P 05-04-07

Municipality/Organization: **City of Newton, MA**

EPA NPDES Permit Number: **MAR 041080**

MaDEP Transmittal Number: **W- W-039247**

Annual Report Number & Reporting Period: **No. 4: March 2006-March 2007**

NPDES PII Small MS4 General Permit Annual Report April 2007

Part I. General Information

Contact Person: Louis M. Taverna, P.E Title: City Engineer

Telephone #: 617-796-1020 Email: ltaverna@newtonma.gov

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: David B. Cohen

Printed Name: David B. Cohen

Title: Mayor

Date: 5/1/07

Part II. Self-Assessment

The City of Newton, Massachusetts has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions, except for Minimum Control Measure #3 Illicit Discharge Detection and Elimination (IDDE). The City has found bacteria contamination in some of its storm drains and brooks, particularly in areas where sanitary sewer infrastructure is aging, underdrains are co-located, and underground pathways or conduits to our drainage systems exist. Newton is proactively finding and eliminating illicit connections to the storm drainage system. In addition, we feel that our Comprehensive Stormwater Plan (dated April 15, 2005) presents an effective program to address IDDE in more detail than this permit.

The following is provided to highlight key accomplishments made in Permit Year 4 with respect to MS4 General Permit goals and objectives.

Administrative

- Proposed and implemented a Stormwater User Fee, effective July 1, 2006. This program provides the City with a reliable, dedicated source of funding for maintenance and improvements to our drainage system. A copy of the ordinance, as well as related programmatic forms (i.e., Guidelines, Stormwater Abatement Application, and FAQ's) is provided in Attachment A of this report.
- Budgeted $700,000 in FY08 for stormwater management and capital projects.
- Added staff in November 2006: Environmental Engineer, whose job duties will focus on implementation of these permit requirements.

Programmatic & Drainage System

- The City retained the services of Weston & Sampson Engineers (WSE) to conduct an extensive investigation of sanitary sewers where inflow/infiltration (I/I) need to be addressed and where exfiltration into underdrains are suspected to be an intermittent source of bacteria. The study, which included numerous televised inspections of sewer main, manhole inspections, flow isolation exercises and dye testing, was completed in 2006.
- Based upon the results of this study, design plans and specifications were developed. In June 2007, the City will proceed with an Invitation to Bid on this **Sanitary Sewer / Underdrain Rehabilitation Project** (estimated contract value is $1.13 Million). Construction is anticipated to begin in September 2007.
- The City has completed an extensive update to our Drain Atlas that includes locating and assigning a unique tracking number to every drain manhole, catch basin, outfall, culvert or spillway that comprises our drainage system. This allows the City to track O&M costs and historical data in our infrastructure management software program.

Pollution Prevention

- The City of Newton strives for good housekeeping practices at our DPW garages and yards. An internal inspection is planned for 2007 to address any potential housekeeping issues.

Pollution Prevention (continued)

- Household Hazardous Waste (HHW) collection program resumes May 16th through October 18th, two days per week. Last year we collected 270 tons of HHW that may otherwise find its way into the trash. More information available at: *http://www.ci.newton.ma.us/DPW/recycling/default.asp*
- Newton monitors 155 stormwater discharge points to the Charles River, including the many brooks that feed into the Charles, by conducting wet and dry sampling.
- Sections of storm drains are routinely inspected (CCTV) and cleaned for maintenance (i.e., sediment) and water quality issues (based upon bacteria sampling data).

Public Education and Involvement

- Stormwater web page developed with further enhancements planned in 2007. *http://www.ci.newton.ma.us/dpw/engin/stormwater.htm*
- Numerous activities and events listed in the following table.

