

Municipality/Organization:	Town of Winthrop
EPA NPDES Permit Number:	MAR051085
MassDEP Transmittal Number:	W040721
Annual Report Number & Reporting Period:	Year 9 April 1, 2011 – March 31, 2012

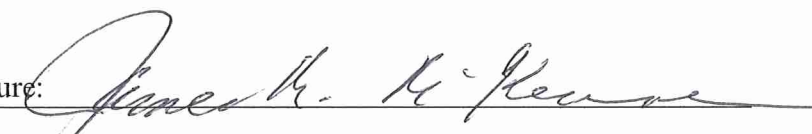
**NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2012)**

Part I. General Information

Contact Person: Steven R. Calla	Title: Director 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: James M. McKenna

Title: Town Manager

Date: 4/3/12

Part II. Self-Assessment

In Permit Year 9 (April 1, 2011 through March 31, 2012), the Town of Winthrop continued to implement its Stormwater Management Program. During 2011, the Town underwent a change in Department of Public Works (DPW) staff. DPW staff are critical to implementing the Stormwater Management Program. The new DPW Director, with the assistance from consultants, re-assessed the Town's Stormwater Management Program and the new staff has begun taking a proactive approach to permit compliance.

As part of developing the annual report, the Town evaluates compliance of the stormwater management program with the conditions of the *NPDES General Permit for Stormwater Discharges from Small MS4s*, effective May 1, 2003, as required by Part II.D.1 of the permit. This year's evaluation shows the Town has implemented the majority of the Best Management Practices (BMPs) identified in the Notice of Intent (NOI) and met many of the measurable goals for these BMPs.

As part of the annual report development, the Town also evaluated the appropriateness of all BMPs in efforts towards achieving the defined measurable goals. BMPs and measurable goals continue to be appropriate, except those improved and noted below:

- BMP ID 1.c was expanded beyond auto repair shops to education of public about stormwater pollution.
- BMP ID 3f – *Education about Illicit Discharges/ Illegal Dumping* was added.
- BMP ID 7a – *Enforce Dog waste Ordinance* was added.

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1a Revised	Distribute/ Post Nonpoint Source Pollution Posters	DPW Director	Hang posters	Measurable goal met. In Permit Year 9, the Town posted new and updated non-point source posters at the Library, Town Hall, Schools, DPW, and Chamber of Commerce, featuring education about fertilizers, cigarette butts, and pet waste.	As budget and staff time allow, continue to make posters available. Town will reassess value of posters for compliance with public education and outreach requirements of North Coastal Small MS4 General Permit, once finalized.
1b Revised	Air Stormwater Message on Local Cable Channel	DPW Director YR09: DPW Director and WCAT	Air PSAs	Measurable goal met by running "Help Prevent Pollution – Become Educated on Stormwater Drains" on WCAT in previous permit years. In Permit Year 9, no PSAs were run due to limits on budget and staff time, and change in Town Staff.	Town is working to obtain and air new PSAs, including the <i>Think Blue Massachusetts PSA</i> and <i>EPA's Reduce Runoff: Slow it Down, Spread it Out, Soak it In!</i> . Town will reassess value of PSAs for compliance with public education and outreach requirements of North Coastal Small MS4 General Permit, once finalized.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1c Revised	Obtain/Distribute Auto Repair Shop and Similar Brochures <i>Educate public about the impact of stormwater discharges on waterbodies and steps/ activities public can take to reduce stormwater pollution.</i>	DPW Director	Print and mail letters <i>Make brochures available and information on Town website available.</i>	Measurable goal met by mailings sent in previous permit years. DPW distributed letters to auto repair shops in April 2006, August 2008, and August 2009. Town also maintains Water Conservation and Clean Water – Everybody's Business brochures in DPW. Town also makes information available on Town's Conservation Commission and DPW website (See BMP 1d)	Town will continue public education and outreach activities to provide information concerning the impact of stormwater discharges on waterbodies and activities the public can take to reduce the pollutants in stormwater runoff. Town will reassess its public education and outreach program for compliance with requirements of North Coastal Small MS4 General Permit, once finalized.
1d Revised	Add Stormwater Information to Town's Website	DPW Director	Frequent updates	Measurable goal met. Stormwater information originally posted on Town's website in Permit Year 3. In Permit Year 9, Town website was revised to include updated Stormwater Management Program information, including on the impact of stormwater on waterbodies and steps/ activities the public can take to reduce pollution in stormwater. See http://www.town.winthrop.ma.us/pages/winthropMA_DPW/stormwater .	As budget and staff time allow, revise website as needed to comply with North Coastal General Permit.

