

Municipality/Organization: Town of Auburn

EPA NPDES Permit Number: MAR041088

MaDEP Transmittal Number:

**Annual Report Number
& Reporting Period: No. 9: May 1, 2011-April 30, 2012**

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: William A. Coyle, P.E.

Title: DPW Director
Town Engineer

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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: W. Coyle

Printed Name: William A. Coyle, P.E.

Title: DPW Director, Town Engineer

Date: 5/1/12

Part II. Self-Assessment

The Town of Auburn has completed the required assessment and determined that our municipality is in compliance with all current permit conditions.

In 2011, there was an overall reorganization into a Department of Public Works (DPW), with the position of DPW Director filled by William Coyle, PE who also remained the Town Engineer. This reorganization consolidated several groups involved with stormwater activities under the DPW. In Permit Year 9, the Assistant Town Engineer's position was expanded (35%) to account for the increased stormwater maintenance and improvement activities, to facilitate tracking of activities and updating of the GIS database. Additionally, a dedicated full-time employee was hired in Permit Year 9 under the DPW to address the increased efforts in cleaning catch basins, rebuilding catch basins, pipe replacement and street sweeping.

The Town has maintained its commitment to addressing stormwater needs through consistent funding of these activities through the general fund. Initiated in FY 2011, the supplemental stormwater funding level of approximately \$300,000 annually was maintained in FY 2012 and is currently being sought in the FY 2013 budget.

The additional staffing and funding has allowed the DPW to make significant improvements in the stormwater system, including the following:

- Replacement of undersized culverts at three locations (South Street and Leicester Street) thereby minimizing the flooding potential and associated erosion (water quality) issues.
- Installation of approximately 2,400 feet of stormwater piping (with deep sump catchbasins and manholes) at numerous locations (Southold St., Field St., Pickering St., Bryn Mawr Ave., Hampton St., Central St., Warren Rd., Millbury St.).
- Cleaning/jetting of approximately 3,200 feet of stormwater piping.
- Installation of four 18-inch diameter HDPE culverts on Barnes St. (replacement).
- Cleaning of drainage outfalls at Saratoga Rd., Central St., and West St.
- Removal of sediment from drainage swale on Bryn Mawr Ave. and from culvert on Rochdale St.

As part of the Town's ongoing efforts towards stormwater system maintenance and improved water quality, the DPW implemented a revised de-icing program that significantly reduces the amount of sand placed on the Town's roads.

Town was one of 10 participating communities that jointly were awarded an EPA Community Innovation Challenge Grant to address regional stormwater issues, including development of collaborative education and training programs.

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 – Next Permit Cycle
1A Revised	Mail Educational Information to Businesses and Residents	Planning Dept., DPW, and Auburn Water District	Number of articles and copies of materials.	Education material was previously included with water bills, through an ongoing cooperative effort with the Auburn Water District.	Auburn Water District continues to have the capability to include stormwater educational materials as water bill inserts, to supplement information posted on the Town's updated website.
1B Revised	Develop Stormwater Section of Town Website	Planning Dept., DPW, and MIS Dept.	Measure number of hits per quarter.	Town website was revamped in 2011, with stormwater information under the Town Engineer's section. Educational pamphlets were posted on the website.	Provide updated information for the stormwater section of the Town's website, in conjunction with recently awarded Community Innovation Challenge Grant (multi-community).
1C Revised	Develop and broadcast a stormwater presentation on local cable network	Stormwater Committee and DPW	Cable TV tapes of shows.	Update on stormwater issues was made periodically at Board of Selectmen meetings, which were broadcast on local cable.	Provide update on stormwater issues and progress of Stormwater Master Plan implementation at periodic selectmen meetings, to be broadcast on local cable. Consider broadcast of available educational materials, to be coordinated through the recently awarded Community Innovation Challenge Grant (multi-community).
1D Revised	Publish Quarterly Article in Local Newspaper	Planning Dept., Health Dept., DPW and Auburn Water District	Copies of Articles.	Update on stormwater issues was provided in The Auburn Account, the Town's Quarterly Municipal Newsletter (available through Town website).	Continue to provide quarterly update on stormwater issues and progress on Stormwater Master Plan in The Auburn Account.

1a. No additions at this time.

