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**Municipality/Organization:** Town of Wellesley

**EPA NPDES Permit Number:** MA041067

**MassDEP Transmittal Number:** W-036293

**Annual Report Number  
& Reporting Period:** No. 8 April 1, 2010 – March 31, 2011

**NPDES PII Small MS4 General Permit  
Annual Report  
(Due: May 1, 2011)**

**Part I. General Information**


**Contact Person:** Stephen S. Fader, P.E. **Title:** Town Engineer

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**Mailing Address:** 2 Municipal Way, Wellesley, MA 02481 (formerly 455 Worcester Street)

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:**  P.E.

**Printed Name:** Stephen S. Fader, P.E.

**Title:** Town Engineer

**Date:** May 1, 2011

## **Part II. Self-Assessment**

The Town of Wellesley has completed the required self-assessment and has determined that our municipality is in compliance with all permit conditions with the following exceptions:

The Town has not yet established erosion and sedimentation control regulations. In the interim, the Town does notify builders, architects and engineers of their requirement to obtain coverage under the NPDES Construction General Permit. Erosion and sedimentation control requirements are a major part of many of the Town's regulatory and permitting processes and the Mass. DEP Stormwater Regulations for a majority of projects implemented publicly and privately. The major issue facing establishment of the Erosion and Sedimentation Control Regulations is the enforcement of said regulations and providing adequate funding for this purpose; including which Town department will have that authority.

During this reporting period, a Town bylaw was proposed to be adopted at Town meeting in April, 2011. This bylaw will prevent clear cutting of trees on private property without proper review by the town and submission of a Tree Protection and Mitigation Plan. This bylaw is expected to decrease the loss of urban forestry by land development and thus reduce the rate of runoff into the Town's drainage system.

The Town has not yet completed a visual inspection of all outfalls. However, it responds to all complaints of possible illicit discharges.

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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits
1.1	Inform the general public about their role in stormwater management.	Town Engineer/ DPW and Natural Resources Commission	Brochures mailed to every residence by fall 2006.	A stormwater brochure is available at Town held events and displayed in public buildings. NRC held annual organic lawn care forum in October 2010. Mailings were sent to landscapers promoting organic farming courses. A Morses Pond web site is under development to provide watershed education.	NRC to continue to distribute healthy lawn care and stormwater brochures in public buildings. Continue to provide updates on stormwater management in future DPW newsletters. Use Morses Pond web site to provide watershed education.
1.2	Inform residents about catch basin stenciling.	Town Engineer/ DPW	Information published in at least one DPW newsletter during FY 07	Catch basin marking has become a part of 8 <sup>th</sup> grade community service day. Markers are being placed by students and the need for additional volunteers has diminished.	Continue program in future years, preferably on an annual basis.
1.3	Continue ongoing pesticide awareness campaign.	Natural Resources Commission	Reach as many residences as possible. Improve the condition of the Town's athletic field turf so that the use of pesticides is reduced or eliminated.	An athletic field natural turf management plan for Town owned playing fields was implemented in 2010. An integrated pest management program at Wellesley Country Club (golf course) is ongoing. The NRC distributes updates to the pesticide awareness campaign to selected recipients by email.	Continue with outreach program and monitor results. A low maintenance and pesticide free lawn turf is to be installed at Perrin Park in summer 2011.
1.4	Continue annual household hazardous waste collection day.	DPW Recycling & Disposal Division	Significant amounts of materials collected and number of vehicles entering site.	Annual collection was held on May 2, 2010. See Part V, Education, Involvement, and Training for additional information.	Annual collection to be held on May 1, 2011. Waste oil is accepted on a daily basis.

