

Municipality/Organization: Town of Durham, NH

EPA NPDES Permit Number: NHR041006

MaDEP Transmittal Number: W-

**Annual Report Number
& Reporting Period:** No. 10: May 1, 2012 to April 30, 2013



NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: David Cedarholm Title: 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: 

Printed Name: David Cedarholm

Title: Town Engineer

Date: April 30, 2013

Part II. Self-Assessment

The Town of Durham, New Hampshire (Town) has continued to work toward meeting goals set for 2012-13 and proceed into what is expected to be the 11th and final year of the 2003 permit. The following is an overview of the efforts performed by the Town to satisfy the Phase II requirements for all six minimum control measures.

Public Education and Outreach – In 2012 and 2013, the Town continued to take an active role in educating local government officials, municipal staff, and the citizens of Durham and elsewhere about stormwater management and the community's responsibilities with regard to MS4 Phase II Stormwater regulations.

The Town of Durham has partnered with the University of New Hampshire to launch the development of an integrated watershed planning approach to addressing water quality impairments in the Great Bay Estuary based on the recommendations contained in two EPA memorandums entitled *Achieving Water Quality Through Municipal Stormwater and Wastewater Plans* and *Integrated Municipal Stormwater and Wastewater Planning Approach Framework* prepared by Nancy Stoner and Cynthia Giles, and dated October 27, 2011 and June 5, 2012 respectively. Durham is the host community to the University of New Hampshire (UNH), and since all of the stormwater runoff from the Town's and UNH's MS4 designated urban areas discharges into the freshwater and tidal reaches of the Oyster River the focus of this approach is a comprehensive integrated watershed management plan for the Oyster River Watershed. The Town is actively collaborating with UNH Facilities, UNH researchers, other communities in the watershed, and watershed advocates and stakeholders to promote what is being referred to as the Oyster River Integrated Watershed Plan (ORIWP). Outreach about the ORIWP is being conducted through public presentations, a newly developed website, and distribution of public informational literature being circulated to local residents and the UNH student populations. The ORIWP was originally introduced to UNH by the Town through the UNH EcoSystems Task Force in 2011, and since then local and regional support of the ORIWP has grown significantly. Strong support and encouragement from EPA Region 1 and NHDES officials has also been received. The ORIWP takes a comprehensive sustainable and GREEN approach to compliance with the Town's and UNH's federal Clean Water Act obligations which stems from three (3) federal discharge permits (the Town's MS4 and NPDES Wastewater Permits plus UNH's MS4 permit) and aims to combine these 3 permits into one single comprehensive permit. A primary goal of the Plan will be to initially focus on reducing non-

point source pollution (which is primarily from stormwater runoff) within the Town of Durham and then extending the effort to other towns in the outer reaches of the watershed.

To assist in developing the Oyster River Integrated Watershed Plan, the Town and UNH have hired a team of expert consultants associated with the firms of Vanasse Hangen and Brustlin of Bedford, NH, and Woodard & Curran of Portland, ME. The Town Engineer and members of the consulting team have held multiple public informational meetings with local watershed communities and stakeholders to inform the public about the ORIWP, solicit interest, answer questions, and receive input. The Town Engineer and consulting team members have also been making regular appearances regionally giving presentations about the details the ORIWP and its benefits. The Town Engineer also traveled to Washington DC in March 2012 to spread the word about Durham's ORIWP to New England's congressional and senatorial representatives at a Congressional Briefing sponsored by the New England Water Environment Association. The key goal of the Washington DC presentation was to educate New England's representatives about non-point source pollution issues in the Great Bay Estuary and solicit their support and funding from the federal budget.