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	Develop Stormwater Press Release	Engineering, M. Rose	Submit annual press release to newspaper, CATV.	Action Alert co-written with CRWA to support the establishment of stormwater drain fee. Stormwater article printed in Newton TAB (see Attachment A).	Submit article to Newton TAB and/or air "After the Storm" video from EPA on Newton Cable TV network.
Revised					
1.2	Develop Stormwater Web Site	Engineering, M. Rose	Prepare web site on stormwater issues.	Developed a Stormwater web page on City's web site. Include e-mail address for comments and responses from public.	Complete. Maintain and update stormwater web page.
Revised					
1.3	Develop Stormwater Brochures	Engineering, M. Rose	Distribute brochures with water/sewer bills	Distributed storm drain fee explanation with water/sewer bills starting July 2006.	Order pre-made EPA brochures, customize and mass mail in 2007.
Revised					
1.4	Provide Stormwater News on City's web site	Engineering, L. Taverna & M. Rose	Prepare/distribute annual newsletter/ report.	Incorporated stormwater information and pollution prevention brochures on the DPW Stormwater web page.	Add project news in Spring 2007.
Revised					
1.5	Establish Volunteer Database	Environmental, M. Rose	Solicit volunteer educators to promote awareness of water quality.	Volunteer database established.	Complete.
Revised					
1.6	Partner with Schools	Environmental, M. Rose	Obtain and distribute educational resources to schools.	Using existing resources (video, books, etc.) developed a lesson plan for local elementary and middle schools. Program piloted at Jackson School, 5th grade class.	Bring educational program to several more elementary schools in Newton.
Revised					

1.7	Develop Education Program	Environmental, M. Rose	Implement stormwater pollution prevention seminar	Green Decade Coalition / Newton host an annual workshop in March, on "Alternatives to Pesticides". Every spring DPW sells rain barrels to residents at a discount (made possible by a state grant).	Continue promoting water conservation and organic fertilizer efforts. Provide stormwater brochure "8 Tips for Keeping our Rivers Clean" when residents pick up rain barrels for April / May 2007.
Revised					
1.8	Partnering with Watershed Associations	Engineering, L. Taverna M. Rose	Promote meetings with Charles River Watershed Association (CRWA).	M. Rose was a speaker at CRWA stormwater seminar in June 2006. Attended CRWA annual meeting (Nov 15, 2006). Encouraged Newton residents to participate in annual river clean-up day (April 2006).	Maintain active participation in CRWA programs. Leadership role as regional coordinator and member of the Charles River Clean-up Collaborative Team – Jan to April 2007.
Revised					

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
2.1	Establish Stormwater Citizen Advisory Committee	Engineering, L. Taverna	Committee to meet once per year, publish results	Stormwater/wastewater citizen advisory committee has been established.	Future discussions to include stormwater issues, sewer Infiltration/Inflow issues, and impact of I/I removal on storm drain system.
Revised					
2.2	Implement Public Meetings for Citizen Input	DPW, R. Rooney M. Rose	Hold meetings once per year, publish results.	Presentations were made to the Public Facilities committee prior to adopting the stormwater utility program. The meetings were open to the public. Fall 2006, a public meeting was held on the future use / vision of Crystal Lake.	Host a public meeting / presentation on stormwater work in the City.
Revised					
2.3	Encourage Citizen Communication and Reporting	Engineering, L. Taverna	Establish stormwater hotline for illicit discharges.	Customer service center and phone number established at City Hall. All stormwater questions and comments directed to Engineering or Utilities. Customer service calls logged on Hansen database.	Continue with current citizen communication and tracking program.
Revised					
2.4	Network with Local Community Groups	Engineering, M. Rose	Observe outfalls, report illicit discharges & stream clean-up.	Friends of Crystal Lake recently formed. Friends of Hemlock Gorge currently work independently to protect this natural resource area.	Provide support to both of these groups and foster communication and a partnership approach with the City. Attend a meeting for both groups.
Revised					
2.5	Implement Storm Drain Marking Program	Utilities, T. Jerdee	Volunteers mark catch basins with decals.	Summer help in the Utilities Division stenciled catch basins throughout the City and taught importance of stormwater pollution prevention.	Continue with decals, and storm drain stenciling.
Revised					
2.6	Promote Community Clean-Up day	Engineering, L. Taverna M. Rose	Promote annual community clean-up day	Newton community clean-up day held April 29, 2006. Volunteer groups target specific areas of the City for clean-up, including Cheesecake Brook and Auburndale Cove park.	Continue with annual community clean-up day.
Revised					