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 – Next Permit Cycle
2A	Conduct River, Stream, and Pond Cleanups	Planning Dept., DPW and Conservation Commission	Cleaner streams as documented by before and after photographs	Continued Leesville Pond winter “drawdown” for weed control (and assoc TMDL reduction). Continued cooperative efforts with Auburn Water District, who performed winter “drawdown” of Dark Brook Reservoir and Lower Stoneville Pond. Conducted a Town-wide cleanup on April 20, 2012 with collection of approximately 100 bags of garbage in addition to numerous tires and debris. Implemented chemical treatment of Eddy Pond for aquatic weed control.	Conduct stream and pond cleanups, including the four Town-owned ponds. Continue to foster cooperation with Auburn Water District for cleanup of the non-Town-owned ponds. Continue aquatic weed control for Town ponds, including winter “drawdown” or chemical treatment as appropriate.
Revised					
2B	Establish a Classroom Education Program	Planning Dept., DPW, and Conservation Commission	The classroom education program will be implemented in the next permit cycle.	Town Staff previously had initial discussions regarding stormwater curriculum for classroom education with a high school biology/ environmental science teacher.	Work with schools to establish implementation plan/schedule. Train volunteers to present the stormwater information.
Revised					
2C	Help Establish Volunteer Stormwater Organization	Stormwater Committee	Document quarterly meetings.	Cooperative efforts ongoing with pond advocacy groups, such as the Leesville Pond Watershed and Neighborhood Association.	Continue cooperative efforts with Town pond advocacy groups and plan projects/activities that can be completed by groups. Continue Town participation in the Upper Blackstone Coalition, as regional advocacy group. Participate in regional Community Innovation Challenge Grant, as one of ten communities, on collaborative education programs.
Revised					

2a. No additions at this time.

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 – Next Permit Cycle
3A Revised	Develop Town Storm Drain Outfall Map	DPW	All outfalls mapped by year 5.	A GIS base map and database for the Auburn storm drain system was created in previous permit years. Existing GIS base map includes outfall information and receiving water information. Existing GIS base map and database were continually updated based upon system maintenance and improvement activities (i.e. catch basin repairs).	Continue to work with MassDOT and the Turnpike Authority to obtain complete drainage information for highways owned/maintained by others (ie. I-90, I-290, I-395). Continue to enhance “connectivity” between storm drain structures, based upon field observations during routine maintenance.
3B Revised	Develop Illicit Discharge Prohibition Ordinance	Planning Dept., DPW, and Health Dept	Obtain authorization to control inputs to the municipal drainage system. Bylaw at Town meeting in next permit cycle.	Bylaw passed in Nov 2009 entitled “Stormwater Management, Erosion Control and Illicit Discharge Bylaw” which prohibits illicit discharges. Draft regulations were previously developed for implementation of bylaw.	Finalize specific regulations for implementation of bylaw.
3C Revised	Develop Illicit Discharge Detection and Elimination Plan and Implement Activities	Planning Dept. and DPW	All outfalls examined by year 4. Sources traced and conclusion documented within one year of discovery.	Illicit discharge detection plan completed. Outfalls identified have been screened for illicit discharges.	No further activity planned, beyond ongoing inspections and response to new illicit discharges identified.
3D Revised	Incorporate Information on Illicit Discharges into Public Education and Outreach Topics	Planning Dept. and DPW	Copies of materials.	Illicit discharge education material included on updated Town website.	Continue public education on hazards associated with illegal discharges and improper disposal of waste.

3E	Hold Annual Household Hazardous Waste Collections	Board of Health	Document quantity of wastes collected annually.	Most recently, a Household Hazardous Waste Collection Day was held on May 22, 2010 (Permit Year 8). The Auburn Board of Health holds these events biannually. Information on disposal of special wastes is continuously posted on the Town's updated website.	The Board of Health will hold a Household Hazardous Waste Collection Day on May 19, 2012.
Revised					
3F	Identify Department to Take Stormwater Calls	Planning Dept., and DPW	Log of complaints and actions taken.	Stormwater related calls are tracked by the Department of Public Works, with open communication established throughout departments to ensure stormwater complaints are properly identified and resolved.	Protocol for addressing and reporting dumping or other inappropriate inputs into the MS4 will be available online, as part of enhancing the stormwater section of the website. Protocol for response to stormwater calls will be evaluated as part of the ongoing reorganization (DPW).
Revised					

3a. No additions at this time.