1a. Additions

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2a Revised	Maintain Stormwater Advisory Committee (SAC)	DPW Director	Create in Year 2; quarterly meetings in Years 3 - 5 <i>Hold SAC meetings as needed.</i>	Component eliminated in Year 7. Due to pending new permit, this BMP was reinstated in Permit Year 9. Town did not have formal SAC meetings in Permit Year 9, but discussions about stormwater occur through existing plan review procedures and interdepartmental coordination between Planning, Health, Conservation, and Building.	Continue interdepartmental coordination as needed. Reassess need for SAC once North Coastal General Permit is issued.
2b Revised	Encourage Public Participation in Household Hazardous Waste Collection	DPW	Provide collection for residents one per month Years 3 - 5 <i>Provide HHW collection.</i>	Held HHW collection four times in 2011. In addition, Town removes trash on a daily basis from 45 trash barrels located throughout the Town. Information on HHW collection is provided on Town website: http://www.town.winthrop.ma.us/Pages/WinthropMA_DPW/trashandrecycling	As Town budget allows, continue to hold HHW collection.
2c Revised	Implement Catch Basin Stenciling Program	DPW Director	Purchase and install Decals	Measurable goal met. In prior years, Town has installed “No Dumping – Drains to Ocean” catch basin markers on numerous catch basins. Due to changes in Town Staff and budget limitations, in Permit Year 9, catch basin program was delayed.	Town may re-instate program as budget and time allows, pending new permit requirements.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2d	Hold Water Resource Cleanup Days, and Advertise Belle Isle Day	DPW Director	Collect trash and debris	The Winthrop Cares committee holds cleanups throughout Town. In May 2011, Winthrop Cares held cleanups at: *French Square *Yerrill Beach *Massa Playground *Coughlin Park *Crest Ave Park *Shore Drive - Beacon Circle *Lewis Lake Playground *High School baseball field *Cummings School *Gorman School *Middle School *High School and baseball fields.	Hold additional cleanups as needed, and as budget and staff time allow.
Revised		DPW Director & Conservation Commission	Collect trash and debris	On July 9, 2011, State Rep. Bob DeLeo sponsored a Winthrop Beach Cleanup. In addition, the Friends of Belle Isle Marsh sponsored the Belle Isle Marsh Spring cleanup, held on April 30, 2011.	
Revised					
Revised					

2a. Additions

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3a	Map Outfalls and Receiving Waters	DPW Director	Map outfalls during Years 2 & 3 Update Existing Maps and Field verify information as needed	BMP complete. Town has a paper map of its drainage system, which shows location of MS4 outfalls and receiving water bodies, and locations of drainage structures (CBs, DMH), as well as pipe direction. Town also has a field atlas from December 2010 that shows locations of outfalls identified during IDDE work.	Town is working to obtain GIS capabilities that will include drainage system maps. Town will continue to update mapping as needed and to comply with the terms of the North Coastal Small MS4 General Permit, once finalized.
Revised					
3b	Review existing Bylaws and Regulations	Planning Department & DPW Director	Determine if existing bylaws/regulations adequate Year 2	BMP complete. Town determined a new IDDE bylaw was needed. On October 20, 2009, the Town Council voted to approved the Municipal Stormwater Ordinance that regulates illicit discharges and connections, and illegal dumping to the MS4.	DPW to enforce ordinance as needed.
Revised					
3c	Develop Illicit Discharge Detection & Elimination Plan	Planning Department & DPW Director	Draft IDDE Plan	Town has implemented IDDE program requirements in priority areas, including dry weather observations of outfalls and dry weather sampling. In 2010, 79 outfall locations were identified for dry weather observation, and 18 outfalls were sampled for pH, temperature, fluoride, ammonia, potassium, and surfactants.	Town will continue IDDE program as needed and will revise IDDE plan to comply with the terms of the North Coastal Small MS4 General Permit, once finalized.
Revised	Develop and implement IDDE Plan		Develop Plan and begin implementation. Screen outfalls during dry weather conditions.	For IDDE work, the Town utilizes the EPA New England IDDE Protocol dated December 2008.	

