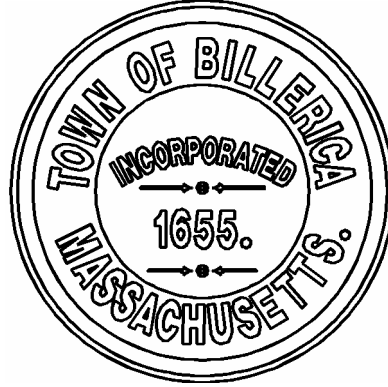


Town of Billerica



**NPDES PII Small MS4 General Permit
Annual Report
(MA041182)
(W-040980)**

YEAR 5

Prepared by:
**The Town of Billerica
Department of Public Works
Engineering Division
365 Boston Road
Billerica, Massachusetts 01821**

Municipality/Organization: Town of Billerica

EPA NPDES Permit Number: MA041182

Mass DEP Transmittal Number: W-040980

**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: Kelley Conway

Title: Town Engineer

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Email: kconway@town.billerica.ma.us

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: Richard J. Scanlon

Title: Interim Town Manager

Date: 4-29-08

Part II. Self-Assessment

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

Planned activities for the next permit term have not been designated unless a BMP under this permit term was not fully completed or is an ongoing effort. Once the General Permit for the next five years is available from EPA, the Town 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
1.3.1 Revised	Partner with local organization	Engineering	Partner with one organization each year.	Continued support with SuAsCo. Partnered with Central Massachusetts Mosquito Control Project.	BMP Complete
1.3.2 Revised	Public Education Materials	BOH <i>BOH & DPW</i>	Stormwater brochure and booth at Health Fair <i>Stormwater brochures available at Town offices and booth at Health Fair</i>	A variety of brochures are available at various offices around town (Water Dept, Conservation, DPW, BOH). Stormwater info included in annual water report and distributed to all town residents and businesses. Developed and distributed informational brochure as part of by-law development. Mailed approximately 250 business brochures from SuAsCo to local businesses. Purchased 4 copies of children's book on stormwater, <i>All the Way to the Ocean</i> , and distributed to various divisions for display.	BMP Complete
1.3.3 Revised	Local schools education program	School Dept.	Present stormwater to two schools each year.	Spoke with representative from Department of Education. Gave them SuAsCo 5 th /6 th Grade curriculum package to review with students.	BMP Complete
1.3.4 Revised	Stormwater Web Page	Engineering	Develop stormwater web page	Updated web page and added additional links and information. Annual Report available for viewing. http://www.billericadpw.org	BMP Complete
1.3.5 Revised	Cable Access TV Show	Engineering	Select a stormwater program for viewing on Billerica Access TV.	Obtained DVD copy of <i>Reining in the Storm: One Building at a Time</i> (Massachusetts Editions) from the North & South Rivers Watershed Association. Video will be played on Billerica Access TV multiple times.	BMP Complete

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
1.3.6	Public Access GIS Tool	Engineering	Provide public access to maps of streams, rivers, storm drains and water quality data by Year 5.	Hired GIS Analyst to coordinate the implementation of Web GIS for public use.	Determine maps that should be available for public use and provide public access in the future.
Revised					
1.4.1	Stormwater flyer to residents	SuAsCo & DPW	No Goal(s) for Yr. 4	N/A	BMP Complete
Revised					
1.4.2	Stormwater lesson plan	SuAsCo & DPW	No Goal(s) for Yr. 4	N/A	BMP Complete
Revised					
1.4.3	Media toolkit and stormwater PowerPoint program	SuAsCo & DPW	Media Packet to local Media	Presented Stormwater Power Point Program to public at informational public meeting 9/26/07 and at the Health and Recreation Fair on 4/12/08.	BMP Complete
Revised					
1.4.4	Business Flyer & Storm Drain Marking	SuAsCo & DPW	Stormwater flyer to 50% of Town businesses	Printed and distributed business flyer to over 250 local businesses. Implemented storm drain marking program, marking storm drains along newly paved roadways. Kits advertised as available to local groups for use. Kit given to school department to mark the drains on school property.	BMP Complete
Revised					
1.4.5	Stormwater video	SuAsCo & DPW	No Goal(s) for Yr. 4	Stormwater video not produced. Will incorporate new materials into next permit education and outreach.	Will incorporate new materials into next permit education and outreach.
Revised	<i>Stormwater Outreach Materials</i>				

