

5/9/11

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Municipality/Organization:	Town of Middleton, MA
EPA NPDES Permit Number:	MA 041211
MassDEP Transmittal Number:	W-
Annual Report Number & Reporting Period:	Year 8 April 1, 2010 - March 31, 2011

NPDES PII Small MS4 General Permit

Annual Report

Part I. General Information

Contact Person: Robert LaBossiere Title: Superintendent of Public Works
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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: Ira S. Singer

Title: Town Administrator

Date: May 5, 2011

Part II. Self-Assessment

The Town of Middleton has continued the implementation of Minimum Control Measures during years 5, 6, 7, and 8 to manage storm water and to reduce pollutants and contaminants associated with storm water. Highlights of the Town's implementation of Minimum Control Measures through the MS4 program include:

1. Public Education and Outreach

- Partnering with Greenscapes.org Massachusetts.
- Earth Day activities. Middleton held an Earth Day on May 2, 2010 and Earth Day is planned for May 1, 2011
- The Middleton Stream Team holds meetings monthly and has hosted events including:
 - The Winter Family Hike on Feb. 7, 2010 and
 - The Spring Family Discovery Hike on March 28, 2010, these field walks are designed to be educational and occurred in different parts of Middleton with different subject matter discussed including various plant and animal life and vernal pool life.
- Videos and handouts available at the library.
- The DPW added a stormwater link to the web site, A stormwater link is also provided at the Conservation site.

2. Public Involvement and Education

- Household Hazardous Waste Day is Held annually in October as a Tri-Town event.
- Transfer Station is open to residents for recycling and collection of tires/batteries/mercury/fluorescent bulbs year round.
- The Middleton Board of Trade sponsored an electrical junk collection day for Town businesses in 2010 and 2011, this practice is expected to continue.
- The Masconomet Music Parents Association sponsored an electrical junk collection event in 2010, this practice is expected to continue.
- Mailings and information available at DPW and Conservation Agent office.

3. Illicit Discharge Detection and Elimination

- The town does not have a municipal sewer collection system. Screening and inspections of outfalls has not identified any illicit discharges.
- Screenings will continue this year.

4. Construction Site Stormwater Runoff Control.

- The Town currently implements the state regulations until the Town bylaw is adopted. The draft Town bylaw and regulations are based on MassDEP requirements listed in the Stormwater Handbook.
- The Conservation Agent and DPW are responsible for monitoring runoff controls during construction.

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

- The Conservation Agent and DPW are responsible for monitoring BMP compliance post construction.
- The Conservation Commission has prepared Draft Stormwater Management Regulations for adoption which includes post construction maintenance requirements.
- The Regulations includes provisions for easement access that permits Town officials to inspect and clean Stormwater facilities as needed and/or in the event of emergency.
- A draft Land Disturbance permit has been developed to coincide with the Stormwater Management Regulations.
- The Town has prepared a draft Stormwater Management By-Law to address Illicit Discharges to the Municipal Storm Drain System including enforcement protocol.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

- Catch basin cleaning has been budgeted to increase in the coming year. The DPW's goal is to clean all catch basins annually.
- Street sweeping activities will continue.
- Catch basin stenciling continues.
- Mosquito control program continues.

7. The Town has Developed a Stormwater Outfall Map

- The map currently has 95% of the outfalls plotted. Newer subdivision information and additional detention ponds will be added in 2011.
- The map has been updated to include outfalls that discharge directly into water bodies.
- The map also has noted those outfalls that discharge into existing BMPs such as wet ponds and infiltration basins.

2012 for Adoption.

Activities planned for the Stormwater Management Program developed by the Town. Highlights include:

- Stormwater Bylaws and Regulations will be reviewed by various Town Departments and Committees in 2011 and presented at Town Meeting in 2012.
- Modifications to the stormwater map include the total number of outfalls leading to existing BMP's such as detention ponds and dry basins vs. older piped outfalls that discharge directly into waters.
- Use the stormwater map to coordinate documentation of the wet testing, dry screening and dry inspection results from outfall testing.
- Develop an outfall BMP self assessment of the existing outfalls to discuss strategies for future BMP construction at untreated outfalls to coincide with capital improvement projects and repaving projects.
- Continue to test outfalls that flow directly to water bodies.
- Volunteers are proposing to GPS locations of catch basins this summer.
- Review the existing testing of untreated outfalls in Town that are owned and controlled by others as needed. The (MassDOT Route 114) outfalls that discharge into the Emerson Pond Reservoir, the Town assumes that the state is responsible for testing these outfalls.
- Prepare a strategy for local funding program to pay for the additional cost of improving, monitoring and maintaining the stormwater system to meet the Final Permit Requirements.
- In the Summer of 2011, Review the final permit for the NCW and discuss strategy for meeting the final permit goals.