The Town continues to work collaboratively with the Oyster River Cooperative School District (ORCSD) and NH Coast (local non-profit watershed advocacy organization) and in June 2012 completed the construction of a 1,000 square foot (SF) rain garden in front of the Oyster River High School. It's location near the entrance of the high school makes is an ideal public outreach tool. The rain garden is designed to filter and treat stormwater runoff from approximately 12,000 SF of the high school's busiest parking lot. This rain garden was constructed using materials and plants donated mostly from local businesses and community members. The Town of Durham contributed labor and equipment time excavating, plumbing the underdrain and overflow outlet, and preparing the rain garden for planting plus providing materials including bank-run gravel and piping. The high school's environmental science class lead by teacher Jonathan Bromley was involved by helping to design the rain garden as well as contributing labor including soil preparation, planting, and weeding as the garden became more established. The rain garden project has been a great opportunity for the students to learn about the positive impacts that rain gardens can have on stormwater management and treatment. Two local landscape architects Jamie Calderwood of Tighe & Bond and Robbie Woodburn of Woodburn & Associates contributed many hours designing the rain garden plant layout, coordinated the plant delivery, and working with the students, and community members who volunteered labor in the planting effort. Kim Mosher of NH Coast volunteered much of her time raising monetary and material donations from local businesses and also help plant the rain

garden. This rain garden will continue to be monitored and maintained by school groups, ORCSD Facilities staff, and Durham Public Works staff to ensure that it is operating effectively.

A 400 square foot rain garden was installed in August 2012 in a busy downtown location and is designed to filter stormwater runoff from approximately 7000 square feet of a very busy downtown parking lot and Pettee Brook Lane. The location of this rain garden is very important as a water quality improvement since it intercepts stormwater runoff that previously flowed directly to the Pettee Brook, which is one of two impaired fresh water tributaries that flow through Durham's urban area.

On numerous occasions, local residents were informed about various local stormwater programs using the Town's list-server which sends out a weekly email entitled "The Town of Durham Friday Update" to more than 2000 area residents.

The Town Engineer continues to support the Durham Planning Board with the site plan reviews of proposed development project for compliance with the Town's updated stormwater management regulations which were adopted in 2010 as part of the Site Plan Review and Subdivision Regulation. These regulations strongly encourage and create incentives for developers to incorporate Low Impact Development (LID) design features into their projects. Presentations of the Planning Boards meetings are broadcast on the local cable access television channel.

Public Participation/Involvement – In addition to the public participation and involvement with the construction of the rain garden at the high school, the "Project Stormdrain - Online Stormwater Observation Form" webpage continues on the Town's website enabling residents to easily report personal observations of the condition of stormwater system and report any water quality or system problems. This webpage gives area residents an easy opportunity to be actively involved in protecting the local waterways. Town staff and various active Town Board/Committee members and resident volunteers continue to be involved with local watershed associations, local river advisory committees, conservation commissions, and regional planning commissions that review and report on conditions and status of stormwater management within the Town and region. These groups are instrumental in monitoring the watersheds that encompass the Town and promoting responsible stormwater management. In 2011, the Oyster River was officially designated in the New Hampshire Rivers Management and Protection Program under RSA 483 and as a result a local advisory committee dedicated to the Oyster River was formed which includes representatives from both Durham and UNH.

To solicit public participation and involvement in the ORIWP, a website with the URL of <http://oysterriveriwp.com/> has been developed, which has the potential for being a powerful public outreach tool.

Illicit Discharge Detection and Elimination (IDDE) – No illicit discharges were detected over the past year. Town of Durham continue to update its Town-wide GIS stormwater management system map; which is an ongoing effort. The Town Engineer is advancing the development of a stormwater ordinance focused specifically IDDE issues and stormwater runoff produced by land disturbances that do not fall under the jurisdiction of the Planning Board and the Town's Site Plan Review and Subdivision Regulations. The ordinance is on hold pending the final issuance of Draft NH Small MS4 Stormwater Permit released in February 2013 to ensure it is in full compliance with the new requirements.

The Durham Town Engineer and Assistant Engineer remain active with the New Hampshire Seacoast Stormwater Coalition (NHSSC), which is a regional coalition of municipal stormwater system managers who meet monthly to collaborate, exchange information, and share/participate in stormwater educational opportunities. As described above, Durham maintains an online report form which is accessed through the Town of Durham's website. The online form provides a real-time opportunity for area residents to electronically report personal observations on illicit discharges immediately to Town staff.