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
3.1	Establish Stormwater System Map	Engineering, T. Jerdee	Update GIS information, locate all outfalls.	System map established of all drainage infrastructure on GIS. Verification of consultant work completed by DPW in July 2006.	BMP Complete.
Revised					
3.2	Establish Stormwater Database Management System	Utilities, T. Jerdee	Add stormwater information to Hansen database.	Hansen database management system established. Stormwater system attributes added into database, by Weston & Sampson Engineers, 100% complete.	Complete input of stormwater system attributes into existing database.
Revised					
3.3	Locate and Inspect all Outfalls	Utilities, T. Jerdee & Engineering M. Rose	Collect outfall data for Hansen database.	The City's stormwater outfalls have been located and inspected. Signage for all is in place except for some of the recently discovered outfalls that are on state or private property.	Complete signage. Continue with monitoring and sampling program.
Revised					
3.4	Review existing Ordinances and determine whether they adequately prevent Illicit Discharges	Engineering, L. Taverna	Propose to BOA revisions to stormwater ordinance/ policies, as appropriate	Draft revisions to existing City ordinances have been submitted to the Law Dept for discussion, as well as with the Sewer / Stormwater Advisory Committee.	Draft ordinance to be presented to Board of Aldermen in Fall 2007.
Revised					
3.5	Identify Illicit Discharge Sources	Utilities, T. Jerdee	Identify bacteria sources via visual and CCTV inspections, dye and/or pressure tests.	An extensive investigation of suspected sources of illicit discharges and I/I issues of sanitary sewers is complete. Design plans and specifications have been prepared to address these issues. DPW conducts CCTV and DMH inspections of our drainage system.	Proceed with Invitation to Bid for Sanitary Sewer / Underdrain Rehab Project (June 2007). Construction to begin Sept 2007.
Revised					

3.6	Establish Illicit Discharge Hotline	Engineering, L. Taverna	Receive and track citizen reports of illicit discharges.	Hotline established (customer service center). One call received from resident reporting a neighbor disposing of gasoline in a CB. Situation resolved.	BMP Complete. Continue to encourage citizen reporting of illicit discharges.
Revised		M. Rose			
3.7	Train Employees	Utilities, T. Jerdee	Employees to help identify illicit discharges.	3 Utilities Division employees trained for outfall inspections.	BMP Complete.
Revised					
3.9	Monitor City's infrastructure for illicit discharges and non-point source pollution	Utilities, T. Jerdee Engineering M. Rose	Observe major outfall discharges.	Each outfall location in the City has been inspected at least once. A field screening form is completed during inspection. See Attachment B for sampling data and dry weather inspection dates.	Continue with dry and wet weather inspection / sample events for all pipes and outlet points leaving the City.
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
4.1	Review existing Ordinances and determine whether they adequately regulate construction site stormwater runoff	Engineering, L. Taverna	Obtain Law Dept's opinion regarding existing practice and appropriateness of regulating construction site stormwater runoff.	Draft revisions to existing City ordinances have been submitted to the Law Dept for discussion, as well as with the Sewer / Stormwater Advisory Committee.	Draft ordinance to be presented to Board of Aldermen Fall 2007.
Revised					
4.2	Implement Review of Construction Documents	Engineering, J. Daghlian	Establish policy for submittal of erosion control plans.	Policy established for which types /sizes of construction projects shall be subject to DPW/Engineering review. Engineering now requires erosion control measures for construction projects ≥ 1 acre.	BMP Complete. Continue with plan reviews for building permits.
Revised					
4.3	Implement Construction Inspection Program	Engineering, J. Daghlian	Develop guidelines, training, inspection of construction sites > 1 acre.	All construction sites inspected by Engineering. BMP guidelines followed. Engineering requires the use of stormwater BMPs for all construction sites.	Continue with inspection of all construction sites. Develop training for construction inspectors.
Revised					
4.4	Educate Developers on Proper Erosion Control Techniques	Engineering, J. Daghlian / M. Rose	Distribute erosion control procedures to all applicants.	Engineering requires erosion control BMPs for all construction. Wall poster of proper erosion control techniques posted at permit application counter.	Develop "Tips to prevent soil erosion" card and distribute with building and street opening permits.
Revised					
4.5	Provide opportunity for citizen review and input on construction projects	Engineering, J. Daghlian	Ensure citizen review procedures for construction projects > 1 acre.	Citizen input of construction projects occurs during Conservation Commission, Land Use, and Board of Survey public hearings. Citizen review also occurs when Environmental Impact Reports are required.	BMP Complete. Continue with implementation.
Revised					

