

APR 28 2014

Municipality/Organization: Stoneham, Massachusetts

EPA NPDES Permit Number: MA041062

MassDEP Transmittal Number: W-040960

Annual Report Number

& Reporting Period: April 1, 2013 – March 31, 2014

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2013)

Part I. General Information

Contact Person: Robert E. Grover, P.E.

Title: Director, Dept. of Public Works

Telephone #: 781-438-0760

Email: rgrover@ci.stoneham.ma.us

Mailing Address: 16 Pine Street, Stoneham, MA 02180

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: Robert E. Grover

Title: Director, Department of Public Works

Date: 4/22/14

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Date:

4/22/14

Part II. Self-Assessment

The Town of Stonelham has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions.

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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future
1-1	Place Educational Information on the Town's Website	Department of Public Works	Winter '03/04 – Winter '12/13 - Post stormwater related information on the Town's website. - Update website regularly. Fall '03/04/05/06/07/08/09/10/11/12 - Continue to sponsor one household hazardous waste collection day per year. - Annually send a press release advertising the event to the <i>Stoneham Independent</i> and <i>Stoneham Sun</i> and track whether it was published. - Advertise the event on the Town's public cable access channel. - Advertise the event on the Town's website. - Track the amounts and types of waste collected each year. - Track the number of Stoneham vehicles/residents that participate in each event.	The Town has a new website. Links to EPA sites relating to stormwater will be added. The Town is incorporating a see-click-fix on its website so problems can be reported A Household Hazardous Waste Collection Day was not held in 2013. However, the Town provided information to residents on the Minuteman Hazardous Products Regional Facility in Lexington that is available to Stoneham residents for household hazardous waste disposal. A household hazardous waste day is tentatively scheduled for the fall of 2014.	To be determined based on issuance and review of proposed NPDES General Permits for MS4 stormwater discharges in Massachusetts. (TBD)
1-2	Conduct Household Hazardous Waste Collection Days	Department of Public Works	Spring '04/05/06/07/08/09/10/11/12 - Track the number of brochures distributed annually. - Track the number of violations issued annually. - Develop an informational press release on pet waste management for the <i>Stoneham Independent</i> and <i>Stoneham Sun</i> and track whether it was published.	The brochure is available at the library, Town Hall, DPW and through the Town Clerk. The Town's "Animals and Fowl" bylaw has a "duty to dispose" of pet waste section including fines for violations. Additionally, pet waste signs have been posted in parks.	TBD
1-3	Intensify the Existing Pet Waste Management Campaign	Board of Health Animal Control Officer	Fall '04 – Winter '12/13 - Obtain "Oil Leak" and "Fertilizer" PSAs from the Washington State Department of Ecology Water Quality Consortium. - Track how frequently the PSAs are broadcast on Stoneham Community Access Television.	Stoneham TV broadcasted stormwater related PSAs during Permit Year 10.	TBD
1-4	Place Educational Information on Stoneham Community Access Television	Department of Public Works Stoneham Community Access Television			

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future
1-5	Promote Water Conservation Practices for Homeowners	Department of Public Works	Spring '03 – Winter '12/'13 - Post water conservation posters at Town Hall and the public library. - Include water conservation bill inserts with the water bill. - Issue an annual press release to the <i>Stoneham Independent</i> and <i>Stoneham Sun</i> to promote water conservation. Fall '05/'07 - Issue the press release to the <i>Stoneham Independent</i> and <i>Stoneham Sun</i> and track whether it was published. - Submit copies of the informational flyers to the Stoneham Chamber of Commerce (SCC). - Post the informational flyer on the Town's website.	Educational materials were available at the DPW office, library, and Town Hall. Low-flow showerheads were available to residents at no cost.	TBD
1-6	Develop a Press Release and Flyer Targeting Community Businesses	Department of Public Works	Fall '05/'07 - Issue the press release to the <i>Stoneham Independent</i> and <i>Stoneham Sun</i> and track whether it was published. - Submit copies of the informational flyers to the Stoneham Chamber of Commerce (SCC). - Post the informational flyer on the Town's website.	No action planned for permit year 10. However, the site plan review process includes requirements for onsite stormwater management. The site plan review process is applicable to new development and upgrades to existing development.	TBD

