

Municipality/Organization: Southwick

EPA NPDES Permit Number: MAR041022

MaDEP Transmittal Number: W-045481

Annual Report Number

& Reporting Period: No. 5: April 1, 2007 – March 31, 2008

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5/1/08

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2008)

Part I. General Information

Contact Person: Karl Stinehart

Title: Town Administrator

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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: Fred B Arnold II

Printed Name: Fred B. Arnold II

Title: Board of Selectman - Chair

Date: 4/24/08

Part II. Self-Assessment

The Town of Southwick has completed the required self-assessment and has determined that our municipality is in compliance with our Stormwater Management Program and permit conditions. The Town has aggressively mapped outfall locations throughout the Town and continues to publicize stormwater related issues and encourage active participation by townspeople in addressing pollution and stormwater issues. The Town has developed a draft set of by-laws that addresses the NPDES requirements while considering the existing regulations and procedures that address stormwater management. The Town adopted bylaws that address Illicit Discharges and Floor Drains at the March 15, 2008 Special Town Meeting. The Town anticipates that the stormwater by-laws will be voted on at the 2008 Town Meeting.

Acronyms Used in Following Pages

BOS = Board of Selectmen

Con Com = Conservation Commission

CRC = Citizens Restoring Congamond

DPW = Department of Public Works

LMC = Lake Management Committee

PB = Planning Board

PRC = Parks & Recreation Commission

PVPC = Pioneer Valley Planning Commission

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)	Additional Planned Activities
1A	Classroom Education	School District	Incorporate water quality into curriculum	The Powder Mill School performed lake water quality sampling and analysis during June 2007.	Study water quality as part of the 7 th and 8 th grade curriculum at Powdermill School.
Revised					
1B	Southwoods Magazine	Con Com/ BOS	Publish stormwater/ water quality info 1x /year	Drinking water results are published annually, with the latest published in July 2007.	Publish stormwater/water quality info one time in the year.
Revised					
1C	Newspaper Press Releases	BOS	Publish stormwater/ water quality info 2x / year	Newspaper articles published on Town Cleanup Day, Household Hazardous Waste Collection Day, Annual Lake Cleanup, Sewer system installation progress and ongoing 319 projects, including Old Town Beach and installation of additional BMPs in the Congamond Ponds watersheds. In addition, there were numerous articles on the DPW & Con Comm enforcing various illicit discharge and construction project NPDES issues.	Publish stormwater/water quality info twice in the year.
Revised					
1D	Local Cable Access	BOS	Post stormwater/water quality info 2x/ year	Taped and televised reruns of “Town Cleanup” and “Annual Lake Cleanup” (See BMP 2C).	Post stormwater/water quality info twice in the year.
Revised					

1E	Lakeside Kiosks	LMC	Post stormwater/water quality info 2x/ year	Handout information on exotic species to boaters launching at two State Boat Ramps. Also, "No Weeds In/No Weeds Out" and "Do not feed waterfowl" signs posted at launch ramps. A Visitor Information Center was completed in 2007 at the North Boat Ramp, where information is readily available to the general public.	Post stormwater/water quality info twice in the year.
Revised					
1F	Community Website	BOS	Post stormwater/water quality info 2x/ year	CRC and Commonwealth of Massachusetts websites are linked through the Town's website; LMC, ConCom and Community Preservation Committee also have pages on the Town website. DPW web pages include information on Highway Division activities including catch basin repairs and cleaning, street sweeping and roadside cleanup. Town Cleanup Day was publicized on Town Website. These pages will continue to be expanded to include more stormwater information as the program develops.	Post stormwater/water quality info twice in the year.
Revised					

1a. Additions

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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)	Additional Planned Activities
2A	Wetland Cleanup	Cub Scouts/ Con Com	Support interested groups with trash pickup. Cub Scouts annual wetland cleanup.	During 2007, Scouts removed two 1-ton truckloads of trash during a June 2007 clean-up day of the wetland area behind the Town Hall.	Continue to support interested groups by collecting trash bagged by participants. Support/ Cub Scout annual wetland cleanup.

