TOWN OF WELLESLEY

WELLESLEY, MASSACHUSETTS 02481

DAVID J. HICKEY, JR, PE
TOWN ENGINEER

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ASSISTANT TOWN ENGINEER

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DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

April 13, 2012

Mrs. Glenda Velez
US EPA – EOP06-1
5 Post Office Square, Suite 100
Boston, MA 02109

Mr. Fred Civian
Massachusetts Dept. of Environmental Protection
One Winter Street
Boston, MA 02108

RE: NPDES Phase II Small MS4 General Permit
Annual Report
Wellesley, Massachusetts
EPA NPDES Permit Number: MA 041067
MA DEPT Transmittal Number: W-036293

Dear Mrs. Velez and Mr. Civian:

Please find enclosed herewith a copy of our annual report for the period April 2011 to March 2012 as required by our NPDES Phase II Small MS4 General Permit. The annual report highlights stormwater related activities and tasks performed during the past year.

Should you have any questions or if you require additional information, please feel free to contact me.

Very truly yours,

David J. Hickey, Jr., P.E.
Town Engineer

Cc: M. Pakstis, Director
J. Curby, Assistant Director
H. Larsen, Executive Director
J. Bowser, Natural Resources Commission
R. Brown, Planning Board

Municipality/Organization: **Town of Wellesley**

EPA NPDES Permit Number: **MA041067**

MassDEP Transmittal Number: **W-036293**

Annual Report Number & Reporting Period: **No. 9 April 1, 2011 – March 31, 2012**

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2012)

Part I. General Information

Contact Person: David J Hickey, P.E. Title: Town Engineer

Telephone #: (781) 235-7600 ex. 3310 Email: dhickey@wellesleyma.gov

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:

Printed Name: David J Hickey, P.E.

Title: Town Engineer

Date: April 13, 2012

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.

This reporting period included Wellesley's first year with the implementation of a tree bylaw that included regulation against clear cutting open land.

Most importantly the Town initiated an inspection of the storm drain system including outfall inspections, the progress of which is included in section XX. We emphasize that the storm water hotline continues to be in operation and the Town continues to respond to all reports 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 9 (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. Storm water education was included in the annual DPW newsletter, mailed to every residence, fall 2011. NRC conducted a resident survey gathering information on lawn care practices and completed the annual organic lawn care forum in October. Informational meetings on pesticide use and benefits of rain barrels were conducted.	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.
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 8th grade community service day. Markers are being placed by students.	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 landscapers and selected recipients.	Continue with outreach program and monitor results.
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 the 1st Saturday in May, more info is listed in Part V.	Annual collection to continue on or about the first Saturday in May every year.

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 Morse's Pond was installed in 2008 and continues operation.	Phosphorus inactivation system to continue operating in non-winter months. Feasability studies for two more ponds to be conducted.
1.6	Brochures mailed to businesses to promote good housekeeping measures at commercial and industrial activities.	Town Engineer/ DPW	Brochures mailed to selected businesses by fall 2006.	Brochures were not distributed this year and activity deferred.	In the future, the town is planning to use web sites to disseminate this information and reduce the use of printed material.
Revised	Defer to next general permit.				
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 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 Morse's Pond, Friend of Fuller Brook and Trails Committee) participating in programs to be aware of water quality issues, as well as citizen's group (Wellesley Cancer Prevention Project) participating in pesticide awareness.	Use newsletters, web pages and email blasts 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 and mentioned in annual DPW newsletter.	Continue program with period public coverage on web page, newspaper and DPW newsletter.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – 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.	8th grade students installing markers on an annual basis. Annual stream clean up day along Charles River and Fuller Brook held in April 16, 2011. About 40 participants.	Continue with catch basin marking program and clean up days. 2012 clean up day scheduled April 21. Middle School Public Service Day scheduled for May 2, 2012. 8th 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.	Responded to 1 email for possible detergent in Fuller Brook near State Street.	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 9 (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.	Initiated outfall observation, 12 outfalls inspected and 2 dry weather flows sampled indicating the source as groundwater.	Full implementation pending an assessment of resources, DPW is aiming to inspect and sample as many outfalls as possible, however completion will likely require several years or as required with the updated 5 year General Permit.
3.4	Use water quality modeling software to identify priority areas for testing.	Town Engineer/ DPW	Software experimented in 2004 and additional options investigated thereafter	Experimented with available demo software and discussed interfacing with consulting engineers	Action delayed until updated 5 year General Permit.
Revised			Delay any purchase until further information is published by the EPA and/or as outlined in the updated 5 year General Permit.		
3.5	Trace identified illicit discharges.	Town Engineer/ DPW	Most illicit discharges eliminated by summer 2007	1 resident report in December concerning suds in the Fuller Brook watershed, visual inspection and field tests could not confirm illicit discharge.	Continue implementation of IDDE in areas of suspected problems.
3.6	Establish catch basin stenciling program.	Town Engineer/ DPW		95 catch basin markers were placed during 8th grade community service day.	Continue Program. Imbed cast iron curb markers in new concrete sidewalk during certain street reconstruction projects.
Revised	Use plastic or cast iron markers instead of stencils.		At least one marker on every street and every 500' on major streets.		
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 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits

4.1 Revised	Develop erosion and sedimentation control measures.	Town Engineer/ DPW	Regulations adopted and 95% permitting compliance. Adopt during 2012	DPW continues to monitor and respond to erosion and sedimentation issues, adoption of further regulation has been delayed.	Finalize and adopt regulations after public hearing / comment after issuance of updated 5 year General Permit.
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 9** (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 is tracked.	Include private BMP's on GIS system.
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 developments. The NRC obtained funding and permitting for an LID demonstration project consisting of rain barrels and other LID elements.	Ongoing. Construct demonstration project at Morses Pond beach in May 2012.