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 – Next Permit Cycle
4A Revised	Develop Erosion Control Regulation	DPW and Selectmen	Bylaw at Town meeting in next permit cycle.	Bylaw passed in Nov 2009 entitled "Stormwater Management, Erosion Control and Illicit Discharge Bylaw" which prohibits illicit discharges. Draft regulations were previously developed for implementation of bylaw.	Finalize specific regulations for implementation of bylaw.
4B Revised	Develop Guidance for Erosion Controls	Planning Dept, DPW and Consultant	Inspection checklist and documented inspections.	DPW/Town Engineer has coordinated stormwater management, enforcement and construction site/erosion control inspection. DPW/Town Engineer conducted inspections of erosion controls and construction sites.	Finalize guidance outlining specific erosion control requirements desired by Auburn. Finalize inspection checklist and set up a tracking program. Continue ongoing inspections of erosion controls.
4C Revised	Identify Department to Take Stormwater Calls	Planning Dept. and DPW	Log of complaints and actions taken	Stormwater related calls are tracked by DPW/Town Engineer, with open communication established throughout departments to ensure stormwater complaints properly identified and resolved. Public education has been successful, with public reporting of inappropriate discharges.	Protocol for addressing and reporting dumping or other inappropriate discharges into the MS4 will be available online, as part of enhancing the stormwater section of the website.

4a. No additions at this time

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 – Next Permit Cycle
5A	Develop BMP Regulation	DPW and Selectmen	Bylaw at Town meeting in next permit cycle.	Bylaw passed in Nov 2009 entitled “Stormwater Management, Erosion Control and Illicit Discharge Bylaw” which prohibits illicit discharges. Draft regulations were developed.	Finalize specific regulations for implementation of bylaw.
Revised					
5B	Develop BMP Design Standards	Planning Dept, DPW, and Consultant	Copy of design standards.	Specific BMP requirements desired by Auburn are included in the Stormwater Bylaw and draft regulations.	Finalize design standards for developers to follow including design performance criteria, BMP examples, and maintenance requirements.
Revised					
5C	Develop and Implement Inspection Program	Planning Dept, DPW, and Consultant	Retain copies of maintenance reports received annually, plus records of inspections completed and results.	DPW/Town Engineer performed inspections.	Setup a maintenance tracking program that requires annual maintenance reports by owner. Conduct post-construction stormwater control inspections for sites without an annual report. Require operation and maintenance plan of developers.
Revised					
5D	Amend Zoning Bylaws to Regulate Impervious Areas	Planning Dept., DPW, and Zoning Board of Appeals	The new zoning bylaw will be implemented in the next permit cycle.	The Aquifer and Watershed Protection Overlay District boundaries were updated in 2008 (Permit Year 6). Current bylaw requires recharging via underground chambers with pretreatment to meet EPA and MassDEP stormwater quality standards.	Consider potential enhancements to the Aquifer and Watershed Protection Overlay district section of the Zoning Bylaw with focus on reducing impervious area.
Revised					
5E	Adopt a Tree Preservation Bylaw	Tree Warden	Adopt a Tree Preservation Bylaw in next permit cycle.	Significant new plantings conducted as part of the Pappas Recreation Complex Project, which included the planting of approximately 50 new trees.	Continue tree preservation efforts, as appropriate.
Revised					

5a. No additional Post Construction Runoff Control BMPs.

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 – Next Permit Cycle
6A Revised	Sweep Streets in Town	DPW	Priority plan of sweeping. Volume of sweepings collected.	Streets and sidewalks were swept earlier this year (started in February) due to mild winter, in order to prevent sand from entering the stormwater system. Reduced use of sand, as part of revised de-icing program, significantly reduced amount of sand on roadways, compared to previous years.	Continue implementation of revised de-icing program with overall reduction in amount of sand applied to roadways. Continue annual sweeping of roadways, as early in the year as feasible.
6B Revised	Clean Catch Basins	DPW	Records of catch basins cleaned.	Approximately 260 catch basins were cleaned this year. Approximately 250 cubic yards of material was removed from catch basins. Based upon field inspections, 30 catch basins were rebuilt/replaced to restore their protective function/capacity. One full time stormwater employee was hired under the DPW, to address stormwater system maintenance activities. Assistant Town Engineer hours increased to account for additional stormwater activities, including update of GIS to reflect system maintenance.	Continue aggressive catch basin cleaning activities, with improvement and/or rehabilitation as necessary. Record sediment collected per catch basin each cleaning.
6C Revised	Calibrate Salt Spreading Equipment	DPW	Prevent over-application of salt as shown with calibration records.	The DPW (Highway Division) implemented a revised de-icing program that significantly reduces the amount of sand, while maintaining the amount of salt use. All salt/sand trucks have been calibrated to distribute 600 lbs of salt treated with magnesium chloride per lane mile. Sand is only used during icing conditions.	Continue implementation of revised de-icing program with overall goal of reduced sand use.