1a. Additions

1-7	Develop a Stormwater Brochure for General Public	Department of Public Works	Summer '05 – Winter '12/'13 Develop and issue a brochure educating the public on ways to prevent pollution in stormwater runoff.	The DPW made the EPA brochure "After the Storm – A Citizen's Guide to Understanding Stormwater" available to the public at the DPW, the Town Hall and the library.	TBD
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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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future
2-1	Public Access to SWMP and Receipt of Comments	Department of Public Works Library Director	Fall '03 – Winter '12/'13 • Make draft SWMP available to the public for the review and comment period. • Finalize SWMP. • Make the final SWMP accessible to the public at the public library and Town's website. Spring '04/'05/'06/'07/'08/'09/'10/'11/'12 • Prepare an annual report. • Annually send a press release advertising the public comment period and the status of the Town's SWMP to the <i>Stoneham Independent</i> and <i>Stoneham Sun</i> and track whether it was published. • Advertise the public comment period on the public cable access channel. • Receive comments on the annual report. • Submit an annual report to both the Environmental Protection Agency and MA Department of Environmental Protection. Spring '03 – Winter '12/'13 • Post advertisement offering assistance with local cleanup activities on the Town's website and within the <i>Stoneham Independent</i> and <i>Stoneham Sun</i>. • Track the number of cleanup activities that the DPW assists annually. • Track the number of cleanup participants at these activities. • Track which areas of Town are cleaned by these activities. • Track the quantity of waste collected as a result of these cleanup activities.	A copy of the Storm Water Management Program continues to be available at the DPW, the library, and the Town Clerk's office. The Town website has rules and regulations regarding the use of storm drains. The Annual Report for Permit Year 10 was completed and submitted in 2013. The annual reports are available at the DPW office.	To be determined based on issuance and review of proposed NPDES General Permits for MS4 stormwater discharges in Massachusetts. (TBD)
2-2	Public Access to Annual Report and Receipt of Comment	Department of Public Works			TBD
2-3	Provide Assistance to Local Cleanup Activities	Department of Public Works		An advertisement offering assistance with local cleanup activities was placed in the <i>Stoneham Independent</i> and <i>Stoneham Sun</i>. During Permit Year 10 several community groups cleaned up public grounds. Additionally, some local court ordered community service obligations are met through cleanup activities under the DPW. The DPW provides personnel, trucks, bags, rakes, gloves and material disposal to groups performing cleanup activities.	TBD

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future
2-4	Provide Assistance to Storm Drain Stenciling Activities	Department of Public Works	Spring '04 – Winter '12/'13 - Post advertisement offering assistance with storm drain stenciling activities on the Town's website and within the <i>Stoneham Independent</i> and <i>Stoneham Sun</i>. - Track the number of drains stenciled each year. - Track the number of participants each year.	Eagle Scouts stenciled storm drains throughout the Town during permit year 7. The stenciling has begun to fade; no stenciling activity occurred in permit year 10. In 2012, the Town applied for, but did not receive, a grant for metal disks that can be epoxied to granite curbing headers. Re-stenciling will continue to be included for public participation activities during 2014.	To be determined based on issuance and review of proposed NPDES General Permits for MS4 stormwater discharges in Massachusetts. (TBD)

2a. Additions

No additions to report at this time.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future
3-1	Field Verify Outfall Locations	Department of Public Works	Spring '04 – Winter '12/'13 - Develop a schedule for outfall verification and outfall identification activities. - Perform and track the outfall verification and outfall identification activities as scheduled. - Continuously update the storm drainage system map as new or corrected information is added.	The DPW routinely visits the outfalls as part of the inspection and maintenance program. Inspection and maintenance activities were recorded in a logbook. The DPW updates the storm drainage system as new or corrected information is added. Each outfall is labeled with a permanent plate.	To be determined based on issuance and review of proposed NPDES General Permits for MS4 stormwater discharges in Massachusetts. (TBD)
3-2	Development and Adoption of a Stormwater Bylaw	Planning Board Stoneham Conservation Commission Department of Public Works Building Department	Winter '04/'05 – Winter '12/'13 - Draft the Stormwater Bylaw, which will address (1) illicit discharges, (2) erosion and sedimentation from construction activities, and (3) stormwater runoff from new development and redevelopment projects. - Present Stormwater Bylaw to Town Meeting for adoption. - Post Stormwater Bylaw on Town's website. - Track the number of enforcement actions taken.	Rules and regulations regarding the use of storm drains in the Town of Stoneham were adopted by the Stoneham Stormwater Board effective July 1, 2010. These rules and regulations are available on the Town's website and are being enforced. Compliance with the rules has been 100%. BMPs included in some site plans complying with the regulations include rain gardens.	TBD
3-3	Implement an Illicit Discharge Detection and Elimination Plan	Department of Public Works	Winter '04/'05 – Winter '12/'13 - Develop an IDDEP. - Conduct dry-weather field screening of outfalls and track the number of surveys indicating a possible illicit connection. - Trace the source of potential illicit discharges. - Track the number of illicit connections found. - Track the number of illicit connections repaired/replaced. - Report on the success of obtaining alternative funding to assist in illicit connection removal.	The DPW continually monitors its open brooks for gray water and, when found, works to identify the source. The DPW has a contract with Arcadis and is working with the EPA regarding a Clean Water Act Administrative Order. Stoneham coordinates with Todd Borci at the EPA's Office of Environmental Stewardship on compliance with the Administrative Order.	TBD
3-4	Conduct Infiltration/Inflow Removal from Sanitary Sewer	Department of Public Works	Spring '03 – Winter '12/'13 - Perform I/I investigations of the sanitary sewer system and track the results. - Perform capital improvement projects to remove I/I.	The DPW continues to propose and perform projects associated with I/I removal. These capital improvement projects remove I/I through manhole sealing, pipe rehabilitation, pipe replacement and grouting. For permit year 11, \$350k was spent on rehabilitation including pipe lining.	TBD