1.5	Pond Restoration Program - Public Awareness	Town Engineer/DPW and Natural Resources Commission	Notable reduction of nutrient concentrations in ponds, particularly P and N.	A phosphorus inactivation system for Morses Pond was installed in 2008 and continued operation in 2010. The first year results led to revisions of the program. The town has a professional pond manager for Morses Pond that has developed and implemented a management plan.	Phosphorus inactivation system to continue operating in May and June 2011. The Town is anticipating implementation of a phosphorous control plan during the next permit cycle. LID techniques to be encouraged within watersheds.
1.6	Brochures mailed to businesses to promote good housekeeping measures at commercial and industrial activities. Defer to next general permit.	Town Engineer/DPW	Brochures mailed to selected businesses by fall 2006.	Brochures were not distributed this year.	In the future, the town is planning to use web sites to disseminate this information and reduce the use of printed material.
1.7	Continue program to discourage feeding of waterfowl at Town Hall Duck Pond.	Natural Resources Commission and DPW	Reduction in duck population to 8 breeding pairs, reduction of fecal coliform measured in Fuller Brook.	Signs are posted at feeding areas. Due to public awareness, duck population has diminished and remained consistently low. Similar signs are now being posted at Longfellow Pond.	Continue program and periodic monitoring of water quality in Fuller Brook.
1.8	Coordinate with local groups for assistance in outreach.	Natural Resources Commission and DPW	Participation by at least one local group in catch basin stenciling program.	Local citizen's group (Friends of Morses Pond) participating in program to reduce use of fertilizers containing phosphorous and nutrients. Local citizen's group (Wellesley Cancer Prevention Project) participating in pesticide awareness.	Use newsletters to encourage participation by neighborhood groups. Continue outreach.
1.9	Institute a program for pet waste management	Town Engineer/DPW	Notable Reduction in measured fecal coliform from previous samplings.	Pet waste containers have been placed at public locations.	Continue program. An article is to be placed in the next DPW newsletter concerning proper disposal of pet waste.

## 2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits
2.1	Hold public hearings for new regulations.	Town Engineer/ DPW		BMP COMPLETED	
2.2	Hold public hearings for new site plan bylaw.	Planning Board/ DPW		BMP COMPLETED	
2.3	Seek volunteers for catch basin stenciling program and stream clean up.	Town Engineer/ DPW and NRC	Volunteer groups formed, stream clean up and stenciling in progress.	8 <sup>th</sup> grade students installing markers on an annual basis. Annual stream clean up day along Charles River and Fuller Brook held, April 25, 2010. About 45 participants.	Continue with catch basin marking program. 2011 clean up day scheduled April 16. Middle School Public Service Day scheduled for May 4, 2011. 8 <sup>th</sup> graders to again install markers.
2.4	Establish hot line to report illegal dumping.	Department of Public Works.	Number of incidents of illegal dumping being reported.	BMP COMPLETED	Continue to publicize hotline.

## 3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits
3.1	Develop stormwater system layer on GIS.	Town Engineer/ DPW	Map completed and showing 100% of outfalls.	BMP COMPLETED	Update as required.
3.2	Develop stormwater regulations.	Town Engineer/ DPW	Regulations adopted and 100% permit compliance.	BMP COMPLETED	Use regulations to control discharges into the Town's stormwater collection system
3.3	Inspect outfalls, sample and test dry weather discharges.	Town Engineer/ DPW	All 330 outfalls visually inspected by summer 2012.	No outfalls were sampled this year	Program on hold until adoption of next 5 year General Permit.
Revised					

3.4	Use water quality modeling software to identify priority areas for testing.	Town Engineer/ DPW	Software in use by winter 2011-2012.	Purchase of water quality modeling software has been postponed to evaluate new software.	Purchase and install software. Conduct training by consultant.
Revised					
3.5	Trace identified illicit discharges.	Town Engineer/ DPW	Most illicit discharges eliminated by summer 2007	One illicit discharge was reported which was an accidental release of heating oil.	Continue implementation of IDDE in areas of suspected problems.
3.6	Establish catch basin stenciling program. Use plastic or cast iron markers instead of stencils.	Town Engineer/ DPW	At least one marker on every street and every 500' on major streets.	152 markers set by 8 <sup>th</sup> grade students May 2010	Continue Program. Imbed cast iron curb markers in new concrete sidewalk during certain street reconstruction projects.
Revised					
3.7	Training for public employees to report illicit discharges.	Town Engineer/ DPW	Public employees observing and reporting illegal dumping.	Refresher training conducted for DPW highway maintenance employees.	Continue ongoing program