Construction Site Stormwater Runoff Control – The Town's updated Site Plan and Subdivisions regulations require ALL developments to provide up-to-date stormwater management facilities that do not create or contribute to water quality impairments. These new regulations include incentives for development projects to incorporate LID design elements into all proposed site plans and subdivisions. The Town Planner and the Town Engineer regularly monitor all site plan and subdivision applications to ensure stormwater management compliance and that adequate best management practices (BMPs) are implemented. Training of Town staff on BMPs and proper implementation of stormwater controls is ongoing. The stormwater management requirements incorporated in the Site Plan Review and Subdivision Regulations in 2010 will help Durham comply with the proposed Draft MS4 Permit requirements relative to construction site stormwater runoff controls.

Post-Construction Runoff Control – As stated above, current Town regulations require ALL developments to provide adequate up-to-date stormwater management facilities and the Planning Board is diligent at ensuring that proposed developments maintain high standards relative to low impact development design of permanent stormwater management systems and BMPs. Durham continues to work with area stormwater professionals including the UNH Stormwater Center (a local academic stormwater management research facility), who regularly assist the Town on the evaluation of the performance of all developments. Local developers and design engineers consistently propose innovative stormwater systems with extremely high standards.

As stated above, the stormwater management requirements incorporated in the Site Plan Review and Subdivision Regulations in 2010 will help Durham comply with the MS4 post-construction runoff control requirements.

Pollution Prevention/Good Housekeeping – The Durham Department of Public Works (DPW) continues to follow through with its three year rotational maintenance plan, in which approximately one-third of the Town's catch basins are cleaned and maintained each year. However, the catch basins located in the busiest area of Durham's urban center are cleaned every year. A minimum of 175 catch basins are scheduled to be cleaned in 2013. The Town is continuing to develop its stormwater management system Master Plan - Capital Improvement Plan (CIP). This will help to identify, prioritize, and track areas of the stormwater system that are in greatest need of improvement. Data that was collected during 2012 and 2013 is being incorporated into the Stormwater Master Plan CIP program. The Town maintains an aggressive street sweeping program in which all downtown streets are swept at least weekly and other areas are swept at least quarterly. The Town purchased a new state-of-the-art street sweeper in 2012, which replaces a much older model and enables the Town to more effectively and efficiently remove sediment and particulates from the streets of Durham. In addition, all repairs and maintenance of stormwater structures within the MS4 area are performed with public works staff using updated BMPs and materials.

Part III. Summary of Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Person	Measurable Goal(s)	Progress on Goal(s) for 2012 – 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities for 2013 - 2014
1 Revised X	Develop Educational Resources	Town Engineer and Public Works Director	Provide new information and educational opportunities.	DPW Publishes information on stormwater issues and provides opportunities for area residents to participate in the annual construction of rain gardens.	Provide more opportunities for area residents to participate in the construction of rain gardens. Publish more information on the benefits and uses of rain gardens and rain barrels.
2 Revised X	Implement Educational Activities	Town Engineer and Public Works Director	Broadcast Stormwater related program on local cable TV network	The Town Broadcasted the Planning Board meetings and public hearings relative to developments proposing and implementing innovative stormwater BMPs.	Continuation of public programs and continue publishing stormwater tips and program updates in DPW Newsletters
3 Revised X	Storm Drain Stenciling	Town Engineer and Public Works Director	Apply stencils and medallions near catch basins.	No stencils or medallions were installed this past year.	The Town plans to work with a local school group install more stencils and medallions on catch basins throughout Town.
4 Revised X	Presentations	Town Engineer	Integrated Watershed Management Plan	The Town Engineer and the integrated watershed consultant team gave numerous public presentations in Durham, throughout the region, and in Washington DC promoting the Oyster River Integrated Watershed management Plan.	Continue to promote the Oyster River Integrated Watershed Management Plan