6D Revised	Continue Practice of Low Salt Ratio Application	DPW	Use low salt ratio throughout town.	The DPW (Highway Division) implemented a revised de-icing program that significantly reduces the amount of sand, while maintaining the amount of salt use. All salt/sand trucks have been calibrated to distribute 600 lbs of salt treated with magnesium chloride per lane mile. Sand is only used during icing conditions.	Continue implementation of revised de-icing program with overall goal of reduced sand use.
6E	Develop an Inspection and Maintenance Plan	DPW	Records of inspections and maintenance.	O&M plan developed for stormwater system, including street sweeping, catch basin maintenance/inspection and outfall maintenance/inspection. Detention ponds were inspected and inventoried, with development of BMP maintenance plan.	Perform inspection and maintenance, modifying frequency as necessary. Implement a written yearly BMP maintenance schedule.
6F Revised	Ensure Water Quality Improvements are Considered for Flood Projects	DPW	Document flood control projects	Work previously completed at Eddy Pond dam including reconstruction to facilitate drawdown. Stormwater system projects used deep sump catch basins and specialized hoods to improve performance. Culvert replacements completed at three locations (South Street and Leicester Street), using current Massachusetts Stream Crossing Standards to the maximum extent possible. New culverts minimize potential overtopping of road with associated erosion into stream. Installed approximately 1050 feet of new stormwater pipe on Southold Road to address significant erosion issues (12% grade). Project included deep sump catch basins.	Continue to identify opportunities for implementation of Water Quality Improvements, as part of scheduled infrastructure replacement and/or rehabilitation projects.

6G	Discontinue Outdoor Vehicle Washing	All Town Departments	Written policy.	Discontinued outdoor vehicle washing at the highway garage. Verified that all garage drains attached to a gas trap which discharges to the sanitary sewer system were cleaned once per year.	Ongoing inspection/cleaning of gas trap and adherence to policy banning outdoor vehicle washing.
Revised					
6H	Implement BMPs at the Highway Garage to Prevent Sedimentation to the Adjacent Waterway from Site Runoff and Road Material Storage	DPW	Before and after photographs. Records of sweeping and catch basin cleaning.	The sand pile and raw material piles remain contained to prevent release to the adjacent stream. The yard and catch basins were cleaned as required.	Sweep the yard and clean catch basins frequently. Document sweeping and catch basin cleaning.
Revised					
6I	Cover Junk Equipment and Vehicles	All Town Departments	Cover all junk equipment and vehicles.	Additional scrap metal and junked vehicles were removed from the Highway Garage yard. Cleanup of Town-owned parcel on Route 12 (Scavone) included removal/disposal of numerous junked vehicles.	Vehicles to be provided with covers and drip pans, on an ongoing basis. Eliminate prolonged storage of scrap metal and junked vehicles.
6J	Dispose of Hazardous Waste Drums	All Town Departments	Keep a record of drum disposal.	All drums are stored indoors until they can be disposed. All waste drums were removed/disposed of properly.	Continue practice of storing drums indoors for prompt disposal.
Revised					
6K	Inspect and Cover Dumpsters	DPW	Record inspections.	Dumpsters have been inspected. Temporary covers were provided for the dumpsters.	Develop a written inspection checklist for dumpsters. Inspect dumpsters yearly to ensure there are no leaks.
Revised					
6L	Document Protocols for Municipal Operations	DPW	Copies of policies.	Policies are available for review by Town employees, such as the new vehicle washing policy banning outdoor washing of vehicles.	Develop written policies for all municipal operations. Review policies with DPW employees.
Revised					
6M	Conduct Town Employee Stormwater Training	DPW	Attendance sheet and copy of program.	Fire Department was previously trained for spill containment. Highway Department was previously trained on stormwater.	Conduct training of DPW employees using modules being developed under the regional Community Innovation Challenge Grant.
Revised					

6a. No additional Good Housekeeping BMPs.

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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Next Permit Cycle
7A	Develop a Water Quality Strategy for 303d Waters	DPW and Consultant	Summary of existing pollution prevention efforts, future needs, and responsible parties. Copy of Surface Water Quality Strategic Plan.	Continued winter “drawdown” of Leesville Pond for weed control (and assoc TMDL reduction). Stormwater Master Plan identified conceptual BMPs that may be implemented to address water quality issues.	Foster cooperation with established and newly formed advocacy groups, such as the Leesville Pond Watershed and Neighborhood Assoc. and the Eddy Pond Watershed Assoc.
Revised					
7B	Implement BMPs from Water Quality Strategy	DPW and appropriate Departments	Photographs, logs, and BMP descriptions for completed efforts and water quality improvements.	Photographs and logs kept for activities related to Leesville Pond cleanup and winter “drawdown” for weed control (and assoc TMDL reduction). Expanded aquatic weed control to include Eddy Pond.	Pursue implementation of aquatic weed control for all Town ponds, including winter “drawdown” or chemical treatment as appropriate.
Revised					

7a. No additional BMPs at this time for compliance with TMDLs.