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 5-7 (Reliance on non-municipal partners indicated, if any)	Planned Activities Permit Year 8
1.1	Develop informational brochure on stormwater program	Conservation Agent/Town Planner	Provide and maintain copies at the library	EPA supplied brochures were distributed in the Town library including: <i>-After the Storm</i> <i>-Make Your Home the Solution to Storm water Pollution</i> <i>-Water Efficient Landscaping -Door hanger: "Stormwater Pollution Found in Your Area"</i>	Maintain copies of the brochure(s) in the library at the new media center.
Revised					
1.2	Add stormwater information and links to the Town's website.	Webmaster	Complete by end of Year 1	Stormwater information is available on the Town's website via the Conservation Commission. This includes a map showing Middleton's MS4 area, links to EPA references for BMPs, and public education outreach materials.	Stormwater information on the Town's website will be updated periodically. The DPW link will be updated to include a Stormwater information link
Revised					
1.3	Distribute informational brochure with annual recycling program mailing.	Conservation Agent/Town Planner	One mailing per year over the 5-year permit term	Town distributed copies of EPA supplied stormwater brochure with the water department Consumer Confidence Report (CCR) annual mailing by July 1 of each year. The Town is a community partner of Greenscapes.org which is handling Inserts/flyers for CCRs and informational mailings for the Town. Greenscapes also uses email to contact residents.	Practice of distributing information will continue.
Revised					
1.4	Broadcast Stormwater related information on local public access TV.	Department of Public Works (DPW)/Town Planner	Broadcasts on Multiple days throughout the year	EPA Video "After the Storm - A citizens Guide to Understanding Stormwater" was shown several times on Public Access TV	Continue to show this, or related stormwater program(s) at new media center in library.

1a. Additions

BMP ID#	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)- Permit Year 5-7	Planned Activities-Year 8
1.5	Family Hikes sponsored by volunteer group	Stream Team	Organize walks to educate the public on a variety of environmentally related topics	Stream Team sponsored events included family walks on 2/7/2010 and 3/28/2010	Family walk held on 3/27/2011

2. Public Involvement and Participation

BMP ID#	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)-Permit Year 5-7 (Reliance on non-municipal partners indicated, if any)	Planned Activities-Year 8
2.1	Presentation at annual public meeting to describe and provide update on the Town's stormwater program and receive public input.	Board of Selectmen's Office	Three (3) public meetings during the -5-year permit term.	A presentation on storm water issues was included in Town Meetings as part of the warrant article process.	Presentation to include stormwater information, Greenscapes.org, Stream Team, vehicle washing, and fertilizer application, and related topics will be planned for this year.
Revised					
2.2	Continue to hold annual household hazardous waste collection	DPW	Household hazardous waste collection held once/year.	11/9/10 6 Full Cars, 22 Half Cars 11/6/09 25 Full Cars, 32 Half Cars 11/12/08 14 Full Cars, 33 Half Cars 11/10/07 17 Full Cars, 23 Half Cars	Continue program. (Note: full car ~ truck full of paint per Clean Harbors)
Revised					
2.3	Continue regular used oil, batteries, and tire collection program.	DPW	Used oil, batteries, and tires are received by the DPW on a year-round basis. (3 times per week)	Town distributed copies of EPA supplied stormwater brochure with the water department Consumer Confidence Report (CCR) annual mailing by July 1 of each year. The Town is a community partner of Greenscapes.org which is handling Inserts/flyers for CCRs and informational mailings for the Town. Greenscapes also uses email to contact residents.	Practice of distributing information will continue. DPW will continue to receive oil, tires and batteries on a year-round basis.
Revised					