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
2.3.1 Revised	Partner / Support a Watershed Organization	Engineering	Partner with one local organization each year.	Continued partnership with SuAsCo.	BMP Complete
2.3.2 Revised	Storm drain stenciling program	Engineering	Develop & Implement drain marking program	Implemented drain marking program, marking storm drains along newly paved roadways.	BMP Complete
2.3.3 Revised	Stormwater Public Meetings Program	Engineering	Discuss stormwater at one or more public meeting each year	Stormwater and the new by-laws discussed at BOH meeting – 8/13/07, Selectmen’s meeting – 8/13/07, Conservation Commission meeting – 8/22/07, Rules Committee meeting – 9/19/07, Finance Committee meeting – 9/25/07, separate public meeting – 9/26/07, and Fall Town meeting – 10/2/07.	BMP Complete
2.3.4 Revised	Substitute 2.3.7	DPW	Substitute 2.3.7	Plan to meet intent of this BMP through 2.3.7 and 1.4.4 (stormwater business flyer)	BMP Complete
2.3.5 Revised	Recreation Department Public Education Program	Engineering	Involve Recreation Department in stormwater public education program each year.	Continue to involve recreational department and identify opportunities for public involvement.	BMP Complete

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
2.3.6	Annual “Clean the Stream” program	Recreation	Recruit volunteers for each years’ stormwater cleaning effort	Held annual Town wide “Green-up” and Town wide “Clean-up” events. Contracted with the Commonwealth of Massachusetts Middlesex Sheriffs Office for assistance with cleaning and preparations of parks, playgrounds, and beach. Contracted with Central Massachusetts Mosquito Control Project to clean 3,240’ of streams.	BMP Complete
Revised					
2.3.7	Develop Stormwater By-Law Advisory Group	Stormwater By-Law Working Group	Hold 1 or more meetings with Advisory Group	Invited local stakeholders and businesses to several meetings (5/21/07, 6/4/07, 6/21/07, and 7/30/07) to provide input on the Draft & Final Stormwater Management By-law.	BMP Complete
Revised					
2.4.1	Stormwater traveling display	SuAsCo & DPW	No Goal(s) for Yr. 4	Display used annually at the Health and Recreation Fair.	BMP Complete
Revised					
2.4.2	Stormwater poster contest	SuAsCo & DPW	Poster contest winners selected	Year 3 product eliminated by SuAsCo	N/A
Revised					
2.4.3	Stormwater photo contest	SuAsCo & DPW	Photo contest advertised	Year 3 product eliminated by SuAsCo	N/A
Revised					
2.4.4	Stormwater summit special event	SuAsCo & DPW	Promote stormwater summit	Held stormwater public hearing on 9/26/07 as part of by-law adoption process.	BMP Complete
Revised					
2.4.5	Stormwater super summit	SuAsCo & DPW	Host or attend watershed wide super summit	Attended Massachusetts Watershed Coalition Meeting with workshops on Community Stormwater Advocacy on 1/31/08.	BMP Complete
Revised					