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 9 (Reliance on non-municipal partners indicated, if any)	Planned Activities – 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.	BMP's are have been included in all re-development or new building projects including a new W/S building, a new High School and redevelopment at the transfer station, in all cases employees were educated about benefits and trained on function and maintenance several Town owned facilities.	Continue to implement recommendations from SWPPP and expand use of BMP's where appropriate.
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.	Department of Public Works and Natural Resources Commission	Visual observation of reduction in invasive and nuisance aquatic weeds.	Mechanical weed harvesting conducted at Morse's Pond, Longfellow Pond and Rockridge Pond. Two weed harvesters are operating. An aggressive weed harvesting plan and addition of a pond management consultant.	Continue program.
Revised	Expand weed harvesting to other ponds				
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 Morse's Pond has been completed. The Town is currently pursuing additional funds required to complete the work.	Rebid dredging project in 2013 prior to obtaining funding. Feasability studies for two more ponds to be conducted.

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 are conducted annually.	Continue annual training and schedule deployment exercise.
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.	The Town has in place an Integrated Management Plan for all outdoor public spaces, the IMP prohibits the use of pesticides, excepting limited and specific applications such as winter moth or rodent control. The DPW employs 12 MA certified licensed pesticide applicators who have satisfied the annual training requirements of the state.	Continue compliance with MA license requirement and the Wellesley IMP.
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, Hazardous Waste Handling, Asbestos Management and SPCC training was conducted for most DPW employees.	Continue training programs.
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.	The Town cleaned the forebay at Reed's pond and 2 oil water separators.	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.	The NRC obtained funding and selected 2 preferred sites for the installation of a bio-swale. However, proximity to a water supply prevented installation, additional sites are being considered. The new high school incorporated rainwater re-use and porous pavement.	Design and install bio-filtration swale or rain garden at additional sites, continue to promote LID technology.

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 9** (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 aTMDL for pathogens. MassDEP has established a TMDL for nutrients for upper/middle Charles River watershed. MassDEP has established a TMDL for phosphorus for the lower 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.	65% of system now inspected.	Inspect 10% per year until completion.

A TMDL HAS BEEN ESTABLISHED FOR THE LOWER CHARLES RIVER WATERSHED FOR PHOSPHORUS.
A TMDL HAS BEEN ESTASBLISHED 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 9 (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 2011. 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 2012.
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.	Brochures were mailed to landscapers and interested parties. Information posted on CATV. NRC conducted a healthy lawn care workshop in April 2011. 80 people attended.	Defer to next general permit. NRC to continue to distribute healthy lawn care and stormwater brochures in public buildings. A website is under development to educate residents on their role in protecting water quality through desirable residential practices.
Revised	Promote proper lawn and garden care to reduce the use of pesticides and fertilizers				
7.6	Evaluate public sites for retrofitting of LID techniques.	NRC Pond manager	Improved quality of runoff in watershed. Design and install one facility per year.	The NRC obtained funding and selected 2 preferred sites for the installation of a bio-swale. However, proximity to a water supply prevented installation, additional sites are being considered. The new high school incorporated rainwater re-use and porous pavement.	Design and install bio-filtration swale or rain garden at additional sites, continue to promote LID technology.

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.

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 65% 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 and Phosphorus

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 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, beginning in 2008. 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.

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

Part IV. Summary of Information Collected and Analyzed

12 outfalls in Fuller Brook were inspected. Dry weather discharges were observed at two locations, FB3 and FB8. Analytical testing was conducted and both discharges were determined to be from natural sources.

One e-mail report of suds in Fuller Brook was investigated. Evidence of this observation could not be located in the field.

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, 2011 through March 31, 2012)

Education, Involvement, and Training

	(Preferred Units)	Response
Household Hazardous Waste Collection Days		

▪ days sponsored**	(#)	1
▪ community participation**	(# or %)	4%
▪ material collected**	(tons or gal)	10.86 tons
Waste oil collected FY12		15 tons
Hazardous material collected FY12		110 tons
School curricula implemented	(y/n)	no
Catch basin markers placed	(#)	95

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 %)	12
Outfalls inspected/screened (Since beginning of permit coverage) (includes waterways and retesting)	(# or %)	154
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; 25 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 **	(#)	146
Qty. of storm drain cleaned **	(l.f.)	7161 l.f.
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	352 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)**	($)	$35,192.00
• Hourly or per basin contract rate **	($/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 **	(lbs. or tons)	1641 c.y.
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	($)	$79,384.00
• Hourly or lane mile contract rate **	($/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.		2
Tons of sludge and sediment removed		0.17
Gallons of oily water removed		453

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% $CaCl_2$ 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/ln 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

Fuller Brook Stormwater Outfalls
Dry Weather Sampling
March 2012

Parameter	FB3 Result	FB8 Result	Units	Range
Surfactants	ND	ND	mg/L	>0.25 mg/L
Fluoride	ND	ND	mg/L	>0.25 mg/L
Ammonia	0.088	ND	mg/L	Ratio >1.0
Potassium	ND	ND	mg/L	Ratio >1.0
pH	7.4	6.5	SU	

Determination: Discharge from both FB3 and FB8 is likely a natural water source.