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 27, 2016

Mrs. Glenda Velez
U. S. Environmental Protection Agency – Region 1
5 Post Office Square – OEP06-01
Boston, MA 02109-3912

Mr. Fred Civian
Massachusetts Dept. of Environmental Protection
One Winter Street – 5th Floor
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 2015 to March 2016 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.

Sincerely,

George J. Saraceno
Certified Stormwater Manager

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

Cc: M. Pakstis, Director
D. Cohen, Assistant Director
H. Larsen, Executive Director
B. Schmitt, Natural Resources Commission
M. Zehner, Planning Board

Municipality/Organization: **Town of Wellesley**

EPA NPDES Permit Number: **MA041067**

MassDEP Transmittal Number: **W-036293**

Annual Report Number & Reporting Period: **No. 13 April 1, 2015 – March 31, 2016**

NPDES PII Small MS4 General Permit Annual Report (Due: May 1, 2016)

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: 20 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 30, 2016

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 and has made several notable stormwater system improvements this year, the primary one being;

The first phase of the Fuller Brook Preservation project, which included the installation of two bio filtration systems, as well as stream and pond dredging, bank stabilization, drainage system upgrades and invasive species management. Fuller Brook is the second largest watershed in Town and contains some of the communities more developed areas. Fuller Brook is tributary to the Charles River and is listed as an impaired waterway for E. coli and nutrients. It was the DPW's first area for only dry weather flow inspections which went well and has resulted in the Town initiating discussions with MADEP to remove or delist Fuller Brook from the Massachusetts Integrated List of Waters, Section 303 (d) of the Clean Water Act.

The Town both through education and regulatory review has encouraged private development projects to focus on stormwater runoff by installing BMP's and LID techniques, where feasible. There were a total of sixteen (16) on-site stormwater BMP's installed this year, including rain gardens, bioswales and other LID techniques, which continues to grow through public education and outreach.

The Town continues to field proof the Town's drainage network and is approximately 75% complete. All inspections and inventory corrections are being made directly to our GIS system. We continue to make moderate gains on inspecting our dry weather outfall inspections. This year, an additional 43 outfalls were inspected or 40% of the drainage network and a total of 131 outfalls inspected for dry weather flow. We are experiencing 15% of our outlets with dry weather flow. However, laboratory analysis has indicated that the dry weather flow is from natural causes such as high groundwater. We continue to manage and update the Town's Stormwater Management webpage, which includes copies of our annual reports, stormwater mapping, stormwater brochure, watershed maps, stormwater hotline and other information that provides residents with the latest information on stormwater.

The areas where the Town has not completed with our permit include establishment of an erosion and sediment control regulations. However, the Town's regulations governing land disturbances do require that we review the project to protect sensitive areas including navigable waters, the water supply areas and wetlands resources. We have not seen this as a significant concern in our community. We continue to reach out to engineers, builders and architects of their requirement to provide for sediment and erosion controls for site development and redevelopment work. This year, our staff, during the installation of on-site drainage work, inspected ten (10) BMP's at several smaller residential projects.

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 10 (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.	The Town performed a stormwater presentation for the Town of Wellesley Middle School students and posts stomwater awareness material in several public buildings and on the web site. 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 and web pages. The NRC provides links to stormwater management programs on the Town's website. Participate in Earth Day by cleaning up the Charles River.
1.2	Inform residents about catch basin stenciling.	Town Engineer/ DPW	Updates published in newsletter and on website.	Catch basin marking has become a part of 8th grade community service day and Boy Scout Eagle Scout project. Markers are being placed by students. The Town provided maps, training and the materials for the program. This year's electronic forms with mobile device enabled fields were used to make the project more interesting and effective.	DPW will present stormwater stenciling project and outreach program on May 4th, 2016 as part of the 8th grade Community Service Day.

