Municipality/Organization: **Town of Sharon, MA**

EPA NPDES Permit Number: **MA041061**

MaDEP Transmittal Number: **W-040625**

Annual Report Number & Reporting Period: **No. 4: May 1, 2006-April 30, 2007**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Peter O'Cain Title: Assistant Town Engineer

Telephone #: (781)784-1525, ext 16 Email: pocain@townofsharon.org

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: Benjamin Puritz

Title: Town Administrator

Date: 4/30/07

Part II. Self-Assessment

The Town of Sharon, Massachusetts has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for the following provision:

1. Schedules have been modified for several BMPs, as discussed in Section III.
2. The Town has decided to prioritize dry weather outfall screening efforts and conduct additional water quality sampling as funding is available. Water quality information provided by local organizations such as the Neponset River Watershed Association will be considered in the outfall screening process.

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
1.1	Design and distribute S/W Educational Brochures	Assistant Town Engineer: Peter O'Cain David Masciarelli	Mailing list of homes contacted	Additional links to stormwater informational brochures were maintained on the Town's website in the Public Works section. The brochure "What can you do to improve water quality" was mailed to all residents in their water bills 2006.	Mail brochure annually and update content as staff time is available. Consider information related to existing impaired waters.
Revised			All residents reached		
1.2	Recruit volunteers from mailing	Greg Meister: Conservation Agent	List of volunteers	The Conservation Commission and "Friends of Conservation" group were contacted to recruit stormwater volunteers. These efforts have not yet resulted in the recruitment of volunteers. Neponset	Pursue alternative avenues for soliciting stormwater volunteers such as local Boy Scout troops and students, Lake Management Committee and the Sharon Water Advisory Board. Coordinate with BMPs 2.6-2.8.
Revised					
1.3	Create Stormwater Hotline	Greg Meister	Done	The stormwater hotline was maintained and all calls were addressed by the appropriate Town department.	Maintain stormwater hotline and begin tracking calls and follow-up actions.
Revised			Maintain hotline, # calls & record of follow-up actions		
BMP ID #	**BMP Description**	**Responsible Dept./Person Name**	**Measurable Goal(s)**	**Progress on Goal(s) – Permit Year 4** (Reliance on non-municipal partners indicated, if any)	**Planned Activities – Permit Year 5**

1.4	Educate students	Teachers, conservation agent	Unknown	NEWPRA has been contacted regarding a stormwater awareness program. Sample lesson plans were reviewed and classes will be coordinated with Neonset River Watershed.	Finalize the lesson plan for stormwater awareness and teach to students in the selected grade/curriculum in the Fall 2007.
Revised	Stormwater Awareness Education for Students		Lesson plan developed, # students taught		
1.5	Create tributary signage	Bill Petipas: Highway Supervisor	Signs being made	Signs will be posted at the main tributaries in town: The signs will include the name of the tributary and information regarding protection of the water body and watershed.	Maintain existing signs and post additional signs at remaining tributaries.
Revised			Signs posted at all named tributaries		

1a. Addition.

1.6	Develop stormwater web site	Peter O'Cain: Assistant Town Engineer	Add a stormwater page to town's existing web site by spring 05	The stormwater page was maintained on the DPW main page with stormwater awareness brochures, local stormwater regulatory requirements and stormwater links for children and adults. A link was added for FEMA flood maps.	Maintain the stormwater page and update periodically with new topics and additional stormwater education resources. Evaluate the feasibility of setting up a hit counter for the stormwater page.
Revised	Develop & Maintain Stormwater Web Site		Update annually & record # of hits (if feasible)		