2a. Additions

BMP ID#	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)- Permit Year 5-7	Planned Activities Year 8
2.4	Catch basin stenciling	Conservation Agent/DPW	Stencil priority catch basins by Fall 2005	Priority basins were stenciled by DPW summer staff in summer of 2006.	Continue program.
Revised					
2.5	Continue regular lead exchange program, and fluorescent bulb recycling program.	DPW	Products containing lead, and florescent bulbs are received by the DPW on a year-round basis. Mercury and Freon containing products are also received.	Transfer Station is open to receive materials on Wednesday, Saturday, and Sunday from 8:00 a.m. to 4:00 p.m. <u>2010</u> 180 feet florescent bulbs 8 thermometers 8 thermostats <u>2009</u> 172 feet florescent bulbs 7 thermometers 8 thermostats <u>2008</u> 156 feet florescent bulbs 8 thermometers 5 thermostats <u>2007</u> 154 feet florescent bulbs 12 thermometers 3 thermostats	Products containing lead, and florescent bulbs are received by the DPW on a year-round basis. (3 days per week) Mercury and Freon containing products are also received. This program will continue.
Revised	Tri-Town Electronics Recycling Day	DPW/EPA Sponsored	Recycled Appliances, computers and parts, lawnmowers, snow blowers, etc	Appliance Recycling Day held on 10/30/2010	Appliance Recycling Day planned for Fall of this year.
	Middleton Board of Trade sponsored electrical junk recycling for Businesses	BTM Board of Trade Middleton	Recycling all electronics, and junk office electronics	BTM Electronics Recycling Day held on 3/27/2010	BTM Electronics Recycling Day planned for Spring of this year.

2.6	Stream Team Cleanup	DPW/Stream Team	Partner with Stream Team and Assist with coordinating activities	Continued partnership and assisted with River, Brook, Pond and Canoe Landing cleanups.	Scheduled Stream Team event to date includes Spring Family Hike 3/27/11 Theme: Vernal Pool Life
Revised				Stream Team Plans Educational Events Including Family Hike 2/7/2010 And Family Hike on 3/28/2010	

3. Illicit Discharge Detection and Elimination

BMP ID#	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)- Permit Year 5-7 (Reliance on non-municipal partners indicated, if any)	Planned Activities Year 8
3.1	Continue mapping stormwater outfalls and receiving waters	DPW	Complete mapping by end of Year 1	Mapping was completed in 2009 and this BMP is 95% complete. New subdivisions information from record drawings will be added to the storm water map. There are 130 outfalls currently mapped. (The majority of these outfalls flow to stormwater BMP's)	The Town has prepared an outfall map in Computer Format. The mapped outfalls include outfalls draining to BMP devices in new subdivisions.
3.2	Visually inspect outfalls for dry weather flow.	DPW	Year 2 through 5: inspect 25% of outfalls per year	Visual inspection of outfalls was completed, most recently during March 2010 flooding. To date, there is no evidence of illicit connections.	Program for continued inspection of outfalls for dry weather flow and during wet weather flow to be developed.
Revised					
3.3	Develop system for detection and elimination of illicit discharges	DPW	Implement system by the end of Year 1.	No evidence of illicit connections observed. There is only 1 private sewer system serving 25 homes.	Based on the results of BMP 3.2, a system for detection and elimination of illicit discharges will be developed and implemented, if necessary, based on

					outfall inspection results.
Revised					
3.4	Update Town Bylaws and Regulations to include storm water ordinances.	Conservation Agent/Town Planner	Year 2: Review existing Bylaws & Regulations; Year 3: propose changes; Year 4: Implement changes (if approved)	Draft Bylaw has been prepared by the Conservation Commission and is being reviewed by various Town departments for adoption by Town. Draft Stormwater regulations have been prepared by the Conservation Commission for approval.	Meeting on By-laws will take place after reviews are completed, by-laws are expected to be approved by 2012.

3a. Additions

3.5	Catalog outfalls discharging into Category 5 impaired waters or discharges in Zone A & B Water Supply Protection areas				Based on the information mapped the TMDL effected waters are: Ref. MA92-06_2008 Ipswich River (Cat. 5) w/12 outfalls. 8 w/ BMP's Ref. MA92-06_2008 Unnamed Tributary (Cat. 5) w/8 outfalls. 4 w/BMP's Zone A & B Water Supply Protection Areas: MA92021_2008 Emerson Brook Reservoir w/5 outfalls. 3 w/BMP's MA92039_2008 Middleton Pond w/3 outfalls. 2 w/BMP's.
3.6	Test outfalls to Category 5 impaired waters and Zone A & B Water Supply Protection areas				Testing to continue this year

