

Town of Billerica



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

YEAR 8

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 Year 8
& Reporting Period: April 1, 2010 – March 31, 2011

NPDES PII Small MS4 General Permit Annual Report (Due: April 29, 2011)

Part I. General Information

Contact Person: Kelley Conway

Title: Town Engineer

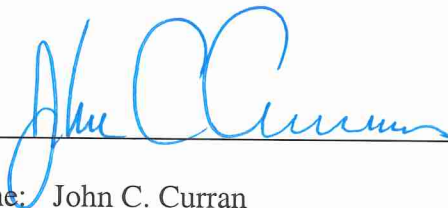
Telephone #: 978-671-0955

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: John C. Curran

Title: Town Manager

Date:

4/27/2011

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 8 (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 & DPW	Stormwater brochures available at Town offices and booth at Health Fair	A variety of brochures and books 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. Stormwater bulletin board at Town Hall was updated. Distributed information at the Health and Wellness Fair on 4/10/10.	BMP Complete
1.3.3 Revised	Local schools education program	School Dept.	Present stormwater to two schools each year.	Partnered with Woodard and Curran and the Ditson School to participate in World Water Monitoring Day.	BMP Complete
1.3.4 Revised	Stormwater Web Page	Engineering	Develop stormwater web page and update as needed	Web page continually updated with additional links and information. Stormwater Think Green presentation added to website. Annual Report available for viewing at www.billericaadpw.org	BMP Complete
1.3.5 Revised	Cable Access TV Show	Engineering	Select a stormwater program for viewing on BATV.	<i>After The Storm</i> DVD was played on Billerica Access TV multiple times. Think Green - Stormwater presentation played on BATV multiple times.	BMP Complete

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (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.	Provided online access to several maps including the Green Engineering Flood Plain maps and the Stormwater system map through the Billerica DPW website.	Determine additional 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. 8	Stormwater Flyers are available at various offices around town (Water Dept, Conservation, DPW, BOH).	BMP Complete
Revised					
1.4.2	Stormwater lesson plan	SuAsCo & DPW	No Goal(s) for Yr. 8	The School Department has a copy of the lesson plan available for the teachers to use.	BMP Complete
Revised					
1.4.3	Media toolkit and stormwater PowerPoint program	SuAsCo & DPW	No Goal(s) for Yr. 8	No activities were planned for Permit Year 8.	BMP Complete
Revised					
1.4.4	Business Flyer & Storm Drain Marking	SuAsCo & DPW	Stormwater flyer to 50% of Town businesses	Stormwater Business Flyers are available at various offices around town (Water Dept, Conservation, DPW, BOH). Continued storm drain marking program See BMP 2.3.2.	BMP Complete
Revised					
1.4.5	Stormwater Outreach Materials	SuAsCo & DPW	No Goal(s) for Yr. 8	Stormwater postcards distributed to different Town departments for handout and display. Pet Waste postcards distributed with new dog licenses. Stormwater Think Green powerpoint presentation played on BATV several times.	BMP Complete
Revised					

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (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. Attended UNH Stormwater BMP workshop on 6/8/2010, Porous Pavement workshop on 6/23/2010 and SuAsCo Paying for Stormwater Management Workshop on 1/18/11.	BMP Complete
2.3.2 Revised	Storm drain stenciling program	Engineering	Develop & Implement drain marking program	Continued with storm drain marking program.	BMP Complete
2.3.3 Revised	Stormwater Public Meetings Program	Engineering	Discuss stormwater at one or more public meetings each year	The Stormwater Management Regulations were adopted at the Board of Health Public Hearing held on April 5, 2010.	BMP Complete
2.3.4 Revised	Substituted 2.3.7 in Permit Year 4	DPW	No Goal(s) for Yr. 8	N/A	N/A
2.3.5 Revised	Recreation Department Public Education Program	Engineering	Involve Recreation Department in stormwater public education program each year.	Recreation Dept has stormwater posters and postcards on display. Billerica Recreation continues to support the Take 5 Patch Program and continually educates the public about proper pet care. Pet Waste Stations are installed and maintained at most public parks throughout Billerica.	BMP Complete