7b. WLA Assessment

TMDL studies have been completed for Auburn Pond, Eddy Pond, Leesville Pond, Pondville Pond, and Stoneville Pond. The BMPs in Minimum Measures 1 through 6 are being applied first. These include measures recommended by the TMDLs such as public education, fostering volunteer watershed groups, street sweeping, catch basin cleaning and mapping outfalls. The Town has developed a Stormwater Management Master Plan for its stormwater system. This plan includes recommended BMPs (conceptual locations and designs) to address the identified TMDL issues.

Part IV. Summary of Information Collected and Analyzed
 GIS database records, relative to system maintenance and improvement activities (updated through Permit Year 9).
 Stormwater Management Master Plan (updated March 2010).

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	Yes (see below)
Land Use Enforcement Officer	Stormwater responsibilities handled by Town Engineer.	
Assistant Town Engineer	Hours increased 35% in 2011	
DPW Employee (full-time stormwater focus)	Hired in 2011	
Annual program budget/expenditures	(\$)	\$300,000 (supplement)
	Approved for FY 2012 with similar funding level sought for FY 2013	

Education, Involvement, and Training

Estimated number of residents reached by education program(s) (as determined by Town website)	(# or %)	Approx 80%
Stormwater management committee established	(y/n)	Yes
Stream teams established or supported (cooperative efforts initiated with pond/watershed advocacy groups)	(# or y/n)	Yes
Shoreline clean-up participation or quantity of shoreline miles cleaned	(y/n or mi.)	
Household Hazardous Waste Collection Days		
▪ days sponsored	(#)	
▪ community participation	(%)	
▪ material collected	(tons or gal)	
School curricula implemented	(y/n)	Initiated

Legal/Regulatory

Regulatory Mechanism Status (indicate with "X")				In Place Prior to Phase II	Under Review	Drafted	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					X	
▪	Erosion & Sediment Control					X	
▪	Post-Development Stormwater Management					X	

Mapping and Illicit Discharges

Outfall mapping complete		(%)		100%
Estimated or actual number of outfalls		(#)		329
System-Wide mapping complete		(%)		97%
Mapping method(s)				
▪ Paper/Mylar		(%)		
▪ CADD		(%)		
▪ GIS		(%)		100%
Outfalls inspected/screened		(# or %)		100%
Illicit discharges identified		(#)		0
Illicit connections removed		(#)		0
		(est. gpd)		
% of population on sewer		(%)		85%
% of population on septic systems		(%)		15%

Construction

Number of construction starts (>1-acre)	(#)	3
- Briarcliff Estates (approx 20 acres) - Dr. Arthur and Dr. Martha Pappas Recreational Complex		
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100%
Site inspections completed	(# or %)	
Tickets/Stop work orders issued	(# or %)	None
Fines collected	(# and \$)	
Complaints/concerns received from public	(#)	

Post-Development Stormwater Management

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

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	
Total number of structures cleaned	(#)	260
Storm drain cleaned	(LF or mi.)	3,200 LF
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	250 cy
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		
Cost of screenings disposal	(\$)	

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	1
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Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	1
Qty. of sand/debris collected by sweeping	(lbs. or tons)	300 cy
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	
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 %)
▪ Herbicides	(lbs. or %)
▪ Pesticides	(lbs. or %)

Anti-/De-Icing products and ratios	% NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand	See Note
NOTE: Town implemented a revised de-icing program in 2011, using Clearlane Enhanced Deicer by Cargill, an EPA endorsed product. As part of the program, all salt/sand trucks have been calibrated to distribute 600 lbs of salt treated with magnesium chloride per lane mile. This is a drastic change from previous years where the ratio of salt to sand has been 2 parts sand and 1 part salt. The use of sand has been minimized, and it is only used during icing conditions. In the previous year (2010-2011 winter) approximately 1500 tons of salt and 3000 tons of sand were used, while this year (2011-2012 winter) approximately 1200 tons of salt and 100 cubic yards of sand were used.		
Pre-wetting techniques utilized	(y/n)	
Manual control spreaders used	(y/n)	Yes
Automatic or Zero-velocity spreaders used	(y/n)	
Estimated net reduction in typical year salt application	(lbs. or %)	
Salt pile(s) covered in storage shed(s)	(y/n)	Yes
Storage shed(s) in design or under construction	(y/n)	