

Municipality/Organization: City of Woburn, Massachusetts
EPA NPDES Permit Number: MAR041073
MassDEP Transmittal Number: W-041026
Annual Report Number & Reporting Period: Year 12
April 1, 2014 – March 31, 2015

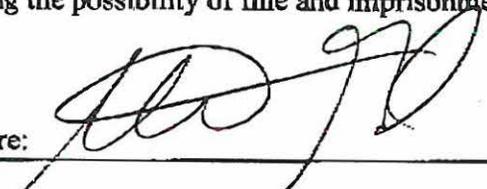
**NPDES PII Small MS4 General Permit
Annual Report
(Due: May 1, 2015)**

Part I. General Information

Contact Person: John Duran **Title:** Superintendent of Public Works
Telephone #: 781-897-5980 **Email:** jduran@cityofwoburn.com

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: Scott D. Galvin

Title: Mayor

Date: 5-1-15

Part II. Self-Assessment

As required by Part II.D.1 of the 2003 General Permit, as part of developing this Annual Report, we evaluated compliance of the City's Stormwater Management Program with the conditions of the 2003 General Permit. **The City has made substantial progress completing BMPs and measurable goals defined in our written Stormwater Management Plan, and our municipality is in compliance with the General Permit.** Also, as required by Part II.D.2 of the 2003 General Permit, the City evaluated the appropriateness of selected BMPs in efforts towards achieving the defined measurable goals and has determined that previously selected BMPs and measurable goals continue to be appropriate at this time. During Permit Year 12, the City of Woburn continued to implement its Stormwater Management Program.

The following program highlights demonstrate Woburn's comprehensive local program and may not have been previously described under the City's BMPs for each Minimum Control Measure.

Programmatic Achievements

- During this past year, we engaged outside consultants to help the City comprehensively evaluate the City's entire Stormwater Management Program to prepare Woburn for meeting the next General Permit requirements.
- The City Engineer is an active member of the Mystic River Watershed Initiative Municipal Subcommittee and has participated in many multi-community events and cooperative efforts.
- The City Engineer is also represents the New England Chapter – American Public Works Association (NEAPWA) on the working committee for the New England Stormwater Collaborative. The New England Stormwater Collaborative was formed by the New England Water Works Association, New England Water Environment Association and NEAPWA in 2013 with the conceptual drivers of EDUCATION, UNDERSTANDING, and ACTION. The collaborative works to engage the stormwater community, provide a forum for information and education exchange, and advocate sound stormwater management practices. More information can be found here: <http://www.newwa.org/Resources/UtilityResources/NewEnglandStormwaterCollaborative.aspx>.

Public Education/Outreach/Involvement

- On August 9, 2006, DPW, in conjunction with CDM and the Woburn Residents Environment Network (WREN), sponsored an event to install markers at approximately 100 catch basins around Horn Pond. The markers were used to promote public involvement and raise awareness about the City's stormwater management program. In addition, a video was prepared in conjunction with the City's Local Access Channel (LAC) to discuss stormwater impacts and the catch basin marking program. This video has run periodically on the LAC.

Illicit Discharge Detection and Elimination Program

- The City's robust IDDE Program has been ongoing since 2003. The City has completed drainage system mapping, outfall inventory, and dry weather screening. A summary of outfall reconnaissance activities is included in *Part IV. Summary of Information Collected and Analyzed*.
- Approximately 200 dry weather samples have been collected and analyzed to date.
- Approximately 2,500 linear feet of drain pipe were TV inspected within the drainage systems tributary to the outfalls that exhibited potential for illicit connections.

Drainage System Mapping and Geographic Information System (GIS)

- The City had no substantial mapping available of the existing drainage pipe system at the start of the permit in 2003 and undertook a comprehensive field inspection program to compile the drainage database.
- Approximately 2,100 manholes were inspected and mapped comprising approximately 88 miles of drain pipe to-date. Drain system manhole and pipe information is collected during the inspections and is incorporated into the GIS system to locate and record all drainage system physical features.
- During the inspections, cleaning requirements for manholes, catch basins and drain lines are identified. The City has followed up on most of the recommended system cleaning requirements noted during the inspections.