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit
2.3.6 Revised	Annual “Clean the Stream” program	Recreation	Recruit volunteers for each years’ stormwater cleaning effort	Held annual Town wide “Clean-up/Green-up” event. 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 4,085’ of streams and 58 culverts.	Working with Billerica Community Alliance for Clean-up/Green-up for April 30, 2011.
2.3.7 Revised	Develop Stormwater By-Law Advisory Group	Stormwater By-Law Working Group	No Goal(s) for Yr. 8	BMP Complete	BMP Complete
2.4.1 Revised	Stormwater traveling display	SuAsCo & DPW	No Goal(s) for Yr. 8	Display used annually at the Health and Recreation Fair. New “Think Green” display received in Year 6 and exhibited at the Town Hall.	BMP Complete
2.4.2 Revised	Stormwater poster contest	SuAsCo & DPW	No Goal(s) for Yr. 8	Year 3 product eliminated by SuAsCo	N/A
2.4.3 Revised	Stormwater photo contest	SuAsCo & DPW	No Goal(s) for Yr. 8	Year 3 product eliminated by SuAsCo	N/A
2.4.4 Revised	Stormwater summit special event	SuAsCo & DPW	No Goal(s) for Yr. 8	BMP Complete in Permit Year 5	BMP Complete
2.4.5 Revised	Stormwater super summit	SuAsCo & DPW	No Goal(s) for Yr. 8	BMP Complete in Permit Year 5	BMP Complete

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit
3.4.1 Revised	Asset Management Program	Engineering	Implement stormwater Asset Management program.	Continued with implementation of asset management program to track public complaints, catch basin cleaning efforts, and drainage repairs. Coordinated with Highway Division regarding implementation of the catch basin O&M forms.	BMP Complete
3.4.2 Revised	Storm Drain Map	Engineering	Complete and update Town-wide GIS drainage map	All of the Town's outfalls and receiving waters have been mapped. All of the Town's drainage system, including catch basins, manholes, and connectivity, has also been mapped. Continue to verify accuracy and completeness of drain map.	On going review of drain map.
3.4.3 Revised	TMDL, Critical Habitat, Historic Property	Engineering	Monitor changes in TMDL, Critical Habitat & Historic Site	No additional TMDLs have been finalized for Billerica's receiving waters, and there are no changes to the Town's General Permit eligibility under the ESA or National Historic Preservation Act.	BMP Complete
3.4.4 Revised	Stormwater By-Law	Board of Health	Implement approved Stormwater By-law.	The "By-law Governing Discharges to the Municipal Storm Sewer System" was adopted as Article XXVI in the Town's General By-laws. The Board of Health is responsible for implementation of the by-law as needed.	BMP Complete
3.4.5 Revised	Illicit Discharge Detection Program	DPW	Implement IDDE Program.	Based on results of dry weather sampling conducted in 2005, 6 outfalls were resampled in April 2008. Follow-up of the possible illicit connection was performed in 2009 and no illicit connection was found. No further action is required at this time.	BMP Complete