3a. Additions

No additions to report at this time.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future
3-2	Development and Adoption of a Stormwater Bylaw			See Section 3: Illicit Discharge Detection and Elimination	To be determined based on issuance and review of proposed NPDES General Permits for MS4 stormwater discharges in Massachusetts. (TBD)
4-1	Develop a Site Inspection Form and Conduct Site Inspections	Department of Public Works	Spring '05 – Winter '12/'13 - Develop an ESC Site Inspection Form that reflects the ESC requirements. - Track the frequency of inspections conducted for each site. - Track the completion of inspection forms. - Track the number of failed ESC BMPs discovered on each site.	As part of the stormwater rules and regulations, a Stormwater Board was created to promulgate, adopt, implement, enforce, and amend stormwater regulations. The Conservation Agent is a member of the Stormwater Board. Site ESC are consistent with the requirements in Conservation Commission jurisdictional area. The Town is presently revising its storm water regulations.	TBD
4-2	Develop and Implement a Citizen Tip Line	Department of Public Works	Fall '05 – Winter '12/'13 - Establish the Citizen Tip Line. - Advertise the Citizen Tip Line. - Track the number of complaints received via the Citizen Tip Line. - Track the problems/incidents remedied as a result of the Citizen Tip Line.	Residents currently contact the DPW during working hours and the police during non-working hours when stormwater related problems/incidents occur. Residents can also notify the DPW through the Town's website. The DPW maintains a computerized complaint log in which complaints are tracked by category. The Town is implementing a tip line via its see-click-fix which is being added to its website.	TBD

4a. Additions

No additions to report at this time.

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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future
3-2	Development and Adoption of a Stormwater Bylaw			See Section 3: Illicit Discharge Detection and Elimination	To be determined based on issuance and review of proposed NPDES General Permits for MS4 stormwater discharges in Massachusetts. (TBD)

5a. Additions

No additions to report at this time.

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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future
6-1	Develop a Formal Training Program for DPW Staff	Department of Public Works	Fall '05 – Winter '12/'13 - Develop the DPW employee training manual. - Conduct training sessions with all current employees. - Train all new DPW employees in accordance with the training program requirements. - Track the number of employees trained. - Conduct refresher training for employees after every two years of employment.	DPW staff received hands-on training for stormwater best management practices.	To be determined based on issuance and review of proposed NPDES General Permits for MS4 stormwater discharges in Massachusetts. (TBD)
6-2	Catch Basin Cleaning Program	Department of Public Works	Spring '03 – Winter '12/'13 - Clean all catch basins on an annual basis. - Document annual cleaning activities and keep all records through the permit term.	The DPW completed the annual catch basin cleaning program as scheduled. The DPW attempted to track sources of illegal material in catch basins where identified.	TBD
6-3	Parking Lot and Street Sweeping Program	Department of Public Works	Spring '03 – Winter '12/'13 - Track the streets and lots that are swept each year. - Maintain a log of the disposed materials	The DPW completed the annual parking lot and street sweeping program as scheduled.	TBD
6-4	Develop a Vehicle and Equipment Maintenance Policy	Department of Public Works	Fall '05 – Winter '12/'13 Develop and implement a Vehicle and Equipment Maintenance Policy and incorporate policy requirements into the DPW employee-training program.	The DPW enforced the Vehicle and Equipment Maintenance Policy. DPW employees received hands-on training for this policy.	TBD
6-5	Develop a Vehicle and Equipment Cleaning Policy	Department of Public Works Fire Department Police Department	Fall '05 – Winter '12/'13 - Develop and implement a Vehicle and Equipment Cleaning Policy. - Place policy in the DPW employee-training manual and provide to the Town's Police Department and Fire Department. - Review MADEP's vehicle rinsing policy when issued and develop a plan to come into compliance with it.	The DPW enforced the Vehicle and Equipment Cleaning Policy. DPW employees received hands-on training for this policy.	TBD
6-6	Develop a Landscaping and Lawn Care Policy	Department of Public Works	Spring '05 – Winter '12/'13 - Develop and implement a Landscaping and Lawn Care Policy. - Place policy in the DPW employee-training manual. - Educate landscaping/lawn care service companies retained by the Town on this policy.	The Town requires that no pesticides and only organic fertilizers be used on Town property. This policy was written into the contracts for the landscaping/lawn care service companies employed by the Town.	TBD