2. Public Participation/Involvement

BMP ID #	BMP Description	Responsible Person	Measurable Goal(s)	Progress on Goal(s) for 2012 – 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities for 2013 - 14
1 ----- Revised X	Create Citizen Committee/ Organization	Assistant Town Engineer and Town Engineer	Actively participate on local Watershed Associations	Actively participate in various local Citizen Groups; Assistant Town Engineer is involved in NH Seacoast Stormwater Coalition (NHSSC).	Continue to play active roles in local organizations.
2 ----- Revised X	Maintain a Cooperative Relationship with UNH and the Community	Public Works Director and Town Engineer	Work with UNH and residents on stormwater related issues	Actively developing and refining the Oyster River Integrated Watershed Plan with UNH and encourage public input.	Coordinate more stormwater activities and programs for public participation and encourage attendance at other related programs.
3 ----- Revised X	Public Meeting – Town Council or Board Presentation	Town Engineer	Town Board Presentation	The Town Engineer gave numerous public presentations promoting the benefits of developing and implementing the Integrated Watershed Plan.	Proceed with developing and implementing an Integrated Watershed Plan for the Oyster River Watershed.
4 ----- Revised X	Community Watershed Monitoring Clean-ups	Public Works Director and other public officials	Coordinate watershed walks and clean-ups, and participate in watershed management planning efforts.	On a monthly basis the ORWA performs river walks along some portions of the Oyster River in an effort to monitor conditions. River and coastal clean-ups sponsored by various groups are held as annual events. The recently formed Oyster River Local Advisory Committee (established in 2011 under RSA 483) includes community members committed to promoting Durham's non-point source management efforts.	Continue to support local organizations sponsoring watershed management of non-point source pollution.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Person	Measurable Goal(s)	Progress on Goal(s) for 2012 – 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities for 2013 - 14
1 ----- Revised X	Stormwater Mapping	Town Engineer and Assistant Engineer	Complete map implement within GIS system.	Mapping is 100% complete. Catch basins, drain pipes, culverts, and outfalls are being IDDE assessed and their condition status prioritized as part of a stormwater system Capital Improvement Plan (CIP).	DPW to continue to assess stormwater infrastructure within MS4 area. The GIS and stormwater system CIP will continue to be updated and improved upon.
2 ----- Revised	Stormwater Regulations	Town Engineer, Town Planner, Code Enforcer	Updated Stormwater Regulations.	LID requirements in the updated Site Plan and Subdivision Stormwater Regulations were adopted in 2010.	Adoption of a separate stormwater ordinance by the Town Council to address IDDE.
3 ----- Revised X	Implement an Information Management System for Tracking Illicit Discharges	Town Engineer	Complete stormwater infrastructure inventory through development of a stormwater CIP and track illicit discharges through GIS system	The stormwater CIP is ongoing to prioritize problems areas and track for signs of illicit discharges. IDDE observations made during system maintenance and through a Town's "Online Storm Drain Report" are utilized for tracking.	Continue updating data and tracking the stormwater system's condition and visually monitoring the quality of local drainage ways.
4 ----- Revised X	Training of Employees	Town Engineer and Assist. Director of DPW Operations	BMP implementation training of staff	Town Staff participated in implementing and maintaining stormwater BMPs and were informed of IDDE methods and techniques.	Attend new workshops offered through NHDES, the UNH Stormwater Training Center, and other regional organizations and educate Town DPW personnel.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Person	Measurable Goal(s)	Progress on Goal(s) for 2012 – 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities for 2013 - 14
1 ----- Revised X	Maintain Ordinance / Regulatory Information	Town Engineer, Town Planner, Code Enforcer	Updated Stormwater Regulations adopted in 2010	LID stormwater management requirements in the updated Site Plan and Subdivision Stormwater Regulations were adopted by the Planning Board for compliance with Draft Small MS4 Permit Requirements.	Monitor the activities related to the stormwater regulation by the Planning Board.
2 Revised X	Informational Management System	Town Engineer and Assistant Engineer	Maintain and update GIS based mapping , track catch basin cleaning & street sweeping, and continue developing/refining a stormwater CIP.	Expanded data input to Town system regarding catch basins cleaning and maintaining construction based stormwater BMPs.	Use GIS system to track construction based stormwater management BMPs.
3 ----- Revised X	Finalize Ordinance/Regulatory Mechanism	Engineering, Code Enforcement, and Planning Departments	Adopt new IDDE specific regulations or ordinance.	Regulations specific to monitoring and control of IDDE and are actively being developed.	Final adoption of the stormwater ordinance for IDDE controls by the Town Council.
4 ----- Revised X	Staff Training	Town Engineer and Assistant Engineer	DPW, Code Enforcement, and Planning Staff to attend training/ workshops on stormwater Management	Town staff annually attends stormwater education workshops and seminars as well as informing staff of information received.	Continue to educate Town staff and local government officials to stay current with new developments in stormwater management.