Drainage System Maintenance and Management Computerization

- The DPW has installed a City system that tracks any areas that come into question on drainage problems.

Pollution Prevention and Good Housekeeping in Municipal Operations

- DPW constructed a new covered storage shed that will house road salt. This storage shed will supplement the existing smaller shed that is currently in use. The existing storage shed will be used to temporarily house and cover catch basin residuals and street sweepings before final disposal at DEP approved landfill.
- The City has constructed a new Vector Truck discharge station at a location separate from the DPW yard (adjacent to the former landfill in North Woburn) that will feature a paved area and runoff controls. This will eliminate any potential discharges from this process into Town Meadow Brook. The Vector truck residuals will be temporarily stored in a lined container until removed for final disposal at the Turnkey Recycling and Environmental Enterprises landfill in Rochester, NH.

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1-1	Hold Earth Day Celebration	Conservation Commission	Hold event annually	<p>Due to constraints on budget and staff time, no formal Earth Day events were held by the Town. An article titled “10 Ways to Celebrate Earth Day all Year” was released in Woburn Patch on April 19, 2014, which detailed ways to reduce, reuse, and recycle.</p> <p>In 2011, Woburn received grants from the Mass Department of Energy Resources to undertake a series of initiatives to reduce costs, such as replacing street lights with LEDs. The City publicizes the work completed under these grants as part of Earth Day press releases.</p>	BMP Completed. For Earth Day 2015, the City will continue to publicize the ongoing energy saving projects.
1-2	Hold Conservation Day Event	Conservation Commission	Hold event annually	<p>Conservation Day was held on Saturday May 3, 2014. The City notified the public about the event through newspapers, on the City’s website and flyers about 2 weeks in advance. Approx. 100 volunteers participated in maintaining trail markers, exercise equipment, repairing a bridge, clearing trails/debris, and picking up trash.</p> <p>The posters developed in BMP 6-8 have also been presented at previous Conservation Day events.</p>	Conservation Day festivities are planned for May 2, 2015
1-3	Continue Pet Waste Disposal Practices	Dept. of Public Works	Maintain signs and doggie mitts	Doggie mitt supply was checked/ restocked every month. Pet waste disposal signs and waste reception bins were checked daily from April 1st through November 30th.	BMP completed. Continue existing program