4.6	Establish Information Management System	Engineering, J. Daghlian	Track construction reviews and construction inspections.	An inspector is assigned to all construction projects over 1 acre (as well as many <1acre). This person maintains a personal field log book of key events.	BMP complete. Continue with implementation.
Revised					
4.7	Establish Standards for Erosion and Sedimentation Controls	Engineering, J. Daghlian	Establish adaptation of MADEP SWMP Standard 8	Engineering requires implementation of MADEP SWMP Standard 8 for all construction projects > 1 acre.	BMP Complete. Continue with implementation.
Revised					

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 3 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 4
5.1	Review existing Ordinances and determine whether they adequately regulate post construction stormwater runoff	Engineering, L. Taverna	Obtain Law Dept's opinion regarding existing practice and appropriateness of regulating post construction stormwater runoff	Draft revisions to existing City ordinances have been submitted to the Law Dept for discussion, as well as with the Sewer / Stormwater Advisory Committee.	Draft ordinance to be presented to Board of Aldermen Fall 2007.
Revised					
5.2	Develop Stormwater Management Policy	Engineering, L. Taverna	Establish policy to establish minimum BMPs for developers.	Stormwater management policy implemented and in practice for several years.	BMP Complete. Continue with implementation.
Revised					
5.3	Develop Stormwater Operations and Maintenance Policy	Engineering, J. Daghlian	Establish policy to establish minimum operations and maintenance plans.	Engineering requires the submittal of stormwater operations and maintenance plans for all construction > 1 acre. About 5 per year received for review.	BMP Complete. Continue with implementation.
Revised					
5.4	Implement Controls to Minimize Impacts to Water Quality	Engineering, J. Daghlian / M. Rose	Implement use of structural and non-structural BMPs.	DPW/Eng. requires developers to implement MADEP Stormwater Standards (1- 8) for applicable projects. Separate and supplemental requirements are outlined for smaller construction projects in the City's Stormwater Management Policy.	BMP Complete. Continue with implementation and stormwater recharge requirements.
Revised					
5.5	Encourage Reducing Directly Connected Impervious Surfaces	Engineering, J. Daghlian	Encourage the use of grass swales and filter strips.	Recommended to developers during development review team meetings. Information provided to homeowners on permeable pavers.	Continue to recommend for all construction projects > 1 acre. Continue to be a resource for developers and homeowners on alternatives to asphalt pavement.
Revised					