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Person	Measurable Goal(s)	Progress on Goal(s) for 2012 - 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities for 2013 - 14
1 ----- Revised X	Identification of BMPs	Town Engineer and Assistant Engineer	Develop possible BMPs for use within the Town	Implemented a variety of BMPs on municipal projects and continued evaluating the efficiency of each item.	Continue to evaluate BMPs that are effective in our geographical area.
2 ----- Revised X	Existing Ordinance / Regulatory Information	Town Engineer, Assistant Engineer, Town Planner, Code Enforcer	Maintain high standards for post-construction monitoring of stormwater design	The updated Durham Site Plan Review Regulations require ALL proposed development to provide "adequate" stormwater management facilities, and insist upon the incorporation of LID design elements to the max extent practicable (MEP).	Monitoring stormwater regulations by Public Works.
3 ----- Revised X	New Ordinance / Regulatory Information	Town Engineer and Town Planner	Draft IDDE ordinance or regulations are in the development process.	The updated stormwater regulations include details on the required post-construction stormwater management controls/BMPs, and encouraging LID design elements to the MEP for compliance with MS4 Permit Requirements.	Monitoring stormwater regulations by Public Works.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Person	Measurable Goal(s)	Progress on Goal(s) for 2012 – 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities for 2013 - 14
1 Revised X	Develop Pollution Prevention Plan	Town Engineer and Public Works Director	Assess and evaluate all Town Facilities and methods of operations relative to Stormwater management.	<ul style="list-style-type: none"> Developing the Oyster River Integrated Watershed Management Plan to comprehensively enhance pollution prevention with sustainable and GREEN non-point source pollution controls. Installed a 2nd rain garden at the Town management Pettee Brook Parking Lot. Clean all catch basins on a three year rotation. 	<ul style="list-style-type: none"> Develop and refine the Oyster River Integrated Watershed Management Plan to enhance pollution prevention. Continue rotational catch basin cleaning schedule. Utilized the UNH Stormwater Center for assistance in developing formal Pollution Prevention Plan for all municipal operations.
2 Revised X	Employee Training Materials	Town Engineer and Assist. Director for DPW Operations	Provide staff with educational opportunities relevant information	Town Engineer worked directly with DPW's Highway and Grounds Division crews to employ more effective BMPs in general stormwater system repairs and maintenance. Completed the construction of a new rain garden at the local high school using DPW staff as a hands-on training activity for DPW Staff.	Take advantage of local training opportunities and obtain and distribute up-to-date materials through suppliers, NHSSC, the UNH Stormwater Center, and provide Town staff with stormwater BMP information.
3	Informational Management Systems	Town Engineer and Assistant Town Engineer	Maintain and updated GIS base mapping, track structure maintenance of operations using	Information relative to municipal operations was updated and expanded.	Continue to use GIS to record critical stormwater system data, and add location of system problems. Continue to update