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future
6-7	Maintenance of Trash Racks and Outfalls	Department of Public Works	Fall '05 – Winter '12/'13 • Develop an inspection and maintenance plan for the trash racks and outfalls. • Educate DPW employees on the proper inspection and maintenance of the trash racks and outfalls. • Maintain records of inspection and maintenance activities.	The DPW inspected the outfalls before heavy rainstorms are predicted. When heavy rainstorms deposited a large amount of debris at the Town's drainage outfalls and inlets, the DPW removed this material and properly disposed of it. In addition, at the larger outfalls, silt was cleaned out once a year as part of routine maintenance. The inspection and maintenance activities were recorded in a logbook.	TBD
6-8	Maintenance of the Detention Basins at Stoneham Public Schools	Stoneham School Department	Spring '04 – Winter '12/'13 • Develop a maintenance plan for the detention basins at the elementary schools. • Educate school department staff on the proper maintenance of the detention basins. • Maintain records of maintenance activities.	The detention basins were maintained by the school department. For newly installed detention basins on private properties, the Town requires that the homeowners maintain the BMP. If the homeowners do not properly maintain the BMP, the Town requires that the homeowners pay the Town to perform the work.	TBD

6a. Additions

No additions to report at this time.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)

NOT APPLICABLE TO THE TOWN OF STONEHAM

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions

7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

As part of the Town of Stoneham's Clean Water Act Administrative Order from EPA, wet- and dry-weather sampling was conducted at various outfalls and manholes throughout the collection system in 2012. These sampling results (provided in the January 2013 Semi-Annual Compliance Report) are included in this annual stormwater report as the next page.

Appendix A
Sampling Results
Table A-1

Structure ID	Date	Weather	Type	Location	New structure	Flow	Sampled	Surfactants	Ammonia	Total Chlorine	E. Coli
DMH 224	7/16/2013	Dry	Manhole	Redstone Plaza Parking Lot	No	Yes	Yes	0.5	0	0	2
DMH 196	7/16/2013	Dry	Manhole	Marie Ave	No	Yes	Yes	0.125	0	0	160
DMH1071713	7/17/2013	Dry	Manhole	100 Ledgewood condo	Yes	Yes	Yes	0	5	0	1
DMH 702	7/17/2013	Dry	Manhole	100 Ledgewood condo	No	No	No	-	-	-	-
CB10716	7/16/2013	Dry	Catch Basin	Parking lot of Stoneham Animal Hospital	Yes	Yes	Yes	0.25	3.5	0	120
OF 44	1/6/2014	Wet	Outfall	Behind 41 Elm street, left when facing wall	No	Yes	Yes	0.3	0	0	290
OF 45	1/6/2014	Wet	Outfall	Behind 41 Elm street, right when facing wall	No	Yes	Yes	0.25	0	0	33,000
OF 59	1/6/2014	Wet	Outfall	Between 18 and 20 Drury Drive	No	Yes	Yes	0.3	0	0	1,600
OF 60	1/6/2014	Wet	Outfall	Cut-De-Sac at the end of Aspen Lane	No	Yes	Yes	0.25	0	0	2,500

Town of Stoneham, Massachusetts
July 31, 2013

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, 2012 through March 31, 2013)

Programmatic

Stormwater management position created/staffed	(Preferred Units)	Response
Annual program budget/expenditures **	(y/n)	
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)	
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 **	(#)	
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	

Legal/Regulatory

Regulatory Mechanism Status (indicate with "X")	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
▪ 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	(%)	
Estimated or actual number of outfalls	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	
Mapping method(s)		
▪ Paper/Mylar	(%)	
▪ CADD	(%)	
▪ GIS	(%)	
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	
Illicit connections removed (Since beginning of permit coverage)	(est. gpd)	
% of population on sewer	(#); and	
% of population on septic systems	(est. gpd)	
	(%)	
	(%)	

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 vacor **	(%)	

	(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 In 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 **	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)	
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