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 pesticide management program at Wellesley Country Club (golf course) is ongoing. The NRC distributes updates to the pesticide awareness campaign to landscapers and selected recipients. Integrated Pest Management Policy, Organic Land Management and Implementation Effort.	Continue with outreach program and monitor results. This is primarily done through the Green Wellesley Campaign, both of which are on the Town's website and Facebook page.
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 3rd Sunday in May, more info is listed in Part V.	Annual collection to continue on or about the first Sunday in May every year. This year it's May 1, 2016.
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 through this year. Dredging of Morses Pond was completed in 2013. The dredging project improved detention times and water quality throughout the pond. A independent annual report was made and is posted on the Towns web site. The water quality improvements, particularly over the last few years is very encouraging.	The Town has hired a consultant to for the Pond management contract. The Town continues to operate under the current Pond management team the phosphorous inactivation system at Morses Pond. State Street Pond was dredged as part of the Fuller Brook restoration project, and most importantly the Town has awarded a contract to do an assessment of all of the major ponds in the community.
1.6	Brochures mailed to businesses to promote good housekeeping measures at commercial and industrial activities.	Town Engineer/ DPW	Completed in the fall 2006, defer development of additional brochures next general permit..	Ongoing. Using the web site for this task.	The town currently uses its web site 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 posted at Longfellow Pond. Installed a rain garden to treat stormwater runoff.	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. No idling program/ campaign with Middle School students.
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 periodic 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 10 (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. Boy Scouts also helping to install markers. Annual stream clean up day along Charles River and Fuller Brook held in April 30, 2016.	Continue with catch basin marking program and clean up days. The Charles River clean up day was scheduled April 30, 2016. Middle School Public Service Day scheduled for May 4, 2016. 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.	A small amount of gasoline was dumped into a catch basin. We were notified by a resident. We responded with the Fire Department and cleaned up the gasoline, which was contained.	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 10 (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.	Field Proofing GIS information, completed inspection and inventorying of network for approximately 75% of the Towns drain system	Continue to field proof drain network and update GIS as required.
3.2	Develop stormwater regulations.	Town Engineer/ DPW	BMP COMPLETED		
3.3	Inspect outfalls, sample and test dry weather discharges.	Town Engineer/ DPW	All 330 outfalls visually inspected by summer 2012.	Continued outfall observation, 43 outfalls inspected with no dry weather flow observed. A total of 131 outfalls have been inspected over the last four (4) years.	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.
	Use water quality modeling software to identify priority areas for testing.	Town Engineer/ DPW	Delay any purchase until further information is published by the EPA and/or as outlined in the updated 5 year General Permit.		Action delayed until updated 5 year General Permit.
3.5	Trace identified illicit discharges.	Town Engineer/ DPW	Most illicit discharges eliminated by summer 2007	One (1) illicit connection found. Sewer service connected to drain. The Town worked with the land owner to reconnect sewer service. Work is complete.	Continue implementation of IDDE in areas of suspected problems, conduct water sampling and follow IDDE policy for correction.
3.6	Establish catch basin stenciling program.	Town Engineer/ DPW		Approximately 66 catch basin markers were placed during 8th grade	Continue Program. Embed cast iron curb markers in new concrete

Revised	Use plastic or cast iron markers instead of stencils.		At least one marker on every street and every 500' on major streets.	community service day and by the Boy Scouts Eagle Scout project.	sidewalk during street reconstruction projects.
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. Make part of the SPCC training that we perform annually.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits
4.1	Develop erosion and sedimentation control measures.	Town Engineer/ DPW	Continue to assess effectiveness and potential to include in next permit phase.	DPW continues to monitor and respond to erosion and sedimentation issues. Conducted 6 site inspections to verify site compliance.	Assess control and effectiveness of existing regulations. Respond to erosion and sediment control issues from land owners.
4.2	Require erosion and sedimentation controls in site plan review.	Planning Board	Amendment to zoning bylaw adopted and 100% permitting compliance.	Review of erosion and sedimentation controls is required for most projects including all PSI's, Site Plan reviews and Large House Projects as well as any project within 100' of a wetland or 200' of a river / brook. This covers most projects in the community.	This year, 16 projects required erosion and sedimentation control review as part of the approval process for a building permit. This trend will continue through FY17.
4.3	Establish procedures for inspections and enforcement of regulations.	Town Engineer/ DPW	Inspections being conducted, achieve 80% compliance rate.	Building inspector and Street Occupancy Permit inspector notifies contractors of erosion and sedimentation control requirements. Inspections and corrections are usually completed by DPW.	SOP for inspections to be established after new permit is adopted. Requiring concrete wash stations a control measure for all project requiring concrete.