#### 4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits
4.1	Develop erosion and sedimentation control measures.	Town Engineer/ DPW	Regulations adopted and 95% permitting compliance. Adopt during 2012	Erosion and Sedimentation Control Regulations have been drafted and were reviewed by technical consultant.	Finalize and adopt regulations after public hearing and comment.
Revised					
4.2	Require erosion and sedimentation controls in site plan review.	Planning Board	Amendment to zoning bylaw adopted and 100% permitting compliance.	Review of drainage and erosion and sedimentation controls is required for residential projects disturbing 1 acre or more.	Compliance with BMP 4.1 will be incorporated into site plan review.
4.3	Establish procedures for inspections and enforcement of regulations.	Town Engineer/ DPW	Inspections being conducted, achieve 80% compliance rate.	Building inspector notifies contractors of erosion and sedimentation control requirements. Inspections are conducted by DPW.	SOP for inspections to be established after new Erosion and Sedimentation Control Regulations are adopted

### 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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits
5.1	Amend zoning bylaw (Site Plan Review) to address post construction runoff.	Planning Board Zoning Board of Appeals	Amendment to zoning bylaw adopted and 100% permitting compliance.	BMP COMPLETED	Implementation of regulations.
5.2	Monitor inspections and maintenance of privately owned BMP's.	Town Engineer/ DPW/Wetlands Protection Committee/ZBA	Inspection and maintenance of BMP's being performed, town receiving annual reports.	Inspections and maintenance of private BMP's are being performed. Inventory of privately owned BMP's has been completed. A mechanism to monitor inspections and receive annual reports was initiated.	Ongoing – receive and maintain annual reports.
5.3	Review and approve selected water quality BMP's and supervise installation.	Planning Board	Approved water quality BMP's installed and functioning.	Ongoing under site plan review and Project of Significant Impact review. LID techniques are being encouraged in proposed development.	Ongoing.

### 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 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits
6.1	Evaluate existing controls for preventing runoff from municipal operations.	Department of Public Works	Storage facilities constructed and employees trained in spill prevention.	Construction of new DPW water and sewer building completed. Structural controls and pervious pavement BMP's are in use at several Town owned facilities. Stormwater treatment BMP's and on site infiltration being installed at new high school under construction.	Continue to implement recommendations from SWPPP.

6.2	Conduct employee training for hazardous materials, vehicle refueling and washing, and preventative maintenance.	Department of Public Works	100% attendance by DPW employees.	Right to Know training was conducted for DPW employees. Training for vehicle refueling, washing, and preventative maintenance for new highway division employees was conducted.	Schedule video training for vehicle refueling, washing, and preventative maintenance for highway division employees.
6.3	Remove aquatic weeds from Morses Pond.  Revised Expand weed harvesting to other ponds	Department of Public Works and Natural Resources Commission	Visual observation of reduction in invasive and nuisance aquatic weeds.	Mechanical weed harvesting conducted at Morses Pond, Longfellow Pond and Rockridge Pond. Two weed harvesters are operating. An aggressive weed harvesting plan was implemented, developed by NRC pond manager.	Continue program, summer 2011. Continue mechanical harvesting.
6.4	Dredge and remove silt, organic sediments and aquatic weeds from selected ponds.	Department of Public Works and Natural Resources Commission	Reduction in nutrients and elimination of algal blooms and fish kills.	Design and permitting for dredging of Morses Pond has been completed. Bids were received early in 2011. However, they exceeded funding available and the project did not commence.	The scope of the work will be adjusted and rebid in 2012. Also, an additional three to four hundred thousand dollars funding will be sought at the next annual Town meeting.
6.5	Conduct training in spill prevention procedures and conduct annual deployment exercise.	Department of Public Works and Fire Department.	All spill response personnel are trained and have participated in at least one deployment exercise.	Spill response training video presentations were conducted during 2009. The last training session and exercise was held in May 2007. A new DPW safety coordinator was hired.	Schedule future training for new employees or as required. Schedule deployment exercise during next permit period. The safety coordinator will be working in conjunction with Highway Division and Fleet Maintenance to improve spill prevention procedures.
6.6	Construct vehicle washing facility at the DPW highway yard.	Department of Public Works	BMP COMPLETED		
6.7	Conduct training for Park & Tree workers on reduced pesticide use.	Department of Public Works and Pesticide Awareness Coordinator (NRC)	Workers are trained and toxic chemicals are not being detected in water bodies.	Periodic training is ongoing. An athletic field natural turf management plan is in use. The purpose of the plan is to improve the condition of the turf so that the use of pesticides is reduced or eliminated.	Continue Town's (Natural Resources Commission) Integrated Pest Management Policy
6.8	Review procedures for handling and storage of hazardous materials.	Department of Public Works	Minimize exposure of hazardous materials to stormwater.	Right to Know training was conducted for DPW employees.	Hazardous Materials Standard Operating Procedure (SOP) to be prepared in 2011.