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3d	Develop/Modify General Illicit Discharge Bylaw	Planning Board & DPW Director	Recommend modification/development of bylaw Year 2	BMP complete. Town hired a consultant and drafted bylaw in Permit Year 5. On October 20, 2009, the Town Council voted to approve the municipal stormwater ordinance that regulates illicit discharges and connections, and illegal dumping to the MS4.	DPW to enforce ordinance as needed.
Revised					
3e	Present to Town Council	Planning Board & DPW Director	Town council to adopt	BMP complete. On October 20, 2009, the Town Council voted to approve the municipal stormwater ordinance that regulates illicit discharges and connections, and illegal dumping to the MS4.	DPW to enforce ordinance as needed.
Revised					

3a. Additions

3f	Education about Illicit Discharges/ Illegal dumping	DPW Director	Educate public employees, businesses, and the general public of hazards associated with illegal discharges and improper waste disposal.	As part of Public Education and outreach BMPs 1a and 1d, DPW has educated public about illicit discharges and illegal dumping. DPW also educates public about trash and household hazardous waste disposal. DPW informally educates staff about proper pollution prevention and waste disposal. Conservation Commission has public education information available on website about proper waste disposal, pet waste, storm drain pollution, auto industry pollution, and pollution prevention practices. See http://www.town.winthrop.ma.us/Pages/WinthropMA_Conservation/mysticriver.pdf	Continue current education practices as budget and staff time allow.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4a Revised	Review Existing Site Inspection Practices	Planning Department & DPW Director	Develop regulatory compliance analysis Develop site inspection checklists	DPW, Building, and Conservation Commission continued to coordinate inspections of construction sites and clarify contractor expectations for stormwater management on construction sites. Utilized inspection checklists as needed.	Continue existing inspection practices. Revise BMP as needed to comply with North Coastal General Permit, once issued.
4b Revised	Develop/Modify Site Inspection Program	Planning Department & DPW Director	Draft program and review with Building Department	Town continues to utilize existing checklist and sign-offs to verify construction is being conducted according to plans.	Continue existing inspection program. Revise BMP as needed to comply with North Coastal General Permit, once issued.
4c Revised	Review Existing Bylaws and Regulations	Planning Department & DPW Director	Determine if existing bylaws/ regulations adequate Year 2	No activities planned for Permit Year 9. Measurable goal met in prior permit years. Prior to Permit Year 9, DPW determined that existing code, building code and wetlands bylaw appear to be adequate to regulate stormwater runoff from construction sites.	None. Revise BMP as needed to comply with North Coastal General Permit, once issued.
4d Revised	Develop/Modify Bylaws for Construction Site Runoff	Planning Department & DPW Director	Develop bylaw based on 4a thru c	No activities planned for Permit Year 9. BMP not necessary due to assessment conducted in previous permit year that determined a new bylaw to manage stormwater runoff from construction is not necessary.	None. Revise BMP as needed to comply with North Coastal General Permit, once issued.
4e Revised	Present Bylaw to Town Council	Planning Department	Submit Town Meeting Article	No activities planned for Permit Year 9. BMP not necessary due to assessment conducted in previous permit year that determined a new bylaw to manage stormwater runoff from construction is not necessary.	None. Revise BMP as needed to comply with North Coastal General Permit, once issued.
Revised					