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 10 (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	BMP COMPLETED		
5.2	Monitor inspections and maintenance of privately owned BMP's.	Town Engineer/ DPW/Wetlands Protection Committee/ZBA	Inspection and maintenance of BMP's is performed, town receiving annual reports.	The DPW continues to track the locations of 302 private BMP's (260 residential, 34 commercial and 8 institutional), which are largely infiltration systems, O&M plans are required as part of permitting and DPW staff inspect the installation. Permit conditions require system owners to report on O&M activities.	Include private BMP's on GIS system, continue tracking, installation and requiring owners to perform O&M activities. Consider sending annual reminder letters to system owners.
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. Town considering a rain garden Sixteen (16) private BMP's were installed this permit period.	Inspection of water quality BMP's are ongoing for the Fuller Brook Preservation project and Morses Pond project. The Town is inspecting private BMP's during installation and is conditioning developers to complete and report on maintenance activities.

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 10 (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 have been included in all re-development or new building projects including the new W/S building, DPW Operations building, High School, salt shed and redevelopment at the transfer station. All employees were educated about benefits and trained on function and maintenance of several Town owned facilities.	Continue to implement recommendations from SWPPP and expand use of BMP's where appropriate. SWPPP's are reviewed annually for updates. MSGP requires review of stormwater runoff, update of SWPP if needed.

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 and expand where possible 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 Morse's Pond and Longfellow Ponds.	Continue program, plan and budget for dredging of Reed's Pond fore bay. As part of the Fuller Brook Preservation project, dredging was completed at State Street. Reeds Pond forebay was dredged this year.
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.	Weed harvesting was conducted on a routine basis and dredging of Morses Pond is complete including beach nourishment. Skate Pond was dredged this year.	Continue weed harvesting and a feasibility 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. SPCC manuals are updated when a spill occurs. SPCC training was completed this year.
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.	253 catch basins cleaning this permit period. 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.	Street sweeping the roads town wide once a year. Commercial areas are swept several times per year.	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 continues to inspect all Town owned structural controls and clean when necessary.	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 Town installed 1 LID application including permeable pavement and rain garden.	Continue to pursue LID applications at any substantially remodeled or renovated Town facility. Town plans to incorporate bioswales and/or infiltration systems at the proposed Senior Center project and the Police Station parking lot project.

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 10 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Future Permits
7.1	Monitor Mass. DEP web site for 303(d) 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. 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. Fuller Brook is impaired with a TMDL for nutrients and E. coli.	Promote organic and zero phosphorus fertilizers. The Town is working with the MADEP to delist Fuller Brook as an impaired waterway. The Town plans to work more closely, including annual reporting and team meeting with the Wellesley Country Club.
7.2	Perform analytical testing for e-coli at various outfalls.	Town Engineer	WLA are not being exceeded.	The Town did not perform any E. coli testing at outfalls as no dry weather flows were observed.	The Water and Sewer Department responded to 1 over flow that was reported as a SSO to DEP and repaired.
7.3	Continue T.V. inspection of sanitary sewer system.	DPW Water & Sewer Division	100% inspection of system by 2014, all leaks repaired.	80 % of system now inspected or approximately 110 miles of sanitary sewer. Approximately 3,400 linear feet of sewer pipe was tested and sealed.	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 10 (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 through this year. The results have been encouraging particularly over the last few years. An annual report is posted on the Town's web site.	The Town has a consultant working on the Morses Pond management Plan project, including operating the phosphorus inactivation system this summer. The consultant is also working on managing other ponds within the Town.

7.5	Promote proper lawn and garden care to reduce the use of pesticides and fertilizers	Town Engineer/ DPW and Natural Resources Commission	Notable reduction of nutrient concentrations in ponds, particularly P and N.	NRC continues to promote Wellesley's Green Campaign, with information on the Town's website and Facebook page.	NRC to continue to distribute healthy lawn care and stormwater brochures in public buildings.
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.	One new rain gardens to be installed this year, including pervious sidewalk pavers and pervious stone dust path surface.	Design and install bio-filtration swale or rain garden at additional sites, continue to promote LID technology.