4. Construction Site Stormwater Runoff Control

BMP ID#	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)- Permit Year 5-7 (Reliance on non-municipal partners indicated, if any)	Planned Activities-Year 8
4.1	Develop an ordinance requiring developers to prepare an Erosion & Sedimentation Control Plan for all sites disturbing more than 1-acre. Require that the plan be reviewed and approved by the Planning Board. <i>Refer to 4.2 BMP Description and Additions</i>	Conservation Agent/Town Planner	Year 2: Develop ordinance for Con Com and Planning Board approval. Years 3-5: Implement ordinance (if approved).	The Conservation Agent has developed draft bylaws, stormwater regulations, and land disturbance application.	Present revised Bylaws at Annual Town Meeting in 2011 for review and adoption in 2012.
Revised					
4.2	Periodically check erosion control measures and construction material management with on-site inspections. <i>Use existing regulatory mechanisms (such as the Wetland Protection Act) to ensure stormwater BMPs are implemented during construction.</i>	Conservation agent/DPW/Town Planner/Building Inspector	Monitor and track violations through reports to the Con Com and/or Planning Board. <i>Institute policy of Town review of contractor stormwater management plans for all proposed construction projects.</i>	Construction activity within the Town is monitored by the Conservation Agent on a regular basis. This includes site inspections to insure that erosion and sediment control BMPs are in place and being maintained.	This practice will continue.
Revised					

4a. Additions

BMP ID#	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)- Permit Year 5-7 (Reliance on non-municipal partners indicated, if any)	Planned Activities-Year 8
4.3	Construction Site Stormwater Runoff Control	Conservation Agent/Town Planner	Prepare Draft Ordinance for Adoption	Prepare draft to be reviewed by various Town Departments and Committees	Currently Listed as Part B of the Draft Stormwater Bylaw. Present revised Bylaws at Annual Town Meeting in 2011 for review and adoption in 2012.
4.4	Draft Conservation Commission Stormwater Management Regulation	Conservation Agent/Town Planner	Prepare Draft Stormwater Regulations	Draft Completed	The Stormwater Management Regulations proposed are related to the Stormwater Bylaw and includes specific requirements for plans and calculations in accordance with the MDEP Stormwater Handbook.
Revised					Draft Regulations include a Land Disturbance Permit Application to be filled out for new and redevelopment sites

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 5-7 (Reliance on non-municipal partners indicated, if any)	Planned Activities Year 8
5.1	Develop an ordinance requiring stormwater controls for all new and redeveloped projects disturbing more than 1-acre.	Conservation Agent/Town Planner	Year 2: Develop ordinance for ConCom and Planning Board review and approval.	Adoption of new Bylaws is no longer required by MA DEP (ref: letter from DEP Bureau of Resource Protection dated 4/12/2004).	Present revised Bylaws at Annual Town Meeting in December 2010 or May 2012 for adoption.
Revised	<i>Use existing regulatory mechanisms (such as the Wetland Protection Act, and MA DEP Stormwater Policy) to ensure post-construction stormwater BMPs are implemented.</i>	<i>Conservation Agent/DPW/Town Planner/Building Inspector</i>	<i>Institute policy of Town review of contractor stormwater management plans for all proposed construction projects. Stormwater Management Plan to include post-construction monitoring, inspection and maintenance.</i>	The Conservation Agent has developed draft bylaws, stormwater regulations, and land disturbance application. Refer to 4.3 and 4.4	
5.2	Inspect and maintain the stormwater controls required under BMP 5.1.	DPW/ Commercial Property Owners	Inspect and maintain stormwater controls annually.	Construction activity within the Town is monitored by the Conservation Agent on a regular basis. This includes site inspections to insure that post-construction stormwater management BMPs have been adequately installed and a BMP maintenance program is in place.	This practice will continue.
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 5-7 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6.1	Street Sweeping	DPW	Sweep streets annually and track volumes	103 lane miles completed. 378 cy collected in 2010, 432 cy collected in 2009, 402 cy in 2008, 295 cy in 2007	Continue Program
Revised					
6.2	Catch basin cleaning	DPW	Check all catch basin annually and track volumes.	810 catch basins in Town roads. Approx. 150 cy collected CB's in 2010 Approx. 125 cy collected in 436 CB's in 2009, 90 cy in 383 CBs in 2007.	Continue Program
Revised					DPW budgeted cleaning of all catch basins in 2011
Revised					

7. BMP's for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>

BMP ID#	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)- Permit Year 5-7 (Reliance on non-municipal partners indicated, if any)	Planned Activities
	Refer to Sections 3.5 and 3.6	DPW			Test all discharges in Category 5 Impaired waters and Water Supply Protection Zones A and B
Revised					
Revised					