4a. Additions

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5a Revised	Review Existing Site Inspection Practices	Planning Board & DPW Director	Develop Regulatory compliance analysis Develop site inspection checklists	DPW, Building, and Conservation Commission continued to coordinate inspections of construction sites and clarify contractor expectations for post-construction stormwater management on new development and redevelopment.	Continue existing inspection practices. Revise BMP as needed to comply with North Coastal General Permit, once issued.
5b Revised	Develop/Modify Inspection & Maintenance Practices	Planning Department Planning Board & DPW Director	<i>Draft program and review with Building Dept</i>	Town continues to utilize existing checklist and sign-offs to verify construction is being conducted according to plans.	Continue existing inspection program. Revise BMP as needed to comply with North Coastal General Permit, once issued.
5c Revised	Review Existing Bylaws and Regulations	Planning Department	Determine if existing bylaws/regulations are adequate, Year 2	No activities planned for Permit Year 9. Measurable goal met in prior permit years. Prior to Permit Year 9, DPW determined existing code, building codes and wetlands bylaw appear to be adequate to regulate post-construction stormwater management on new development and redevelopment.	None. Revise BMP as needed to comply with North Coastal General Permit, once issued.
5d Revised	Develop/Modify Bylaws for Post Construction Site Runoff	Planning Department Planning Board & DPW Director	Develop bylaw based on 5a thru c	No activities planned for Permit Year 9. BMP not necessary due to assessment conducted in previous permit year that determined a new bylaw to manage post-construction stormwater management on new development and redevelopment is not necessary.	None. Revise BMP as needed to comply with North Coastal General Permit, once issued.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5e	Present Bylaw to Town Council	Planning Board & DPW Director	Submit Town Meeting Article	No activities planned for Permit Year 9. BMP not necessary due to assessment conducted in previous permit year that determined a new bylaw to manage post-construction stormwater management on new development and redevelopment is not necessary.	None. Revise BMP as needed to comply with North Coastal General Permit, once issued.
Revised					

5a. Additions

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6a Revised	Maintain Street Sweeping Program	DPW	Sweep all street twice per year, Years 1-5	In 2011, Town swept each street four times, once in April, May, September, and October Sweepings were removed and disposed of by Casella Waste in accordance with Massachusetts Street Sweeping Guidelines.	Town plans to continue street sweeping as budget allows. In 2012, Town plans to increase town-wide street sweeping to up to seven times, April through October.
6b Revised	Maintain Catch Basin Cleaning Program	DPW	Check basins quarterly; clean up to twice per year, Years 1-5 Check basins annually Clean basins as required	Town cleans catch basins as required, and to address complaints and problem areas. In 2011, Town inspected and cleaned 154 Catch Basins.	Town plans to continue catch basin cleanings as budget allows. Town will re-assess cleaning program as needed to comply with North Coastal General Permit, once issued.
6c Revised	Perform Site Visits to Examine Existing Practices at Facilities	DPW Director	Target all applicable municipal facilities Year 3	Town facilities include: DPW building, two fire stations, Police Department Town Hall, two elementary schools, middle school, high school, cemeteries, and ball fields and parks. Facilities Director performs site visits to buildings and schedules maintenance as needed. Parks and Recreation Department inspects and manages the ball fields and parks. The Cemetery Division of the DPW manages the cemeteries.	Continue site visits and maintenance practices. Revise BMP as needed to comply with North Coastal General Permit, once issued.

6d	Revised	Train Municipal Employees at Each Facility	DPW Director	Target all applicable municipal facilities Year 3	Due to staff turnover and time and budget constraints, formal training was not held in Permit Year 9. Municipal employees are trained informally and on-the-job on pollution prevention and good housekeeping practices for municipal facilities. Consultant discussed training with DPW Director, Director of Facilities, and Building Commissioner and Inspector.	Continue existing education efforts. Revise BMP as needed to comply with North Coastal General Permit, once issued.
6e	Revised	Perform Follow-ups to ensure Required Practices are met	DPW Director	Target all applicable municipal facilities Years 4 & 5 Target all applicable municipal facilities by year 6	As described in BMP 6c, inspections and maintenance are conducted by Town Staff.	Continue existing program. Revise BMP as needed to comply with North Coastal General Permit, once issued.
	Revised					