7b. WLA Assessment

1. Pathogens

The 2012 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 nor are there any wastewater treatments plants operating within the Town. However, the Town did locate one (1) sanitary sewer service that was connected to the Town's drainage system, which was repaired by the land owner. The Town has completed about 80% of a program to inspect its sanitary sewer system and repair leaking pipes and manholes. The Town responded to storm caused sanitary sewer overflows during this permit period, which were immediately cleaned up and included sampling of adjacent streams. 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 is considering providing 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 and added 4 rain gardens this year. See BMP 1.7.

The Town is on the second phase of the Fuller Brook Park Restoration project, which included the installation of wetlands meadows, bio retention areas, removed sediment in the stream bed, bank stabilization, dredging of Skate Pond and removal of invasive species, which will improve water quality.

2. Nutrients and Phosphorus

The 2012 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. The NRC will continue to investigate rain gardens or other LID installations. (see BMP 6.14) There is an active BMP and LID program that encourages private property owners to adopt similar techniques. The Town encourages reductions in the use of fertilizers and pesticides through various public awareness programs that were conducted in 2015. 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.

Since 2008, 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 on the second phase of the Fuller Brook Park Restoration project, which included the installation of wetland meadows, bio retention areas, removed sediment in the stream bed, bank stabilization, dredging of Skate Pond and removal of invasive species, which will improve water quality.

Part IV. Summary of Information Collected and Analyzed

Forty Three (43) outfalls were inspected this permit period as part of the Lake Waban watershed. The Town will continue inspecting outfalls during dry weather conditions. During our inspections, there was no dry weather flows observed. The Town continues to implement the IDDE program as dry weather flows are discovered. The Town continues to monitor two (2) outfalls at the Recycling

Disposal Facility (RDF) as part of the EPA Multi-Sector General Permit (MSGP).

The Town continues to perform field inspections of outfalls, catch basins and manholes as part of the stormwater drainage system to remove sediments and update the GIS system.

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, 2014 through March 31, 2015)

Education, Involvement, and Training

	(Preferred Units)	Response
Household Hazardous Waste Collection Days		
▪ days sponsored**	(#)	1
▪ community participation**	(# or %)	< 5%
▪ material collected**	(tons or gal)	25 tons
Waste oil collected FY15		11 tons
Hazardous material collected FY15		111 tons
School curricula implemented	(y/n)	no
Catch basin markers placed	(#)	66

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 %)	43
Outfalls inspected/screened (Since beginning of permit coverage) (includes waterways and retesting)	(# or %)	131
Illicit discharges identified **	(#)	1
Illicit discharges identified (Since beginning of permit coverage)	(#)	12
Illicit connections removed **	(%); est.gpd	1; 50 gpd
Illicit connections removed (Since beginning of permit coverage)	(%); est.gpd	12; 200 gpd
% of population on sewer	(%)	98%
% of population on septic systems	(%)	2%

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 **	(#)	253
Qty. of storm drain cleaned **	(l.f.)	6,118 l.f.
Qty. of screenings/debris removed from storm sewer infrastructure **	(lbs. or tons)	393 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)**	($)	$25,500
• Hourly or per basin contract rate **	($/hr or $ per basin)	$25.50 per basin
• Disposal cost** **(Amount includes truck fee and disposal)**	($)	$30.00/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)	1
Average frequency of street sweeping (commercial/arterial or other critical streets) **	(times/yr)	Wkly= 12+/-
Qty. of sand/debris collected by sweeping **	(lbs. or tons)	290.25 c.y.
Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) **	(location)	Landfill
Annual Sweeping Costs		
• Annual budget/expenditure (labor & equipment)**	($)	$25,000

• Hourly or lane mile contract rate **	($/hr. or ln. mi.)	$63/ ln. mi.
• Disposal cost** **(Amount includes truck fee and disposal)**	($)	$30.00/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		11
Gallons of oily water removed		0

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 (new)
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