Revised					
2B	Student Water Quality Monitoring	School Dept.	Conduct water quality sampling and analysis.	The schools performed lake water quality sampling and analysis during June 2007.	Conduct water quality sampling and analysis during 2007 if schools are able to schedule.
Revised					
2C	Annual Lake Cleanup	CRC	Conduct cleanup day	The CRC and LMC annual cleanup of Lake Congamond that normally covers 5 – 6 miles of shoreline, was cancelled for safety reasons due to a major rain/wind storm that occurred on Saturday June 9, 2007. The volunteers spent the day laying sod, cleaning beds and trimming bushes around the North Ramp and the new Visitor Center.	Hold lake cleanup day in summer 2008 (scheduled for 6/14/08).
Revised					
2D	Lakeside Maintenance	LMC	Maintain trash receptacles at Lake	LMC continued to maintain ~25 trash receptacles at public access points to Lake Congamond.	Continue to maintain trash receptacles at public access points to Lake Congamond
Revised					
2E	Volunteer Water Quality Monitoring	CRC	Conduct water quality sampling & analysis	Water quality sampling & analysis was conducted at Lake Congamond monthly. Analytes include: temperature, pH, dissolved oxygen, conductivity, phosphorus & chlorophyll.	Continue water quality sampling & analysis.
Revised					

2a. Additions

	Town-Wide Cleanup	CRC/ ConCom/ DPW	Conduct Town-wide Cleanup Day	Promoted Town-wide 4 th Annual Green and Clean cleanup on April 21, 2007, where volunteers, with DPW assistance, collected litter from roadsides and throughout Town. Approximately 40 volunteers collected two half-filled 30-yard containers with debris. The Rotary Club sponsored three cleanups of 1 mile of College Highway during 2007, resulting in a total of 26 large bags of trash.	The Con Comm has scheduled its 5 th Annual Green and Clean Town-wide cleanup, for May 3, 2008, where volunteers, with DPW assistance, collect litter from roadsides throughout Town. The Rotary Club plans to continue its work on College Highway via the "Adopt a Highway" program.
	Plantings for erosion control	Scouts	Plant trees to control erosion	Scouts planted 35 new trees around the town well-site to help control erosion in that sandy area.	We hope that Scouts will be available and willing to continue plantings in this area. Another group is planning on planting trees early in 2008 in another old sand-pit area to better control erosion.

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)	Additional Planned Activities
3A	Mapping Stormwater Outfalls	DPW	Develop map of outfalls	The DPW contracted the services of Cartographic, who was mapping the entire town for the Assessors, to map the catch basins and outfalls in the balance of town, along with the entire water and sewer system.	Continue to map additional outfalls as found.
Revised					

3B	Develop Illicit Discharge Program	DPW	Draft plan.	DPW has an existing Curtain Drain/ Foundation Drain Policy allowing connection to catch basin and another bylaw that prohibits discharging of sump pumps into the street or catch basins. Periodic inspections are conducted by DPW for presence of gray water or bacteria, which would result in disconnection from the system. Through storm drain outfall mapping process, potential illicit connections (sump pumps) continue to be identified and addressed. Townspeople voted to approve the new Illicit Discharge and Floor Drain Bylaws at the March 15, 2008 Special Town Meeting.	Revise procedures/ plan as necessary in future.
Revised					
3C	Non-Stormwater By-Law	BOS/DPW	Draft by-law.	Town with the assistance of PVPC has prepared a draft by-law. Draft bylaws have been approved by Town Counsel and are under review by the Town Board of Selectmen and Planning Board. The Illicit Discharge bylaws are on the Warrant for the May 20, 2008 Annual Town Meeting.	Refine by-law and propose to Town Meeting for adoption as necessary in future.
Revised					
3D	Illegal Dumping	DPW	Perform regular patrols/cleanup	DPW performed regular patrols and cleaned up illegal dumped trash. Police have ticketed those found responsible for illegal dumping. The DPW has pulled several Transfer Station Permits for violating Transfer Station policies and/or dumping trash along the road.	Continue to perform regular patrols/cleanup.
Revised					
3E	Water Quality Monitoring	BOH	Regular sampling at beach sites in summer	BOH performed weekly sampling at Town Beach when open from June through August, 2007.	Continue to perform weekly water quality monitoring at beaches during summer months.
Revised					