7a. Additions

BMP ID#	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s)- Permit Year 5-7	Planned Activities
Revised					

Part IV. Summary of Information Collected and Analyzed

Municipal storm drain system contains approximately 130 outfalls and 810 catch basins.
 150 cubic yards (cy) removed from 810 catch basins in 2010.
 378 cubic yards of street sweepings from 103 lane miles collected in 2010.
 125 cubic yards (cy) removed from 436 catch basins in 2009.
 432 cy of street sweepings from 103 lane miles collected in 2009.
 Hazardous Waste Collection day held annually.
 Transfer Station accepts lead, fluorescent bulbs, oil, batteries, and mercury containing products year round. Three days a week.

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, 2010 through May 1, 2011)

Programmatic

	(Preferred Units)		Response
	y/n	Y	
Storm water management position created/staffed (DPW Director)			Y
Annual program budget/expenditures **			
Total program expenditures since beginning of permit coverage	(\$)		\$35,000
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)	(\$)		
(Operating Budget)			DPW

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	80%
Storm water management committee established	(y/n)	Y
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 per year
• community participation **	(# or %)	3
• material collected	(tons or gal)	
School curricula implemented	(y/n)	Y

Legal/Regulatory

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

Mapping and Illicit Discharges

	(Preferred Units)		Response
Outfall mapping complete	(%)		95%
Estimated or actual number of outfalls	(#)		130*
System-Wide mapping complete (complete storm sewer infrastructure)	(%)		95%
Mapping method(s)			
• Paper/Mylar	(%)		100%
• CADD	(%)		95%
• GIS	(%)		
Outfalls inspected/screened **	(# or %)		
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)		100%
Illicit discharges identified **	(#)		0
Illicit discharges identified (Since beginning of permit coverage)	(#)		0
Illicit connections removed **	(#); and (est. gpd)		
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)		
% of population on sewer	(%)		0.1%
% of population on septic systems	(%)		99.9%

Construction

	(Preferred Units)	Response
Number of construction starts (> 1-acre) **	(#)	15
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	100%
Site inspections completed **	(# or %)	100%
Tickets/Stop work orders issued **	(# or %)	0
Fines collected **	(# and \$)	0
Complaints/concerns received from public **	(#)	0

Post-Development Stormwater Management

	(Preferred Units)	Response
Estimated percentage of development/redevelopment projects adequately regulated for post-construction storm water control	(%)	100%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100%
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y or n)	Y
Low-impact development (LID) practices permitted and encouraged	(y or n)	N

Operations and Maintenance

	(Preferred Units)	Response
Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	1 per year
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1 per year
Qty of structures cleaned **	(#)	810
Qty. of storm drain cleaned **	(%, LF or mi.)	100% per year
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Cemetery

Operations and Maintenance (cont.)

	(Preferred Units)	Response
Basin Cleaning Costs		Subcontracted
• Annual budget/expenditure (labor & equipment)**	(\$)	\$8,100
• Hourly or per basin contract rate **	(\$/hr or per basin)	\$10.00 Per basin
• Disposal cost **	(\$)	
Cleaning Equipment		Subcontractor
• Clam shell truck(s) owned/leased	(#)	Subcontractor
• Vacuum truck(s) owned/leased	(#)	
• Vacuum trucks specified in contracts	(y/n)	
• % Structures cleaned with clam shells **	(%)	100%
• % Structures cleaned with vactor **	(%)	
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	1
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	1
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 lane mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		Subcontracted
• 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 **	(%)	100%
• % Roads swept with vacuum sweepers **	(%)	
Reduction (since beginning of permit coverage) in application on public land of:		

("N/A" = never used; "100%" = elimination)			
Operations and Maintenance (cont.)		(Preferred Units)	Response
• Fertilizers		(lbs. or %)	
• Herbicides		(lbs. or %)	N/A
• Pesticides		(lbs. or %)	N/A
Integrated Pest Management (IPM) Practices Implemented		(y/n)	
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	70 30
Pre-wetting techniques utilized **		(y/n or %)	Y
Manual control spreaders used **		(y/n or %)	Y
Zero-velocity spreaders used **		(y/n or %)	N
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 %)	100%
% of salt/chemical pile(s) covered in storage shed(s)		(y/n or #)	100%
Storage shed(s) in design or under construction		(y/n)	Y
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008		(y/n or %)	

Water Supply Protection

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