Revised X			newly developed stormwater CIP.		the GIS database based on field studies within the stormwater network.
BMP ID #	BMP Description	Responsible Person	Measurable Goal(s)	Progress on Goal(s) for 2012 – 13 (Reliance on non-municipal partners indicated, if any)	Planned Activities for 2013 - 14
4 Revised X	Employee Training	Town Engineer	Provide staff with more educational opportunities	DPW also continued to provide Town staff with ongoing in-house staff training on BMP installation and effectiveness. Town DPW staff attended seminars and workshops on integrated watershed planning, water quality monitoring, and green infrastructure. Constructed a new rain garden this spring at the local high school as a hands-on training activity for DPW staff.	Take advantage of local training opportunities available to town Staff, and partake in more hand-on BMP installations.

Part IV. Summary of Information Collected and Analyzed

Data specific to the physical condition of the stormwater system discharge Town owned outfalls and culverts within the MS4 area were assessed and evaluated for signs of illicit discharges and general deterioration. No signs of illicit discharges were observed.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

Stormwater management position created/staffed	(y/n)	N
Annual program budget/expenditures	(\$)	200,000

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	80 %
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.)	Y Not logged
Household Hazardous Waste Collection Days		

▪ days sponsored	(#)	1
▪ community participation	(%)	70+ house holds
▪ material collected	(tons or gal)	Not available
School curricula implemented	(y/n)	N

Legal/Regulatory

Regulatory Mechanism Status (indicate with "X")	In Place Prior to Phase II	Under Review	Drafted	Adopted <i>NEW</i>
▪ Illicit Discharge Detection & Elimination		X	X	<i>almost</i>
▪ Erosion & Sediment Control	X	X	X	<i>complete</i>
▪ Post-Development Stormwater Management	X	X	X	<i>complete</i>
Accompanying Regulation Status (indicate with "X")				
▪ Illicit Discharge Detection & Elimination		X	X	<i>almost</i>
▪ Erosion & Sediment Control	X	X	X	<i>complete</i>
▪ Post-Development Stormwater Management	X	X	X	<i>complete</i>

Mapping and Illicit Discharges

Outfall mapping complete	(%)	100
Estimated or actual number of outfalls	(#)	60
System-Wide mapping complete (catch basins, outfalls, and culverts)	(%)	100
Mapping method(s)		
▪ Paper/Mylar	(%)	0
▪ CADD	(%)	0
▪ GIS	(%)	100
Outfalls inspected/screened	(# or %)	100
Illicit discharges identified	(#)	0
Illicit connections removed	(#) (est. gpd)	0
% of population on sewer	(%)	30
% of population on septic systems	(%)	70

Construction

Number of construction starts (>1-acre)	(#)	0
Estimated percentage of construction starts adequately regulated for erosion and sediment control	(%)	100
Site inspections completed	(# or %)	8
Tickets/Stop work orders issued	(# or %)	0
Fines collected	(# and \$)	0
Complaints/concerns received from public	(#)	0

Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	100
Site inspections completed	(# or %)	5
Estimated volume of stormwater recharged	(gpy)	+100,000

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	1/3 of all CBs each yr
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	1 /yr
Total number of structures cleaned	(#)	120
Storm drain cleaned	(LF or mi.)	200 LF
Qty. of screenings/debris removed from storm drain infrastructure	(lbs. or tons)	90
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		beneficial use
Cost of screenings disposal	(\$)	N/A

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)	40
Qty. of sand/debris collected by sweeping	(lbs. or tons)	Not available
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	beneficial use
Cost of sweepings disposal	(\$)	N/A
Vacuum street sweepers purchased/leased	(#)	1 owned
Vacuum street sweepers specified in contracts	(y/n)	

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

Operations and Maintenance (continued)

Anti-/De-Icing products and ratios	% NaCl % Sand % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl	10 90 Note: little to no salt is used on roads in the winter within the Durham MS4 area.
Pre-wetting techniques utilized	(y/n)	N
Manual control spreaders used	(y/n)	N
Automatic or Zero-velocity spreaders used	(y/n)	Y
Estimated net reduction in typical year salt application	(lbs. or %)	Not available
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	Y