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
3.4.1 Revised	Asset Management Program	Engineering	Develop stormwater Asset Management program.	Developed asset management program to track public complaints, catch basin cleaning efforts, and drainage repairs.	BMP Complete
3.4.2 Revised	Storm Drain Map	Engineering	GPS field effort of drainage structures.	All of the Town’s outfalls have been mapped. Continue to verify accuracy and completeness of consultant’s drain map. Efforts not complete. Hired GIS Analyst to continue with this effort.	Continue to verify accuracy and completeness of consultant’s drain map.
3.4.3 Revised	TMDL, Critical Habitat, Historic Property	Engineering	Monitor changes in TMDL, Critical Habitat & Historic Site	Assessed critical habitats and historic sites and found no change. Reviewed the <i>Bacteria for Shawsheen River Basin</i> report and the <i>Draft Pathogen TMDL for the Concord River Watershed</i> report. Created plan to summarize Town actions to address TMDL recommendations and recommended future actions.	BMP Complete
3.4.4 Revised	Stormwater By-Law	Board of Health	Develop stormwater requirements regulated by Board of Health	Continued working with consultant and Working/Advisory Groups to develop stormwater by-law and changes to Board of Health Regulations. By-law submitted and approved at Fall Town Meeting. Awaiting approval from Attorney General’s office.	BMP Complete
3.4.5 Revised	Illicit Discharge Detection Program	DPW	Develop phased illicit discharge detection program.	Continued program to find illicit discharges. Based on results of dry weather sampling conducted in 2005, 6 outfalls were resampled to confirm presence of an illicit connection. 1 of the outfalls indicated a possible illicit connection. Drainage tributary to outfall will be investigated in Spring 2008.	BMP Complete

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
3.4.6 Revised	Illicit Discharge Elimination Program	DPW <i>Board of Health</i>	Enforce illicit discharges by-law	By-law Governing Discharges submitted and approved at Fall Town Meeting. Enforcement will be implemented upon approval of by-law from Attorney General's office.	Enforcement of any illicit discharges found will be implemented upon approval of by-law from Attorney General's office.
3.4.7 Revised	Resident education program	DPW	Develop and distribute fliers defining illicit discharges and summarizing the Town Stormwater Regulations	Flier explaining new stormwater management by-laws developed and distributed to all town meeting members, placed on the website and available at town hall for viewing.	BMP Complete

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
4.2.1 Revised	Regulatory Controls	Board of Health	Develop “Erosion & Sediment Control” by-law	Erosion and sediment control was incorporated into the Stormwater Management By-law which was submitted and approved at Fall Town Meeting. Awaiting approval from Attorney General’s office.	BMP Complete
4.2.2 Revised	Review and site inspection procedures	Board of Health	Sanctions developed and included in regulations to ensure compliance	Stormwater Management By-law was approved at Fall Town Meeting. Sanctions that include enforcement measures are included in the by-law and will also be included in the Rules and Regulations.	BMP Complete
4.2.3 Revised	Enforcement procedures	Board of Health	Develop and implement enforcement procedures and sanctions for stormwater violators	Stormwater Management By-law was approved at Fall Town Meeting. Enforcement procedures and sanctions for stormwater violators are part of the Stormwater Management By-law.	BMP Complete
4.2.4 Revised	Procedures for Handling Public Comments	DPW	Develop & implement public comment procedure	Developed a stormwater complaint tracking form for residents to fill out. Form will be placed online. Information will be inventoried as part of the asset management program.	Place form online; inventory complaints received.

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
5.3.1 Revised	Structural stormwater controls	Planning Board	Revise subdivision rules and regulations with new BMP's	N/A. Completed Year 2.	BMP Complete
5.3.2 Revised	Local By-Laws	Stormwater By-Law Working Group	Develop General By-Law	Stormwater Management By-law was approved at Fall Town Meeting. By-law addresses post-construction stormwater management.	BMP Complete
5.3.3 Revised	Planning Strategies	Engineering	Review Current Town Master Plan	Reviewed Master Plan. Drafted stormwater management language for insertion with the next version of the Master Plan. Language includes a write-up on how the Town's Stormwater Management Program protects water resources, mitigates non-point source pollution, and protects sensitive areas from development.	BMP Complete
5.3.4 Revised	Conditions for private stormwater systems	BOH	Develop maintenance requirements for private stormwater systems	Stormwater Management By-law was approved at Fall Town Meeting. Bylaw addresses post-construction stormwater management. Rules and Regulations will include specific operation and maintenance requirements for stormwater systems.	BMP Complete
5.3.5 Revised	Stormwater infrastructure inspection program	Engineering	Develop technology based inspection program	Stormwater Management By-law was approved at Fall Town Meeting. Developed asset management program to track BMP Maintenance.	BMP Complete