3a. Additions

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)	Additional Planned Activities
4A	Construction Runoff By-law	PB/ Con Com/ DPW	Draft by-law.	Town with the assistance of PVPC has prepared a draft by-law. By-law under review by Board of Selectmen and Planning Board, with DPW plan to submit to Town voters at May 20, 2008 Annual Town Meeting. Building Department is distributing information packages on NPDES construction and requiring builders to sign off on receipt of package. ConCom, Planning Board and DPW are also informing developers of NPDES requirements and have incorporated proof of NPDES NOI submittal and development of SWPPP as permitting requirement.	Refine by-law as necessary and propose to Town Meeting for adoption. Continue to work with developers to incorporate BMPs during construction activities.
Revised					
4B	Plan Review	PB/ Con Com/ DPW	Enforcement under by-law	Continued plan review per existing regulations.	Continue plan review per existing regulations. By-law enforcement proposed following adoption by Town voters.
Revised					
4C	Inspection / Reporting	DPW/PB/ Con Com	Enforcement under by-law	Continued inspection / reporting under existing regulations. Town officials have worked with developers to ensure compliance with required BMPs during construction.	Continued inspection / reporting under existing regulations. By-law enforcement proposed following adoption by Town voters.
Revised					
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 5 (Reliance on non-municipal partners indicated, if any)	Additional Planned Activities
5A	Post Construction Runoff By-law	PB/ Con Com/ DPW	Draft by-law.	Town with the assistance of PVPC has prepared a draft by-law. Draft bylaws have been approved by Town Counsel and are on the Warrant for the May 20, 2008 Annual Town Meeting.	Refine by-law as necessary in future and propose to Town Meeting for adoption.
Revised					
5B	Construction Site Plan Review	PB/ Con Com/ DPW	Enforcement under by-law	Continued plan review per existing regulations. By-law enforcement proposed following adoption by Town voters.	Continue plan review per existing regulations. By-law enforcement proposed following adoption by Town voters.
Revised					
5C	Stormwater System Maintenance Plan	PB/Con Com/ DPW	Enforcement under by-law	Continued inspection / reporting under existing regulations.	Continued inspection / reporting under existing regulations. By-law enforcement proposed following adoption by Town voters.
Revised					
Revised					

5a. Additions

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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)	Additional Planned Activities
6A	Municipal Maintenance Activity Program	DPW/ PRC	Evaluate and draft additional policies	All roads swept as part of spring cleanup. All catch basins are vacuumed	Continue with annual sweeping and catch basin cleaning program. Draft

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)	Additional Planned Activities
5A	Post Construction Runoff By-law	PB/ Con Com/ DPW	Draft by-law.	Town with the assistance of PVPC has prepared a draft by-law. Draft bylaws have been approved by Town Counsel and are on the Warrant for the May 20, 2008 Annual Town Meeting.	Refine by-law as necessary in future and propose to Town Meeting for adoption.
Revised					
5B	Construction Site Plan Review	PB/ Con Com/ DPW	Enforcement under by-law	Continued plan review per existing regulations. By-law enforcement proposed following adoption by Town voters.	Continue plan review per existing regulations. By-law enforcement proposed following adoption by Town voters.
Revised					
5C	Stormwater System Maintenance Plan	PB/Con Com/ DPW	Enforcement under by-law	Continued inspection / reporting under existing regulations.	Continued inspection / reporting under existing regulations. By-law enforcement proposed following adoption by Town voters.
Revised					
Revised					

5a. Additions

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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)	Additional Planned Activities
6A	Municipal Maintenance Activity Program	DPW/ PRC	Evaluate and draft additional policies	All roads swept as part of spring cleanup. All catch basins are vacuumed	Continue with annual sweeping and catch basin cleaning program. Draft

Revised					
6B	Training of all municipal employees	DPW	Initial good housekeeping training	In-house training is done for new hires or anyone transferring within DPW. Good housekeeping training attended by Town Officials, maintenance and DPW staff on April 1, 2008.	Conduct good housekeeping training.
Revised					
6C	Catch Basin Cleaning Program	DPW	Clean 90% of catch basins annually	Town purchased its own vacuum/jet rodder truck in 2005 and now performs catchbasin maintenance with DPW employees. 100% of town catch basins within the entire town were cleaned in the months of May through October, 2007, with some 2 nd cleaning during November following major storm.	Clean at least 90% of catch basins in 2008.
Revised					
6D	Street Sweeping & Cleaning	DPW	Sweep 90% of streets annually	100% of paved town streets within the entire town were swept in the months of April, May and June, 2007. Approximately 25% of streets within urbanized area were swept twice.	Sweep at least 90% of streets in 2008.
Revised					
Revised					