6.9	Conduct training for DPW employees on new construction and land disturbance.	Department of Public Works	Training is conducted every other year. 100% attendance by DPW employees.	Informal training conducted on use of erosion and sedimentation controls.	Ongoing as determined by supervisors.
6.10	Continue ongoing program to clean catch basins.	Department of Public Works	Clean critical catch basins annually, others when 60% full.	Ongoing program. Material is being transported to landfill to use as a cover.	Continue with catch basin cleaning program.
6.11	Continue ongoing program for street sweeping.	Department of Public Works	Sweep commercial areas weekly, residential streets annually.	Ongoing program.	Continue with street sweeping program.
6.12	Review and revise schedules for municipal maintenance activities.	Department of Public Works	Revised schedules have improved efficiency of operations.	Maintenance SOP's are completed and will be reviewed and revised as necessary.	Continue with program. Plan will be revised as needed.
6.13	Inventory, inspect and maintain town owned structural controls.	Department of Public Works	Volume of material being removed.	Town owned structural BMP's and oil – water separators have been inventoried, inspected and placed on periodic maintenance schedules. 4 BMP/oil–water separators cleaned this year.	Continue periodic inspection and cleaning.
6.14	Evaluate public sites for retrofitting of LID techniques.	NRC Pond manager	Improved quality of runoff in watershed. Design and install one facility per year.	13 sites were evaluated. 5 sites were identified for cost effective retrofitting. Funding has been obtained for two sites. Construction at first site delayed until summer 2011.	Complete design and construction at both funded sites. Design and install bio-filtration swale or rain garden at additional sites.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) <<if applicable>>

A TMDL HAS BEEN ESTABLISHED FOR THE CHARLES RIVER WATERSHED FOR PATHOGENS

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits
7.1	Monitor Mass. DEP web site for 303D list, draft TMDL's and final TMDL's.	Town Engineer	The Town is aware of its requirements under the TMDL report and has established BMP's for meeting the WLA.	Ongoing, Mass. DEP has established a TMDL for pathogens. Mass. DEP has proposed a TMDL for nutrients for upper/middle Charles River watershed.	ongoing
7.2	Perform analytical testing for e-coli at various outfalls.	Town Engineer	WLA are not being exceeded.	No suspected locations were reported this year.	Program to be expanded during next general permit.
7.3	Continue T.V. inspection of sanitary sewer system.	DPW Water & Sewer Division	100% inspection of system by 2014, all leaks repaired.	57% of system now inspected.	Inspect 10% per year until completion.

A TMDL HAS BEEN ESTABLISHED FOR THE LOWER CHARLES RIVER WATERSHED FOR PHOSPHORUS. A DRAFT TMDL IS PROPOSED FOR NUTRIENTS FOR THE UPPER/MIDDLE CHARLES RIVER WATERSHED.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 8 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits
7.4	Install and operate phosphorus inactivation system in Morses Pond.	Town Engineer/ DPW and Natural Resources Commission	Notable reduction of nutrient concentrations in ponds, particularly P and N.	A phosphorus inactivation system for Morses Pond was installed in 2008 and continued operation in 2010. The first year results led to revisions of the program. The town has a professional pond manager for Morses Pond that has developed and implemented a management plan.	Phosphorus inactivation system to continue operating in May and June 2011.

7.5	Mail brochures alerting residents to the threat of phosphorus overload and pond eutrophication.	Town Engineer/DPW and Natural Resources Commission	Notable reduction of nutrient concentrations in ponds, particularly P and N.	A brochure alerting residents to the threat of phosphorus overload was mailed to residents in the 1990's.	Defer to next general permit.
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## 7b. WLA Assessment

### 1. Pathogens

The 2010 303(d) list identifies two waterbodies within the jurisdiction of the Town of Wellesley that are impaired by pathogens, specifically e-coli. Portions of a segment of the Charles River, MA 72-07, form the boundary between Wellesley and several other towns. Fuller Brook, MA72-18, has headwaters in Needham, but its confluence with Waban Brook is in Wellesley about 250' yards upstream from the Charles River at mile 40. It was noted that pathogens will no longer be listed as an impairment for Charles River segment, MA72-06.