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
2.6	Encourage public participation through adverts and brochures	Peter O'Cain Dave Masciarelli	Make 5000 brochures and send out in water bills	A copy of the brochure was maintained on the website (refer to BMP s 1.1 & 1.6) and notices were included on the Town's cable TV station throughout the year. The brochure encourages volunteer participation and lists activities.	Maintain brochure and notices on cable to encourage public participation. Seek additional support from local environmental organizations.
Revised					
2.7	Stencil storm drains	Volunteers/ highway Dept.	Stencil of town's catch basins that feed impaired waterways	Approximately 40% of storm drains in Town have been stenciled.	Continue to stencil storm drains in high priority drainage areas, as possible.
Revised			# drains stenciled		
2.8	Organize Community clean-ups of tributaries.	Greg Meister	At least one clean-up per year.	No significant progress occurred on this task due to the lack of success in recruiting volunteers.	Organize a cleanup activity based on the progress of BMP 2.6. Utilize Newpra to help with organizational tasks.
Revised			Amount of debris removed		
2.9	Residents assist with by-law enforcement.	Volunteers Peter O'Cain	Residents report violations.	No reports or calls were received during the permit term.	Log calls and track enforcement/ follow-up actions.
Revised			# calls & record of follow-up actions		
2.10	Initiate "adopt a drain" programs/stream monitoring	Volunteers	Record number of drains adopted.	No drains were adopted during the permit term. Stream monitoring was not performed on streams and Lake Massapoag except for e-coli and fecal coliform testing in different areas during the summer. The Town is currently looking interviewing engineering firms to perform dry weather tests of all outfalls, in order to identify sources of illicit discharge.	Evaluate options to encourage residents to participate in the "adopt a drain" program and/or evaluate an alternative BMP. Continue to support existing stream/ lake monitoring programs and track progress, as well as provide support as staff time and budget allows. Use data collected for illicit discharge identification to perform further water quality tests and identify sources of illicit discharge, if present.
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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
3.11	Storm water management and illicit discharge by-law.	Peter O'Cain	Town adopts by-law prohibiting non-sw discharges.	An illicit discharge prohibition by-law was previously approved at the October 2004 Town Meeting. Applications were reviewed and approved in accordance with the by-law.	Continue to enforce the by-law and record corrective actions. Continue to review applications for new connections.
Revised					
3.12	Develop storm sewer map with outfalls.	April Forsman Peter O'Cain	Map of MS4 outfalls.	The drainage system map was updated and entered into a GIS database. All outfalls, catch basins and manholes have been mapped using a GPS and are on the town GIS system.	Continue to update the drainage system map based on new information and the results of BMPs 3.14 and 3.15. Any illicit discharge locations will be added to the map database.
Revised					
3.13	Develop plan to detect and address non s/w discharge.	Greg Meister	Plan developed	Now that all outfalls have been mapped and the town drainage system is mapped, we have been interviewing consultants that will be hired to perform dry weather observations of all outfalls. Sites that have flow in dry weather will be noted and added to the mapping system. We will then have water quality testing performed at the observed dry flow locations.	Incorporate drainage observations and mapping information into BMP 3.12. Develop a work plan for the detecting and eliminating illicit discharges, focusing on outfall inspections (see BMP 3.14).
Revised	Develop a Work Plan for Illicit Discharge Detection & Elimination		Record of field inspections		
3.14	Identify and document illicit outfalls.	Con Com, volunteers DPW	Keep record of suspected sites.	Based on the results of BMP 3.13, an updated GIS datalayer was generated to outline illicit connections and flow sources to outfalls.	Screen outfalls for illicit discharges in accordance with the Work Plan developed under BMP 3.13 and prioritize inspection areas based on previously identified illicit connections.
Revised					
3.15	Monitor accomplishment of goals of reducing illicit discharge.	Peter O'Cain	Create spreadsheet with goals and percentage completed.	Illicit connections permits were issued for allowable non-stormwater flows that are directly connected to the MS4. Residents pursuing direct connections to the storm drain system are now required to have indirect overland connections to the MS4.	Continue to identify non-stormwater discharges and determine whether they pose a risk to surface waters. Permit connections as appropriate and document enforcement actions for illicit discharges. Identify dry flow discharges and determine source of water and the water quality.
Revised					

Revised					

3a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
3.16	Address non-storm discharges or flows, such as landscape irrigation, car washing and street wash water.	Peter O'Cain	Posted ways to reduce the impact of these activities on Town website and water bill mailings in year one.	Methods to address impacts from non-stormwater discharges was incorporated into brochures and information posted on the Town website.	Continue program and incorporate illicit discharge information into existing public education avenues.
Revised					

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
4.16	Include E&S BMP's/req's in all applicable town regulations.	Planning, zoning, Con-com, Peter O'Cain	Regs modified and accepted by all applicable boards.	Section 3.3.2.21 of the Land Subdivision Rules and Regs of the Planning Board requires E&S plan. Also lot drainage section 4.5.3 refers to NPDES standards. The previously adopted Construction Activity By-Law addresses the Phase II requirements for any disturbance over 1 acre.	Continue to enforce regulations and improve if needed.
Revised					
4.17	Include construction E&S plan as part of review.	Planning, Zoning, BOH.	Approval of modified regulations.	Planning Board requires E&S plan and includes in review. Zoning by-law section 3340. The previously adopted Construction Activity By-Law addresses the Phase II requirements for any disturbance over 1 acre.	Continue to enforce requirements.
Revised					
4.18	Inspect site for E&S problems	Greg Meister Conservation Agent	Record Inspections and enforcement issues	Conservation Agent inspects all developments and construction projects over 1 acre for erosion and	Continue to enforce requirements and document follow-up actions.