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit
3.4.6 Revised	Illicit Discharge Elimination Program	Board of Health	Enforce illicit discharges by-law	The "By-law Governing Discharges to the Municipal Storm Sewer System" was adopted as Article XXVI in the Town's General By-laws. Continue to investigate possible illicit discharges, respond to public complaints, and take appropriate action.	Enforce the new by-law by responding to public complaints and through ongoing illicit discharge detection activities by the DPW
3.4.7 Revised	Resident education program	DPW	Develop and distribute fliers defining illicit discharges and summarizing the Town Stormwater Regulations	Information regarding the new stormwater management by-laws was included in the annual Water Quality Report which is distributed to all Town Residents. Information regarding the by-laws is on the DPW website and is available at the Board of Health 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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit
4.2.1	Regulatory Controls	Board of Health	Develop “Erosion & Sediment Control” by-law & enhance as appropriate.	Erosion and sediment control was incorporated into the Stormwater Management By-law which was adopted as Article XXV in the Town’s General By-Laws. No changes are necessary at this time.	BMP Complete
Revised					
4.2.2	Review and site inspection procedures	Board of Health	Review new site plans against the by-law	Construction site review and site inspection procedures are included in the Stormwater Management By-law and in the Stormwater Management Regulations. The Stormwater Management Regulations were adopted at the Board of Health Public Hearing held on April 5, 2010. In October 2010, the Board of Health and Engineering began to create forms and guidance to facilitate implementation of the Stormwater Management Permit.	The Board of Health plans to finalize the necessary forms and guidance for applicants this year. This will include formalizing a multi-phased site inspection procedure.
Revised					
4.2.3	Enforcement procedures	Board of Health	Develop and implement enforcement procedures and sanctions for stormwater violators	Enforcement procedures and sanctions for stormwater violators are included in the Stormwater Management By-law and in the Stormwater Management Regulations. The Stormwater Management Regulations were adopted at the Board of Health Public Hearing held on April 5, 2010.	BMP Complete
Revised					
4.2.4	Procedures for Handling Public Comments	DPW	Develop & implement public comment procedure	Currently using the DPW website to receive comments.	Continue to work with other Departments to track these.
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 8 (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	Planning Board is in the process of reviewing the subdivision rules and regulations to make them consistent with the Town's new stormwater by-laws and regulations and incorporate LID features into the regulations.	BMP Complete
5.3.2 Revised	Local By-Laws	Stormwater By-Law Working Group	Develop General By-Law	The Stormwater Management By-law was adopted as Article XXV in the Town's General By-laws. By-law addresses post-construction stormwater management.	BMP Complete
5.3.3 Revised	Planning Strategies	Engineering	Review Current Town Master Plan	Draft stormwater management language sent to Planning Division in 2009 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	The Stormwater Management By-law was adopted as Article XXV in the Town's General By-laws. The Stormwater Management Regulations were adopted at the Board of Health Public Hearing held on April 5, 2010 and include operation and maintenance requirements for private stormwater systems. In October 2010, the Board of Health and Engineering began to create forms and guidance to facilitate implementation of the Stormwater Management Permit.	The Board of Health plans to finalize the necessary forms and guidance for applicants this year. This will include a template for Inspection and Maintenance Agreements and an example Annual O&M Inspection Report.
5.3.5 Revised	Stormwater infrastructure inspection program	Engineering	Develop technology based inspection program	Working to implement the 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 8 (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	Reminder sent to all applicable Town offices to review and update their Stormwater Pollution Prevention Plan (SWPPP). Continued with vehicle washing program for DPW.	BMP Complete
6.3.2 Revised	Employee Training Program	DPW	Implement employee training program	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.	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. 2011 Recycling and Trash Collection Guide distributed to residents and available on the DPW website at www.billericadpw.org . Rain barrels made available for Billerica residents to purchase in April at a discounted price from The New England Rain Barrel Company. Composters were also made available for Billerica residents to purchase.	BMP Complete. Continue these programs as budget allows.
6.3.4 Revised	Catch Basin Cleaning Program	Highway Dept.	Clean catch basins each year and monitor pounds of sediment removed.	Catch basin cleaning was contracted out this year. The contractor cleaned 4,056 catch basins from October 2010 to December 2010. Highway performed routine inspections and rebuilt basins as needed.	Continue to clean catch basins each year as required.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (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 from May thru Sept 2010. Highway Division monitored sediment removed.	Continue to sweep streets as required
Revised					
6.3.6	Operations and Maintenance	DPW	Inventory ongoing stormwater maintenance activities	Performed updates to SWPPPP for all Town facilities.	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 8 (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)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 7 (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 stormwater 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 is making steady progress towards meeting the Shawsheen River Fecal Coliform WLAs through implementation of a number of existing stormwater control measures, as reported in the above Annual Report, that address pollutants of concern in water quality impaired waters.