Based on the guidance provided in Section 5 of the TMDL, the town has focused on stormwater runoff, leaking sewer pipes, illicit sanitary sewer connections, pet waste and waterfowl contamination as potential sources of pathogens. Due to the urbanized nature of the Town, failing septic systems and agriculture are not considered to be significant sources of pathogens. There are no known CSOs in the Town. Nor are there any wastewater treatments plants operating within the Town. The Town has completed about 57% of a program to inspect its sanitary sewer system and repair leaking pipes and manholes. Pet waste is being addressed in BMP 1.9. It is suspected that pet waste is a significant cause of pathogens in storm water runoff. The Town will need to provide more pet waste containers and increase public awareness of the problem.

Waterfowl has been identified as the primary source of bacterial impairment in Fuller Brook. To this end, the town has taken steps to improve the water quality at the Town Hall Duck Pond by removing sediment, increasing flow through the stagnated basins of the pond and reducing the duck population. See BMP 1.7.

## 2. Nutrients

The 2010 303(d) list identifies four waterbodies within the jurisdiction of the Town of Wellesley that are impaired by nutrients or phosphorus. Portions of two segments of the Charles River, MA 72-06 and MA 72-07, form the boundary between Wellesley and several other towns. Fuller Brook, MA72-18, has headwaters in Needham, but its confluence with Waban Brook is in Wellesley about 250' yards upstream from the Charles River at mile 40. Rosemary Brook, MA72-25, flows from Needham through Wellesley and empties into the Charles River at mile 60. Most of the portions of Rosemary Brook within Wellesley are within a water supply area and are protected by Town forest and water works land.

The proposed TMDL for the Upper/Middle Charles River watershed recommends reducing phosphorus loadings by employing LID techniques, proper lawn and garden care, and proper disposal of pet waste. A program to retrofit LID techniques is underway at Town owned facilities (see BMP 6.14) The program will then be used to encourage private property owners to adopt similar techniques. The Town encourages reductions in the use of fertilizers and pesticides through various public awareness programs. An athletic field natural turf management plan was developed by a consultant in October 2009 and implemented in 2010. The purpose of the plan is to improve the condition of the Town's playing fields so that the use of fertilizers and pesticides is reduced or eliminated. As stated above, pet waste is being addressed in BMP 1.9.

A phosphorus inactivation system is in use at Morses Pond. Although the purpose of this system is to control the growth of algae within the pond itself, Morses Pond is a tributary of the Charles River through Waban Brook, MA72-17. In this manner, the phosphorus inactivation system also provides treatment to the stormwaters that discharge to the Charles River.

The Town is expected to develop a phosphorus control plan during the next permit cycle.

Progress will be closely tracked and modifications and improvements will be implemented as required.

### **Part IV. Summary of Information Collected and Analyzed**

There was one incident of a discharge of heating oil into Caroline Brook, a tributary of Fuller Brook, to which the Town took immediate action to contain and minimize the effects of this spill. Absorbent booms, vacuum trucks and a temporary oil water separator in the drain pipe above the point of discharge were utilized. The source of the oil was determined to be from a failed heating system component in a school building. The oil had entered a floor drain that led to the brook. Approximately 100 cubic yards of contaminated soil was removed from the site. The Town will continue to assess, collect samples and provide additional response as necessary.

A gasoline spill of unknown origin was reported in catch basins discharging to Academy Brook, a tributary of Rosemary Brook. Absorbent pads were deployed in the basins and 585 gallons of contaminated water was removed from the basins.

There was no additional activity under this program as there were no further observations or reports of pollutants in the Town's drainage system or waterbodies.

**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, 2010 through March 31, 2011)

**Education, Involvement, and Training**

	(Preferred Units)	Response
Household Hazardous Waste Collection Days		
▪ days sponsored**	(#)	1
▪ community participation**	(# or %)	4%
▪ material collected**	(tons or gal)	10.7 tons
Waste oil collected FY11		16 tons
Hazardous material collected FY11		131 tons
School curricula implemented	(y/n)	no
Catch basin markers placed	(#)	152