6a. Additions

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

BMPs for meeting TMDL WLA are *not applicable* because none of Winthrop's receiving waters have approved TMDL reports at this time. A Draft Pathogen TMDL Report was developed for the North Coastal Watersheds and addresses Lynn Harbor (MA93-53) and a Draft Pathogen TMDL Report was developed for the Boston Harbor Watershed and addresses Winthrop Bay (MA70-10) and Boston Harbor (MA70-01). These TMDLs are not final. The following BMPs were previously included in annual reports and continue to be listed to address the discharge of pollutants of concern from the MS4 to impaired waterbodies.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities
7a Revised	Implement BMPs listed in MCM 3	DPW Director	During Years 2 and 3	No measurable goals planned for Permit Year 9.	Continue to implement IDDE BMPs under MCM 3 as budget and staff time allow.
7b Revised	Review Winthrop Bay Existing Water Quality Data	DPW Director	Determine Winthrop contribution Year 4	No measurable goals planned for Permit Year 9. Town has previously coordinated with Mystic River Watershed Associated on water quality testing.	None.
7c Revised	Review Effect of MWRA CSO on Water Quality	DPW Director	Determine MWRA CSO contribution Year 4	No measurable goals planned for Permit Year 9.	None.
7d Revised	Initiate Illicit Connection Detection and Elimination Plan	DPW Director	Begin plan during Year 5	No measurable goals planned for Permit Year 9. As described in BMP 3c, Town has implemented IDDE activities in priority areas.	Continue IDDE efforts as budget and staff time allow, in accordance with 2003 General Permit requirements.

7a. Additions

7e	Enforce Dog Waste disposal ordinance (Chapter 6.04)	Animal Control	Enforce ordinance	Enforced Town ordinance which requires that "each person who owns, possesses or controls a dog walking in any area of Winthrop other than his or her own private property is responsible for the removal and disposal of any feces left by the dog on any sidewalk, gutter, street or other public area. Persons walking dogs must carry with them a device designed to dispose of dog feces. Such devices include but are not limited to plastic or paper bags or pooper-scoopers. Exempt from the requirements of this section are assistance dogs in the service of their handlers."	Continue to enforce as needed.

7b. WLA Assessment

Not Applicable.

Part IV. Summary of Information Collected and Analyzed

Sampling was conducted at Winthrop's public beaches. Results are available at http://mass.digitalhealthdepartment.com/public_21/beaches.cfm

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, 2011 through March 31, 2012)

Programmatic

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

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	
Stormwater management committee established	(y/n)	N
Stream teams established or supported	(# or y/n)	Y
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	Y
Shoreline cleaned since beginning of permit coverage	(mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored **	(#)	
▪ community participation **	(# or %)	
▪ material collected **	(tons or gal)	
School curricula implemented	(y/n)	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					X
▪ Erosion & Sediment Control	X				
▪ Post-Development Stormwater Management	X				
Accompanying Regulation Status (indicate with "X")					
▪ Illicit Discharge Detection & Elimination					N/A (included in ordinance)
▪ 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	(#)	
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	90%
Mapping method(s)		
▪ Paper/Mylar	(%)	100%
▪ CADD	(%)	
▪ GIS	(%)	
Outfalls inspected/screened **	(# or %)	0
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	79
Illicit discharges identified **	(#)	
Illicit discharges identified (Since beginning of permit coverage)	(#)	
Illicit connections removed **	(#); and (est. gpd)	

Illicit connections removed (Since beginning of permit coverage)	(#); and (est. gpd)	
% of population on sewer	(%)	100%
% of population on septic systems	(%)	

Construction

	(Preferred Units)	Response
Number of construction starts (>1-acre) **	(#)	
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	99
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	(%)	99
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 **	(#)	154
Qty. of storm drain cleaned **	(%, LF or mi.)	
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	~680 tons

Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	landfill
Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
• Disposal cost**	(\$)	\$19,810
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 vacator **	(%)	

	(Preferred Units)	Response
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	4
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	4
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	
• Disposal cost**	(\$)	
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	
• Vacuum street sweepers owned/leased	(#)	
• Vacuum street sweepers specified in contracts	(y/n)	
• % Roads swept with rotary brush sweepers **	%	
• % Roads swept with vacuum sweepers **	%	

Reduction (since beginning of permit coverage) in application on public land of:
 ("N/A" = never used; "100%" = elimination)

▪ Fertilizers	(lbs. or %)
▪ Herbicides	(lbs. or %)
▪ Pesticides	(lbs. or %)
Integrated Pest Management (IPM) Practices Implemented	(y/n)

	(Preferred Units)	Response
Average Ratio of Anti-/De-Icing products used **	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	100% CaCl ₂
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)		
Pre-wetting techniques utilized **	(y/n or %)	N
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 %)	
% of salt/chemical pile(s) covered in storage shed(s)	(%)	
Storage shed(s) in design or under construction	(y/n or #)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	

Water Supply Protection

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