To address Illicit Sewer Connections WLA, the Town has implemented the following BMPs under the Illicit Discharge Detection and Elimination Minimum Control Measure:

- Asset Management Program including improvements in Billerica's public complaint response and tracking (BMP 3.4.1);
- Storm Drain Mapping (BMP 3.4.2);
- Stormwater By-law that addresses illicit discharges and illegal dumping, adopted at the October 2007 Town Meeting (BMP 3.4.4);
- Illicit Discharge Detection Program, which is ongoing (BMP 3.4.5);
- Illicit Discharge Elimination Program, now enforceable by the Board of Health through the new stormwater by-law (BMP 3.4.6); and
- Resident Education (BMP 3.4.7).

To address the Urban Stormwater Runoff WLA, the Town has implemented the following BMPs in the Stormwater Management Program:

- Construction Site Runoff Control through Billerica's Stormwater Management Bylaw, adopted at the October 2007 Town Meeting (BMPs 4.2.1, 4.2.2 and 4.2.3);
- Post-construction Stormwater Management through Billerica's Stormwater Management Bylaw (BMPs 5.3.2 and 5.3.4); and
- Catch Basin Cleaning and Street Sweeping Programs to keep debris from filling catch basins and maintain proper drainage system function (BMPs 6.3.4 and 6.3.5).

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. Postcards concerning proper disposal of pet waste are distributed with new dog licenses. The

Board of Health regulates the design, construction, and inspection of septic systems and leach fields. The Town recently updated their Comprehensive Wastewater Management Plan (CWMP), and a Sewer System Rehabilitation contract was awarded and repairs made to existing sewer infrastructure to reduce sewer line leaks and pump station overflows.

Pathogen TMDL for the Concord River Watershed is still draft and has not been approved. The Town does not plan to add any additional BMPs to meet TMDL requirements at this time. Billerica's plan to meet watershed specific TMDL requirements is described in detail in the March 2008 memorandum entitled, *Best Management Practices to Address Shawsheen and Concord River TMDLs*, on file at the Engineering Office.

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, 2010 through March 31, 2011)

Programmatic

	(Preferred Units)		Response
	(y/n)	Yes	
Stormwater management position created/staffed			
Annual program budget/expenditures **	(\$)	\$ 149,393.26	
Total program expenditures since beginning of permit coverage	(\$)	\$ 1,389,301.04	
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.)	1.23 mi
Shoreline cleaned since beginning of permit coverage	(mi.)	6.15 mi
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	12
▪ community participation **	(# or %)	462

material collected **	Oil Flammables Oxidizers Pesticides Corrosives Other Mercury	(tons or gal) 	1,004 gal 0 tons 0 tons 0.58 tons 0.23 tons 2.46 tons 165 gallons .003 tons
School curricula implemented		(y/n)	Partial

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					X
Erosion & Sediment Control					X
Post-Development Stormwater Management					X
Accompanying Regulation Status (indicate with "X")					
Illicit Discharge Detection & Elimination					N/A
Erosion & Sediment Control					X
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)		
Paper/Mylar	(%)	
CADD	(%)	
GIS (Note: 75% of structured relocated with GPS. 25% previous GIS from existing maps.)	(%)	100
Outfalls inspected/screened **	(# or %)	0
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)	0
Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	0
% of population on sewer	(%)	76
% of population on septic systems	(%)	24

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	(%)	100 %
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100 %
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	Yes
Low-impact development (LID) practices permitted and encouraged	(y/n)	Yes

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	1 / year
--	------------	----------

Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1 / year
Qty of structures cleaned **	(#)	4,056 Ea.
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	219.06 tons
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Warren Landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	\$26.21 / basin
• Disposal 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 **	(%)	
• % Structures cleaned with vacor **	(%)	

(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)	Approximately 1,160,000 lbs
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	(#)	3
• 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	98.5%
	% CaCl ₂	0
	% MgCl ₂	0.5%
	% CMA	0
	% Kac	0
	% KCl	0
	% Sand	1.0%
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/ln mi. or %)	n/a
Estimated net reduction or increase in typical year sand application rate **	(±lbs/ln 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