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
6.3.1 Revised	Pollution Prevention Planning	Highway Dept.	Develop a Stormwater Pollution Prevention Plan	In coordination with Woodard & Curran, developed a Stormwater Pollution Prevention Plan (SWPPP). Plan includes BMP fact sheets applicable to the Town’s municipal operations.	BMP Complete
6.3.2 Revised	Employee Training Program	DPW	Implement employee training program	Finalized development of a training program for department employees. Training workshop was held on April 15, 2008. Facility managers attended workshop and signed a training workshop attendance sheet to track attendance. Participated in several US EPA Stormwater Webcast Series Events and attended a MassDEP Circuit Rider Workshop.	BMP Complete
6.3.3 Revised	Recycling Program	Highway Dept.	Monitor recycling program & enhance if necessary	Annual hazardous waste day and continuously operated oil recycling program available on monthly basis. Mandatory recycling instituted on October 1, 2007. Recycling and Trash Collection Guide distributed to residents and available on the DPW website http://www.billericadpw.org . Rain barrels made available for Billerica residents to purchase this year at a discounted price from The New England Rain Barrel Company.	BMP Complete
6.3.4 Revised	Catch Basin Cleaning Program	Highway Dept.	Clean catch basins each year and monitor pounds of sediment removed.	Cleaned all Town catch basins in 2007. Created catch basin cleaning form for contractor to fill out in order to assess heavily sedimented catch basins. Information will be inventoried as part of asset management program.	BMP Complete

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
6.3.5	Street Sweeping Program	Highway Dept.	Sweep Streets each year and monitor pounds of sediment removed.	Street sweeping of all Town roadways was conducted in Spring/Summer 2007. Main roadways were swept again in Fall 2007. Highway Department to begin monitoring pounds of sediment removed.	BMP Complete
Revised					
6.3.6	Operations and Maintenance	DPW	Inventory ongoing stormwater maintenance activities	Inventoried Town facilities and applicable stormwater maintenance activities and developed BMP fact sheets to reduce sources of pollutant runoff. This information is available in the SWPPP and was distributed to Town facility managers.	BMP Complete
Revised					
6.3.7	Reporting	DPW	Continue to track stormwater management activities and submit annual report	Continued to track stormwater management activities and submitted annual report.	BMP Complete
Revised					

6a. Additions

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
6.3.8	Mosquito Control Project & Drainage System Maintenance	Engineering	Record of improved drainage system inspection and maintenance.	Through the efforts of the Central Massachusetts Mosquito Control Project, brush and other accumulated debris was removed from culverts and streams. Efforts also included insertion of larvacides in Town catch basins.	BMP Complete
Revised					

7. BMPs 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 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit
7.2.1	Monitor Current Impairment Lists	DPW	Continue to monitor TMDL studies annually and develop programs as appropriate.	Reviewed the <i>Bacteria for Shawsheen River Basin</i> report and the <i>Draft Pathogen TMDL for the Concord River Watershed</i> report. Created plan to summarize Town’s actions to address TMDL recommendations and recommended future actions.	BMP Complete
Revised					

7b. WLA Assessment

Billerica’s MS4 discharges into the Shawsheen River, which has an approved Final TMDL for Bacteria. Because the TMDL is for a pollutant likely to be found in storm water discharges from Billerica’s MS4, their Stormwater Management Program includes BMPs that address the waste load allocation (WLA) from point sources that include illicit connections to the drainage system and urban stormwater runoff. Billerica’s Stormwater Management Program includes a number of existing stormwater control measures, as reported in the above Annual Report, that address pollutants of concern in water quality impaired waters. The BMPs identified under Minimum Control Measures (MCMs) 1 through 6, including, but not limited to, those relating to public education, implementation of the by-laws that regulate illicit discharges, construction and post-construction runoff; illicit discharge detection program, drainage mapping, employee training, and the good housekeeping measures such as street sweeping and catch basin cleaning all help prevent pollutants such as bacteria from entering the water bodies within Town that include the Shawsheen River. In addition, Billerica has a leash law with “pooper-scooper” provisions in General By-laws, Article VII, Section 2 - Regulation of Dogs, pet stations for proper pet waste disposal, and the Board of Health regulates the design, construction, and inspection of septic systems and leach fields.