Revised					
BMP ID #	**BMP Description**	**Responsible Dept./Person Name**	**Measurable Goal(s)**	**Progress on Goal(s) – Permit Year 4** (Reliance on non-municipal partners indicated, if any)	**Planned Activities – Permit Year 5**
4.19	Create sanctions to ensure compliance with E&S req's	Con-Com, Board of Selectmen, Town Engineer	List of sanctions approved by Town.	The current comprehensive by-law includes sanctions and fines. One stop work order was issued and the owner was required to install catch basins and install erosion control measures on their site located at 66 Bullard Street.	Enforce sanctions as required.
Revised					
4.20	Include construction site runoff on stormwater hotline	Residents/ Volunteers	Established hotline with phone records.	Continued to advertise the hotline using existing public education avenues. Only three calls were received regarding construction sites and all issues were addressed (see 4.19).	Continue to monitor hotline and advertise through existing education avenues.
Revised					

4a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4	Planned Activities – Permit Year 5
4.21	Create procedure to receive and consider information submitted by the public and include requirements for the construction site operators to control waste such as discarded building materials.	Peter O'Cain	The Town passed the construction activity by-law that requires a public hearing be held for stormwater plans submitted on lots that will have more than an acre of disturbed area. The by-law requires a SWWP that addresses construction wastes of all kinds.	Stormwater Discharges Generated by Construction Activity By-Law approved in October 2004. Approved by Attorney General in January of 2005. Public hearings were held for permit application during the permit term.	Continue to enforce Stormwater Discharges Generated by Construction Activity By-Law.

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
5.21	Planning Board/Con-Com regs, BMP for runoff control +1 acre	Planning Board, Con-Com: Greg Meister	Passed new Construction Acticity General By-Law to address sites that are disturbed over 1 acre.	Construction Activity General By-Law passed and approved at October 2004 Town Meeting. By-Law requires a public hearing and requirements for post-construction stormwater management inspection and maintenance.	Enforce By-Law when required.
Revised					
5.22	Require operation and maintenance plans for ret/det basins	Peter O'Cain Greg Meister	Include plan requirement in Planning regs and maint fee.	Amendments to the Planning Board regulations have yet to be passed regarding detention and retention basin fees. O&M Plans for BMPs are required for all lots with over an acre of disturbance as part of the Construction Activity By-Law. The Planning Board regulation will require a maintenance fee based on the size of the detention basin to be built.	Enforce new regulation requiring payment for every foot of detention basin to be built. Funds to be used for basin maintenance, as needed.
Revised					
5.23	In addition to BMP's develop community BMP's	Peter O'Cain Greg Meister	Make a list of community BMP's, if any.	The Town has not expressed interest in developing Town-specific BMPs or a manual to address stormwater management.	Develop a BMP Manual specific to Sharon, if desired. The Planning Board will be updating their regs this year and requirements will be updated.
Revised	BMP Manual				
5.24	If community BMP's desired, add to appropriate regulations	Planning, Zoning, Con-Com Boards/ Town Engineer	Additions to appropriate regulations.	None based on the results of BMP 5.23.	Incorporate reference to the BMP Manual (if developed) into appropriate regulations.
Revised					

5a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4	Planned Activities – Permit Year 5
5.25	Zoning that encourages low impact development.	Peter O'Cain	Zoning that encourages low impact development	The Town has had a Conservation Subdivision Design zoning regulation for several years. The Town Planning Board Regulations section 3.2.2.1 requires, "For all subdivisions of ten (10) or more lots, two (2) or more substantially different alternative development plans, one of which shall utilize flexible development." CSD design and flexible development were encouraged and Hunter's Ridge age-qualified CSD was approved and is under construction.	Continue to encourage CSD design and flexible development (sections 4360 & 4300).