5.6 Revised	Determine Capacity of Stormwater System Elements	Engineering, J. Daghlian	Perform capacity analysis for wet weather events.	Old Farm Road System Evaluation project started March 2007 – drainage and sewer investigation. See Attachment C for more information.	Assist and monitor progress of study.
5.7 Revised	Review existing Ordinances and determine whether they adequately regulate recharges to groundwater	Engineering, J. Daghlian	Obtain Law Dept's opinion regarding existing practice and appropriateness of regulating recharges to groundwater	Engineering Division requires recharge to groundwater or retention prior to discharge into our drain system for most construction projects; and strictly limits the amount of new impervious area that is waived of this requirement.	Propose Stormwater Ordinance to back up this practice by Fall 2007.
5.8 Revised	Implement Use of Groundwater Recharge Rates	Engineering, J. Daghlian	Explore adaptation of MADEP SWMP Standard 3	Engineering requires implementation of MADEP SWMP Standard 3 for all construction projects > 1 acre.	BMP Complete. Continue with implementation.
5.9 Revised	Implement Post Development Peak Discharge Rates	Engineering, J. Daghlian	Implement adaptation of MADEP SWMP Standard 2	Engineering requires implementation of MADEP SWMP Standard 2 for all construction projects > 1 acre.	BMP Complete. Continue with implementation.
5.10 Revised	Implement Requirements for Removal of 80% TSS	Engineering, J. Daghlian	Implement adaptation of MADEP SWMP Standards 4 & 7	Engineering requires implementation of MADEP SWMP Standard 4 & 7 for all construction projects > 1 acre.	BMP Complete. Continue with implementation.

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
6.1	Develop Staff Training Program	Environmental, E. Gentile	Train staff on spill prevention control, vehicle maintenance, and lawn care.	Fire Department has staff trained in spill prevention control and response. Vehicle maintenance staff trained in handling waste fluids. Parks and Recreation staff trained in lawn care.	BMP Complete.
Revised					
6.2	Develop Stormwater Pollution Prevention Plan	Environmental, E. Gentile	Develop spill prevention control procedures.	Fire Department has Hazardous Material Emergency Response / spill response plan.	Develop stormwater pollution prevention plan.
Revised					
6.3	Develop Flood Mitigation Plan	Utilities, T. Jerdee	Develop plan, perform exercises.	Flood Mitigation Plan in place; copy provided in previous reporting period.	Continue field exercises and update the flood mitigation plan, as needed.
Revised					
6.4	Establish Inspection Procedures	Utilities, T. Jerdee	Inspect storm drain system using visual inspection and CCTV.	Inspected and cleaned 10,000 linear feet of storm drain system with City's CCTV truck.	Continue to inspect and clean 10,000 linear feet of storm drain system per year.
Revised					
6.5	Incorporate BMPs into Standard Procedures	Utilities, T. Jerdee Highway, S. Tocci	Establish BMPs for municipal operations and maintenance.	"Low Salt Area: Environmentally Sensitive" signs posted around Crystal Lake. Installation of bioretention areas and sand filters around Hammond Pond – in progress (50% complete).	Complete Hammond Pond Stormwater Project. Start another stormwater improvement project at Crystal Lake Bath house & parking lot, which incorporated BMPs into the design.
Revised					
6.6	Establish Maintenance Procedures	Utilities, T. Jerdee	Vactor/flush storm drains to remove sedimentation	Cleaned and flushed 3,500 linear feet of storm drains and removed excess sedimentation.	Continue vactor/flush up to 5,000 linear feet of storm drains to remove sedimentation per year.
Revised					

6.7	Establish Maintenance Procedures	Utilities, T. Jerdee	Clean drainage brooks to remove sedimentation.	Cleaned 3,000 linear feet of drainage brooks.	Continue to clean between 3 and 5,000 linear feet of drainage brooks per year.
Revised					
6.8	Establish Maintenance Procedures	Utilities, T. Jerdee	Clean catch basins every 2 years.	Approximately 6500 catch basins cleaned in 2006.	Continue with catch basin cleaning program.
Revised					
6.9	Establish Maintenance Procedures	Highway, S. Tocci	Sweep streets 2 times per year.	Streets were swept up to 5 times in 2006 depending on location.	Continue with street sweeping program.
Revised					
6.10	Establish Maintenance Procedures	Highway, S. Tocci	Calibrate salt spreaders annually.	Salt spreaders calibrated fall 2006.	Calibrate salt spreaders fall 2007.
Revised					
6.11	Implement Household Hazardous Waste Program	Environmental, E. Gentile	Collect waste oil, antifreeze, paint, pesticides.	Household Hazardous Waste (HHW) collection facility has been implemented, and is now open two days per week from May through October. See attached info.	BMP Complete. City will continue to operate HHW collection facility.
Revised					

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
7.1	Check Criteria for Meeting TMDL	Engineering M. Rose	EPA criteria for TMDLs checked.	Attended informational meeting on phosphorus TMDL requirements for Charles River with DEP on June 26, 2006.	Evaluate use of high efficiency vacuum street sweepers.
Revised					
Revised					
Revised					
Revised					
Revised					
Revised					

7a. Additions –N/A

7b. WLA Assessment – N/A

Part IV. Summary of Information Collected and Analyzed

Please refer to Part IIA – Self Assessment for the City summary of information collected and analyzed.

