the South River Drainage Basin in Summer 2007. $300,000 in funding was requested from the City Council for 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, and the cleaning and inspection of the conduit.	Upon approval from Council, Phase I South River Drainage Improvement Project will be implemented.
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; Staff training (with SWPPP) to be held in Spring 2008.	Prepare SWPPP and provide staff training.

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

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 2007, the following beaches experienced closings:

- **Ocean Avenue**
- **Willow Avenue**
- **Winter Island (Waikiki)**
- **Dead Horse**
- **Children's Island**
- **Mackey**
- **Osgood**
- **Steps**

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, 2007 through March 31, 2008)

Programmatic

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

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	
Stream teams established or supported	(# or y/n)	Y
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	Y
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	1
▪ 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	(%)	100
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100
Mapping method(s)		
▪ Paper/Mylar	(%)	10
▪ CADD	(%)	10
▪ GIS	(%)	80
Outfalls inspected/screened **	(# or %)	
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	(%)	
% of population on septic systems	(%)	

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)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/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)	

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)	
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)	
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 %)	
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 % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	
Pre-wetting techniques utilized **	(y/n or %)	
Manual control spreaders used **	(y/n or %)	
Zero-velocity spreaders used **	(y/n or %)	
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln 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	