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
6.25	Develop municipal operation and maintenance plan.	Superintendent of public Works: Eric Hooper	Completed plan.	Draft standard operating procedures. These procedures are in place but have yet to be formalized. Additions to the existing DPW Policies and Procedures Manual or a new procedures manual will be part of a consultant's contract within 2007.	Finalize standard operating procedures and adopt for use.
Revised					
6.26	Implement operation and maintenance plan w/schedule.	Highway Dept/Bill Petipas	Maintain records of maintenance compliance.	No significant progress has occurred on this task during the permit term.	Finish plan and begin to use.
Revised					

6.27 Revised	Use E&S controls for road repairs.	Highway Dept: Bill Petipas Con-Com: Greg Meister	Record work and erosion controls taken	All roadway work is assessed by the Conservation Agent and Town Engineer for erosion issues. Work is silt fenced and hay baled as needed. Any work over 1 acre has a NPDES construction permit filed. All town projects were reviewed for E&S requirements and BMP's were implemented as approved.	Continue to use erosion and sedimentation controls as needed and file for construction general permits for work over 1 acre.
BMP ID #	**BMP Description**	**Responsible Dept./Person Name**	**Measurable Goal(s)**	**Progress on Goal(s) – Permit Year 4** (Reliance on non-municipal partners indicated, if any)	**Planned Activities – Permit Year 5**
6.28 Revised	Fill Drains in areas of equipment cleaning or work	Highway Dept: Bill Petipas	Drains covered or filled in.	All drains were previously covered or filled in.	None
6.29 Revised	Clean catch basins on regular schedule	Highway Dept: Bill Petipas	Maintain record of cleaning	Half of the catch basins in town were cleaned this year and records were maintained with the cleaning contractor (Truax). Additional funding was not available to clean more structures; however, the Town evaluated the potential to use GIS data and catch basin cleaning data to prioritize cleaning efforts.	Maintain catch basin cleaning schedule and evaluate priority cleaning areas to maximize cleaning effectiveness.

6a. Additions

BMP ID #	**BMP Description**	**Responsible Dept./Person Name**	**Measurable Goal(s)**	**Progress on Goal(s) – Permit Year 4** (Reliance on non-municipal partners indicated, if any)	**Planned Activities – Permit Year 5**
6.30	Construct Vehicle wash building with recycling wash system to eliminate pollutants from entering groundwater.	Peter O'Cain Assistant Town Engineer	Construct building and utilize for vehicle washing	The new vehicle wash building was maintained to ensure proper use for vehicle washing activities.	Utilize and maintain wash building, as needed

6.31	Added employee training to operation and maintenance plan requirements	Peter O'Cain	Operation and maintenance plan includes employee training component.	Sample employee training materials were reviewed.	Finalize training materials/curriculum and conduct employee training.
Revised			Training attendance sheet		

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 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
7.30	Utilize list of impaired bodies as a basis for areas to study	Town Engineer: Peter O'Cain	Determine how to reduce causes of impairment.	The list of impaired waters in Town and water quality data was obtained from the Neponset River Watershed Association.	Review existing data in conjunction with outfall inspections under BMP 3.14. Use dry flow outfalls to identify locations of illicit discharges and test the water quality of those discharges.
Revised					
7.31	Set up plan utilizing outfall mapping to reduce impairment	Town Engineer: Peter O'Cain	Written plan	Outfall locations have been mapped on GIS.	See 7.30
Revised					
7.32	Ensure WLA met by stormwater BMP's	Superintendent of Public Works: Eric Hooper	Determine if additional BMP's needed.	No work done yet.	Evaluate the status of BMPs (e.g., BMP 3.14) in drainage areas to TMDL waters and develop recommendations for pollutant load reductions. Evaluate the need to test water for WLA compliance.
Revised					
7.33	Reduce pollutant discharges coming through MS4	Conservation Agent: Greg Meister/Town Engineer	Inspect water for reduction in turbidity, increase in DO	Work continued to try and gather support from the Conservation Commission and Lake Management Committee. No significant progress occurred.	Use catch basin cleaning and roadway sweeping program to reduce turbidity and reduce pollutants. Implement the recommendations from BMP 7.32 and use water sampling to compare water quality from year to year as budget allows. Use dry flow outfalls to identify areas of illicit discharge and perform water quality testing in those areas.
Revised					

7a. Additions

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 4 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 5
7.31A	Set up plan using outfall mapping to reduce impairment	Peter O'Cain	Adjust mapping as direct connection data is collected from applications submitted related to the Illicit Discharge By-Law and through catch basing cleaning process.	Outfall and direct connection information was updated on the Town drainage map and GIS system as direct connection permits were reviewed and approved.	Continue to update mapping as appropriate.