**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**

	(Preferred Units)	Response
Outfall mapping complete	(%)	100%
Estimated or actual number of outfalls	(#)	330
System-Wide mapping complete (complete storm sewer infrastructure)	(%)	100%
Mapping method(s)		
▪ Paper/Mylar	(%)	100
▪ CADD	(%)	0
▪ GIS	(%)	100
Outfalls inspected/screened ** (including in waterways)	(# or %)	4
Outfalls inspected/screened (Since beginning of permit coverage) (includes waterways and retesting)	(# or %)	144
Illicit discharges identified **	(#)	0
Illicit discharges identified (Since beginning of permit coverage)	(#)	3
Illicit connections removed **	(%); est.gpd	0
Illicit connections removed (Since beginning of permit coverage)	(%); est.gpd	0; 2.5 gpd
% of population on sewer	(%)	97%
% of population on septic systems	(%)	3%

### Post-Development Stormwater Management

Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control	(%)	90%
Site inspections (for proper BMP installation & operation) completed **	(# or %)	100%
BMP maintenance required through covenants, escrow, deed restrictions, etc.	(y/n)	yes
Low-impact development (LID) practices permitted and encouraged	(y/n)	yes

### Operations and Maintenance

Average frequency of catch basin cleaning (non-commercial/non-arterial streets) **	(times/yr)	Every 2 years
Average frequency of catch basin cleaning (commercial/arterial or other critical streets) **	(times/yr)	Every year
Qty. of structures cleaned **	(#)	550
Qty. of storm drain cleaned **	(l.f.)	6342 l.f.
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	1,258 c.y
Disposal or use of screenings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Crapo Hill Landfill

Basin Cleaning Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$65,158
• Hourly or per basin contract rate **	(\$/hr or \$ per basin)	\$24.95 per basin
• Disposal cost**	(\$)	\$8.00/ton
Cleaning Equipment		
• Clam shell truck(s) owned/leased	(#)	1 owned
• Vacuum truck(s) owned/leased	(#)	1 owned
• Vacuum trucks specified in contracts	(y/n)	n/a
• % Structures cleaned with clam shells **	(%)	75%
• % Structures cleaned with vactor **	(%)	25%
(Preferred Units) Response		
Average frequency of street sweeping (non-commercial/non-arterial streets) **	(times/yr)	Every year
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	2 per week

Qty. of sand/debris collected by sweeping **		1278 c.y.
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **		Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	(\$)	\$83,837.00
• Hourly or lane mile contract rate **	(\$/hr. or ln mi.)	In house -- not contracted
• Disposal cost**	(\$)	\$8.00/ton
Sweeping Equipment		
• Rotary brush street sweepers owned/leased	(#)	2 owned
• Vacuum street sweepers owned/leased	(#)	none
• Vacuum street sweepers specified in contracts	(y/n)	n/a
• % Roads swept with rotary brush sweepers **	%	100%
• % Roads swept with vacuum sweepers **	%	0%
Number of municipal oil-water separators cleaned.		4
Tons of sludge and sediment removed		0.2
Gallons of oily water removed		165

Reduction (since beginning of permit coverage) in application on public land of: ("N/A" = never used; "100%" = elimination)		
▪ Fertilizers	(lbs. or %)	10%
▪ Herbicides	(lbs. or %)	0
▪ Pesticides	(lbs. or %)	0
Integrated Pest Management (IPM) Practices Implemented	(y/n)	yes

Average Ratio of Anti-/De-Icing products used **		
(also identify chemicals and ratios used in specific areas, e.g., water supply protection areas)		
Calcium Chloride 37% - 39% CaCl <sub>2</sub> Solution		
Pre-wetting techniques utilized **	(y/n or #)	yes
Manual control spreaders used **	(y/n or #)	yes
Zero-velocity spreaders used **	(y/n or #)	no
Estimated net reduction or increase in typical year salt/chemical application rate	(±lbs/ln mi. or %)	indeterminate



Estimated net reduction or increase in typical year sand application rate **	(±lbs/In mi. or %)	indeterminate
% of salt/chemical pile(s) covered in storage shed. Some mixed sand/salt stored outside under cover.	(%)	100% covered
Storage shed(s) in design or under construction	(y/n or #)	In use
100% of salt/chemical pile(s) covered in storage shed(s) by May 2008	(y/n)	yes

### Water Supply Protection

Storm water outfalls to public water supplies eliminated or relocated	# or y/n	no
Installed or planned treatment BMPs for public drinking water supplies and their protection areas	# or y/n	no
• Treatment units induce infiltration within 500-feet of a wellhead protection area	# or y/n	no