6a. Additions

	Exotic Aquatics Bylaw	LMC		Townpeople voted 11/30/99 to accept LMC proposed "No Weeds In/No Weeds Out" Town bylaw that addresses boats launching on Congamond Lakes – Ramp Attendants inspect boats entering/leaving ramps. DCR summer employee helped pass out info and educate boaters during summer 2007. New Visitor Center has lots more information available to public.	Continue reminding public, boat inspection process & giving out handouts on preventing spread of nuisance aquatics. DCR plans to supply summer employees in 2008 to assist in monitoring boats in/out of ramps and educate users.
	Waterfowl Bylaw	LMC		Townpeople voted 3/14/02 to accept LMC proposed "Do Not Feed Waterfowl" Town bylaw that setup fines for feeding waterfowl. Ramp Attendants hand out literature on "why" not to feed waterfowl & LMC installed "Do Not Feed Waterfowl" signs at ramps & public areas. Compliance is nearly 100% without having to issue fines.	Continue reminding ramp users & public on benefits of not feeding waterfowl (besides fines).

	Stormwater Management	LMC		LMC began seeking Town Funds & matching grants in 1995 to address erosion, sedimentation, etc. LMC received grants in 1995, 1997, 1999 & 2001 for various catch basin, erosion control, sedimentation chambers, etc. New 65-space public parking area designed & built in 1998 adjacent to boat ramp with 100% of stormwater sheet flowing onto grassy area where it percs naturally into ground. The Town & PVPC received another 319 grant to address erosion & sediment issues in 4 subwatersheds on the western side of Middle Pond. Five deep-sump catch basins, four Baysavers + grassy swales were added to the four outfalls in these subwatersheds. This work is ongoing, and is expected to be completed in 2008. Two more Baysavers were added as part of the Middle/South Pond culvert replacement project.	Continue seeking funding for projects in watershed. Work with PVPC (319 project manager), consulting engineering company, and contractor to implement BMPs in these 4 subwatersheds.
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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)	Additional Planned Activities
7A	No TMDL for waters in Southwick				
Revised					
Revised					

7a. Additions

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7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

- The Town notes the high involvement of its citizens and various community and lake organizations in improving town-wide environmental conditions.
- Eleven (11) weekly water samples were collected and analyzed for coliform at the Town beach during the 2007 beach season. No samples were above recommended coliform levels; therefore, no beach closures occurred.
- Water testing over the last five years by Citizens Restoring Congamond, Inc. showed levels of total phosphorus averaging over 20 micrograms/liter. Levels in other western Massachusetts lakes are typically in the (low) single digits indicating that the Congamond lakes are being affected by stormwater runoff.

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, 2006 through March 31, 2007)

Programmatic

	(Preferred Units)	Response
Stormwater management position created/staffed -- Currently being covered by DPW, Con Com & Board of Health – Long range staffing & necessary funding being assessed. Con Comm is also hiring outside consultant under MGL 44§ 53G to perform peer reviews of new subdivision stormwater management plans.	(y/n)	Y & N (see left)
Annual program budget/expenditures	(\$)	\$25K
Total program expenditures since beginning of permit coverage	(\$)	
Funding mechanism(s) (General Fund, Enterprise, Utility, etc)		

Education, Involvement, and Training

Estimated number of property owners reached by education program(s)	(# or %)	20%
Stormwater management committee established	(y/n)	Y
Stream teams established or supported	(# or y/n)	N
Shoreline clean-up participation or quantity of shoreline miles cleaned **	(y/n or mi.)	5-6 mi/yr
Household Hazardous Waste Collection Days		Normally 1x/yr
▪ days sponsored **(held May 5, 2007, is tentatively scheduled for May 24, 2008)	(#)	1 day
▪ community participation **	(%)	9%
▪ material collected **	(tons or gal)	~7 tons
School curricula implemented	(y/n)	Y

Legal/Regulatory

	In Place Prior to Phase II	Reviewing Existing Authorities	Draft in Drafted	Draft in Review	Adopted
Regulatory Mechanism Status (indicate with "X")					
▪ Illicit Discharge Detection & Elimination					3/15/08
▪ Erosion & Sediment Control			X	X	2008 ATM
▪ Post-Development Stormwater Management			X	X	2008 ATM
Accompanying Regulation Status (indicate with "X")					

▪ Illicit Discharge Detection & Elimination					3/15/08
▪ Erosion & Sediment Control			X	X	2008 ATM
▪ Post-Development Stormwater Management			X	X	2008 ATM