7b. WLA Assessment

The Town is working on reducing loads to streams through strict enforcement of our Illicit Discharge and Construction Activity By-laws. The Construction activity By-Law in combination with strict enforcement of soil and erosion control plans will help reduce the TSS entering the town waterways. Planning Board Regulations and the two new by-laws require strict compliance with all Mass DEP stormwater regulations and water quality regulations. As discussed in the BMPs listed above, the next steps for addressing TMDL waters is dependent on the results of tasks such as outfall inspections for illicit discharges and an evaluation of existing water quality data at receiving waters. Our catch basin cleaning contractor (Truax) will be indicating catch basins that are high in sediment levels, so that they can be cleaned on a more frequent schedule, which is expected to maximize the efficiency of sediment removal in the basins and minimize flow to receiving waters. The DPW is now interviewing consultants that will perform the dry flow outfall inspections. The outfalls that have dry weather flow will be identified, mapped and sources of flow will be identified when possible. The outfalls identified may then have water quality tests performed on them. It may or may not be necessary to test outfall flow if sources are identified.

Part IV. Summary of Information Collected and Analyzed

The Town has completed its stormwater drainage system map.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	Y
Annual program budget/expenditures	($)	$35,000 will be much higher in 2007

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	8,000
Stormwater management committee established	(y/n)	N
Stream teams established or supported	(# or y/n)	N
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	N
Household Hazardous Waste Collection Days		Y
▪ days sponsored	(#)	1
▪ community participation	(%)	?
▪ material collected	(tons or gal)	500 gallons of chemicals and we accept TV's, computers, printers, batteries, tires
School curricula implemented	(y/n)	Not yet-2007

Legal/Regulatory

	In Place Prior to Phase II	Under Review	Drafted	Adopted

Regulatory Mechanism Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				X
▪ Erosion & Sediment Control	some			X
▪ Post-Development Stormwater Management				X
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination				X
▪ Erosion & Sediment Control				X
▪ Post-Development Stormwater Management				X

Mapping and Illicit Discharges

Outfall mapping complete	(%)	100
Estimated or actual number of outfalls	(#)	237
System-Wide mapping complete	(%)	100
Mapping method(s)		
▪ Paper/Mylar	(%)	90%
▪ CADD	(%)	
▪ GIS	(%)	100%
Outfalls inspected/screened	(# or %)	
Illicit discharges identified	(#)	30
Illicit connections removed	(#) (est. gpd)	None
% of population on sewer	(%)	0
% of population on septic systems	(%)	

Construction

Number of construction starts (>1-acre)	(#)	5
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	4 plan review process ended before adoption of by-law
Site inspections completed	(# or %)	100
Tickets/Stop work orders issued	(# or %)	1
Fines collected	(# and $)	0
Complaints/concerns received from public	(#)	3

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100
Site inspections completed	(# or %)	100
Estimated volume of stormwater recharged	(gpy)	

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	½ of town per year
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	" "
Total number of structures cleaned	(#)	1500
Storm drain cleaned	(LF or mi.)	1200

Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)	truck to asphalt plant	
Cost of screenings disposal	($)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	1.5/year
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	1.05
Qty. of sand/debris collected by sweeping	(lbs. or tons)	
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Asphalt plant
Cost of sweepings disposal	($)	
Vacuum street sweepers purchased/leased	(#)	
Vacuum street sweepers specified in contracts	(y/n)	

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	100%
▪ Herbicides	(lbs. or %)	0
▪ Pesticides	(lbs. or %)	0

Anti-/De-Icing products and ratios	% NaCl	30
	% $CaCl_2$	32
	% $MgCl_2$	0
	% CMA	0
	% Kac	0
	% KCl	0
	% Sand	68

Pre-wetting techniques utilized	(y/n)	N
Manual control spreaders used	(y/n)	Y
Automatic or Zero-velocity spreaders used	(y/n)	Y
Estimated net reduction in typical year salt application	(lbs. or %)	10
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	n/a