We are hopeful that the information provided is adequate to demonstrate our commitment to improving our SWMP and ultimately ensuring the quality of our stormwater discharges meets or exceeds standards.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic: Stormwater User Fee created, effective July 1, 2006.

Stormwater management position created/staffed – Environmental Engineer	(y/n)	Yes
Annual program budget/expenditures (catch basin cleaning, material, 1 Environmental Engineer, 4 drainage labor positions, capital improvements) for FY08	($)	$700,000

Education, Involvement, and Training

Estimated number of residents reached by education program(s)	(# or %)	1,000
Stormwater management committee established	(y/n)	Y
Stream teams established or supported	(# or y/n)	Y (Charles river)
Shoreline clean-up participation or quantity of shoreline miles cleaned (during 8th Annual Earth Day Charles River Cleanup; 7 community groups in Newton participated)	(y/n or mi.)	2.5 miles
Household Hazardous Waste Collection Days (*May 2006 to Oct. 2006*)		
▪ days sponsored	(#)	45
▪ community participation	(%)	10%
▪ Material collected: CRTs, auto & button batteries, fluorescent bulbs, paint, waste oil, thermostats, thermometers, and elemental mercury. (*some of which are collected year round*)	(tons or gal)	270 tons
School curricula implemented	(y/n)	Y

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		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	(#)	155
System-Wide mapping complete	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	100%
▪ CADD	(%)	100%
▪ GIS	(%)	100%
Outfalls inspected/screened	(# or %)	100%
Illicit discharges identified (mostly underdrains)	(#)	12
Illicit connections removed	(#) (est. gpd)	0 N/A
% of population on sewer	(%)	98.5
% of population on septic systems	(%)	1.5

Construction

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

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)	Unknown*
*This value would take significant time to quantify, but most likely would be > 100,000 gallons/yr		

Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets)	(times/yr)	Once per 2 years
Average frequency of catch basin cleaning (commercial/arterial or other critical streets)	(times/yr)	Once per 2 years
Total number of structures cleaned	(#)	6,500/yr
Storm drain cleaned	(LF or mi.)	4,500 LF
Qty. of screenings/debris removed from storm sewer infrastructure	(lbs. or tons)	1,000 cy
Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.)		Offsite
Cost of screenings disposal	($)	$71,000

Average frequency of street sweeping (non-commercial/non-arterial streets)	(times/yr)	2 to 3
Average frequency of street sweeping (commercial/arterial or other critical streets)	(times/yr)	5
Qty. of sand/debris collected by sweeping	(lbs. or tons)	Unknown
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.)	(location)	Offsite
Cost of sweepings disposal	($)	0
Vacuum street sweepers purchased/leased	(#)	0
Vacuum street sweepers specified in contracts	(y/n)	0

Reduction in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers (all applications are with 15-2-8 Nature Safe Organic Fertilizer)	(lbs. or %)	30 %
▪ Herbicides	(lbs. or %)	75 %
▪ Pesticides	(lbs. or %)	100 %
* also see copy of email correspondence from Parks & Recreation, dated July 10, 2006		

Anti-/De-Icing products and ratios	% NaCl % $CaCl_2$ % $MgCl_2$ % CMA % Kac % KCl % Sand	97% 1% 0 0 0 0 2%
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 %)	Unknown
Salt pile(s) covered in storage shed(s)	(y/n)	Y
Storage shed(s) in design or under construction	(y/n)	N