Mapping and Illicit Discharges

	(Preferred Units)	Response
Outfall mapping complete (continue to look for “unidentified” outfalls)	(%)	100%
Estimated or actual number of outfalls	(#)	~225
System-Wide mapping complete (now all areas)	(%)	100%
Mapping method(s)		
▪ Paper/Mylar – Some older developments & projects	(%)	
▪ CADD – Some newer developments & projects	(%)	
▪ GIS – Town-wide GIS Warrant Article for Town voters in May 2005 Town Meeting. ~2-year effort initiated November 2005; Entire system GIS work completed in February 2008.	(%)	X
Outfalls inspected/screened **	(# or %)	~210
Outfalls inspected/screened (Since beginning of permit coverage)	(# or %)	
Illicit discharges/connections identified **(4 possible outfalls + 6 sump pump discharges to storm sewers)	(#)	10
Illicit discharges/connections identified (Since beginning of permit coverage)	(#)	
Illicit discharges/connections removed **(Corrective action work completed on 4 of 4 outfalls are part of 2005 319 Grant. Work included a Baysaver and grassy swale at each outfall. 3 of 3 sump pump discharges identified in 2006 have been corrected and 1 of 6 identified during 2005 already corrected, remaining property owner received 2 nd notice & fine under existing bylaw)	(#) (est. gpd)	See details at left
Illicit connections removed (Since beginning of permit coverage)	(#) (est. gpd)	
% of population on sewer	(%)	25%
% of population on septic systems (Sewer Phase 2 study completed with data collection and survey going to homeowners in potential areas. Town voters approved funding for parallel interceptor project and Phase 2 preliminary engineering work for funding)	(%)	75%

Construction

Number of construction starts (>1-acre) ** Approximately 50% of starts exceed 1 acre.	(#)	19
Estimated percentage of construction starts adequately regulated for erosion and sediment control **	(%)	75%
Site inspections completed **	(# or %)	~35
Tickets/Stop work orders issued **	(# or %)	~4
Fines collected ** Collecting fines is a difficult problem. Consequently, Conservation has started implementing a new fining method called “restorative justice” where fines are levied, but instead of issuing a ticket that may never get paid, the violators use the fine money to restore or correct the violation and restore or correct any other areas that the Conservation Commission deems worthy.	(# and \$)	
Complaints/concerns received from public ** DPW issued 4 stormwater warnings in 2007.	(#)	~10

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	75%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	~75
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 times/yr
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	1 times/yr
Qty of structures cleaned **	(#)	~1100
Qty of storm drain cleaned ** (jet rodded)	(%, LF or mi.)	~300'
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	700 to 800 tons (dry wt.)

Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.) **	(location)	Town landfill / compost

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	
• Disposal cost** (All basin & storm drain cleaning previously performed as contract service (~\$30K/year)) DPW received \$210K in FY06 to purchase vacuum/jet-rod truck. Truck received November 2006 and DPW will continue to perform catch basin cleaning with in-house resources.	(\$)	~\$30K (2004)
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	0
• Vacuum truck(s) owned/leased (owned)	(#)	1
• Vacuum trucks specified in contracts	(y/n)	0
• % Structures cleaned with clam shells **	(%)	0
• % Structures cleaned with Aquatech B10 **	(%)	100

Average frequency of street sweeping (non-commercial/non-arterial streets) ** (some 2x/yr)	(times/yr)	1 times/yr
Average frequency of street sweeping (commercial/arterial or other critical streets) ** (some 2x/yr)	(times/yr)	1 times/yr
Qty. of sand/debris collected by sweeping **	(lbs or tons)	1200 - 1300 tons
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Town landfill / compost
Street sweeper being considered for possible purchase in FY10, depending on funding availability. Contract services will be used until DPW has own equipment.	(#)	See left
Developers required to keep roadways swept and vacuum catch basins until roads in development are accepted by Town.	(y/n)	Y

Annual Sweeping Costs (All sweeping performed as contract service (\$30K))		
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• 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	(#)	0
• Vacuum street sweepers owned/leased	(#)	0
• Vacuum street sweepers specified in contracts	(y/n)	0
• % 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 %)	NA
▪ Herbicides	(lbs. or %)	NA
▪ Pesticides	(lbs. or %)	NA
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) (sand/salt mix is typically 4:1 or all sand)	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	15% NaCl 5% CaCl₂ 0% MgCl₂ 0% CMA 0% Kac 0% KCl 80% Sand
Pre-wetting techniques utilized **	(y/n)	Y
Manual control spreaders used **	(y/n)	Y
Zero-velocity spreaders used **	(y/n)	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)	(y/n)	Y
Storage shed(s) in design or under construction – New larger storage facility funding requested as part of new DPW land & facility	(y/n)	
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	Y

Water Supply Protection

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