The Pathogen TMDL for the Concord River Watershed is still draft and has not been approved.

Part IV. Summary of Information Collected and Analyzed

N/A

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)	Yes
Annual program budget/expenditures **	(\$)	\$ 196,261
Total program expenditures since beginning of permit coverage	(\$)	\$ 891,917
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		Town Meeting Appropriation, Operational Budget and General Fund

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	100%
Stormwater management committee established	(y/n)	Yes
Stream teams established or supported	(# or y/n)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	.6 mi
Shoreline cleaned since beginning of permit coverage	(mi.)	>3.7 mi
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	12
▪ community participation **	(# or %)	323

<ul style="list-style-type: none"> material collected ** 	Oil Flammables Oxidizers Pesticides Corrosives Other Mercury	(tons or gal)	1500 gal 13 containers 3 containers 4 containers 2 containers 13 containers 1 container
School curricula implemented		(y/n)	Partial

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "X")					
<ul style="list-style-type: none"> Illicit Discharge Detection & Elimination 					X
<ul style="list-style-type: none"> Erosion & Sediment Control 					X
<ul style="list-style-type: none"> Post-Development Stormwater Management 					X
Accompanying Regulation Status (indicate with "X")					
<ul style="list-style-type: none"> Illicit Discharge Detection & Elimination 					N/A
<ul style="list-style-type: none"> Erosion & Sediment Control 				X	
<ul style="list-style-type: none"> Post-Development Stormwater Management 				X	

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete	(%)	100
Estimated or actual number of outfalls	(#)	467
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100
Mapping method(s)		
<ul style="list-style-type: none"> Paper/Mylar 	(%)	
<ul style="list-style-type: none"> CADD 	(%)	
<ul style="list-style-type: none"> GIS (Note: 86% of structured located with GPS. 14% converted to GIS from existing maps.) 	(%)	100
Outfalls inspected/screened **	(# or %)	6
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	100%

Illicit discharges identified **	(#)	1 potential
Illicit discharges identified (Since beginning of permit coverage)	(#)	1 potential
Illicit connections removed **	(#); and (est. gpd)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	0
% of population on sewer	(%)	73
% of population on septic systems	(%)	27

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)	1
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1

Qty of structures cleaned **	(#)	3362
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	375 ton
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	83,438
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	\$24.82 per basin
• Disposal cost**	(\$)	Included in above cost
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	2
• Vacuum truck(s) owned/leased	(#)	1
• Vacuum trucks specified in contracts	(y/n)	No
• % Structures cleaned with clam shells **	(%)	99
• % Structures cleaned with vactor **	(%)	1

	(Preferred Units)	Response
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)	2-3
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	Not available
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill (BFI)
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	n/a
• Disposal cost**	(\$)	n/a
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	2
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	No
• % Roads swept with rotary brush sweepers **	%	100
• % Roads swept with vacuum sweepers **	%	0

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	99.0% 0 0.5% 0 0 0 0.5%
Pre-wetting techniques utilized **	(y/n or %)	No
Manual control spreaders used **	(y/n or %)	No
Zero-velocity spreaders used **	(y/n or %)	No
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/l _n mi. or %)	n/a
Estimated net reduction or increase in typical year sand application rate **	(±lbs/l _n mi. or %)	n/a
% of salt/chemical pile(s) covered in storage shed(s)	(%)	100
Storage shed(s) in design or under construction	(y/n or #)	No (In place)
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Yes

Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	No
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	No
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	No