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
1-4	Maintain Environmental Awareness Brochures	Dept of Public Works and Conservation Commission	Brochures available	Brochures were distributed in 2012. Brochures restocked once during the permit year.	BMP completed. Continue existing program
1-5	Develop Stormwater Brochure	Dept. of Public Works	Brochure developed by May 1, 2004	BMP completed (May 2004).	BMP completed.
	Brochure Available for Distribution	Dept. of Public Works	Distribute brochure via mass mailing once during permit term	BMP Completed (February 2005).	BMP Completed.
1-6	DPW staff available for classroom discussions/tours	Dept. of Public Works	Schools aware of opportunity for speakers each fall and spring	Schools were notified of the opportunity. Massachusetts Water Resources Authority has also been involved at the middle school level giving stormwater presentations.	BMP completed. Continue to notify schools of opportunity.
1-7	Stormwater bulletins added to Kiosks at Horn Pond	Dept. of Public Works	Bulletin posted on kiosks by May 1, 2004	No goals for this BMP were planned for Permit Year 12. BMP Completed in previous Permit Year.	BMP completed. Maintain/ update bulletins on kiosks.
1-8	Stormwater Information added to DPW's Website	Dept. of Public Works	Stormwater information added to website by May 1, 2005	The City developed stormwater web pages to supplement its public education program in 2005. The stormwater website is accessible from the Department of Public Works (DPW) page on the City's website. The site includes information on stormwater contamination, the City's NOI and Annual Reports, and links to environmental groups in the City and the Mystic River Watershed Association (MyRWA).	BMP completed. Web address is http://www.cityofwoburn.com/index.asp?id=386
	Maintain/update information on DPW Website	Dept. of Public Works	Maintain/update website as necessary	Website updated as necessary to provide residents notice of public stormwater events.	BMP completed. Continue to update website as necessary.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
2-1	Comply with State Public Notification Guidelines	Planning Board and Any City Department	Post notices on all applicable meetings and environmental awareness events	As required, the City complied with MGL Ch. 39 S 23B (state) and local meeting notification requirements.	BMP completed. Notify public of meetings as necessary. DPW to consider adding meeting notifications to website.
2-2	Used Oil Collection Program	Board of Health	Collection held monthly	Murphy's Waste Oil accepts waste oil, oil filter, and anti-freeze once a month for residents of Woburn. Information is provided on the City's Trash and Recycling Calendar.	BMP completed. Continue monthly collection
2-3	Hold Household Hazardous Waste/Tire Collection Days	Board of Health	Collection held every three months	Woburn provided residents four opportunities to dispose of hazardous waste during Permit Year 12, including auto batteries, tires, propane tanks, mercury and batteries, fluorescent lights. Collection was held in March, June, September and December in the City Hall parking lot. In addition, Waste Management picks up appliances and CRT screens from residents for a small fee.	BMP completed. Continue quarterly collection
2-4	City-Wide Recycling Program	Board of Health	Recyclables collected every two weeks	Recycling is collected every other week by a subcontractor.	BMP completed. Continue existing program
2-5	Street Tree Planting Program	Dept. of Public Works	Maintain tree-planting program	Under the direction of the Tree Warden, the City maintains the public shade trees within the City right of way. The City also offers a street tree planting program whereby residents may request that the City install a public shade tree near their property within the public right of way. 7 public shade trees were planted in Spring 2014 as well as shrubs in several areas.	BMP completed. Maintain existing program. On April 29, 2015, the City planted 20 shade trees.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3-1	Continue to inspect new sewer connections	Engineering Department	Continue inspection of all new sewer connections	City inspected 38 new/updated sewer connections to confirm they are connected to the sewer system, not the MS4.	BMP completed. Continue existing program.
3-2	Map Outfalls/Receiving Waters	Engineering Department	Map completed by May 1, 2005	<p>BMP Completed. Woburn has met the requirements of the 2003 General Permit to map outfalls and receiving waters.</p> <p>A map of the storm drainage system, including catch basins, manholes, outfalls, receiving waters, and some connectivity was completed by May 2005. Mapping is available in ArcGIS, and is updated as pipes are replaced or added to the system. The City has located and inventoried 620 outfalls, 400 of which are public outfalls, and has inspected them for the presence of illicit discharges during dry weather. See BMP 3-3.</p>	BMP completed. Mapping of the drainage system continues and the GIS will be updated, as needed, as pipes are either added to the system or replaced.
3-3	Complete dry weather screening of outfalls	Engineering Department	All outfalls screened once during permit period	BMP Completed. Woburn has inspected all mapped public outfalls during dry weather at least once since during the permit term. Reports summarizing mapping and IDDE investigations are available in the Engineering Department. A summary of these ongoing efforts is included in <i>Part IV. Summary of Information Collected and Analyzed.</i>	BMP Completed.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
3-4	Stormwater Ordinance	Engineering Department	Stormwater ordinance adopted January 2007	BMP Completed. The City has adopted a drainage system ordinance (Title 1, Public Services Section IV, Stormwater, Illicit Discharge / Connection and Construction Site Management) that regulates flows entering the municipally owned storm drainage system. This ordinance defines prohibited activities and enforcement authority for the Superintendent of Public Works.	BMP Completed. Stormwater ordinance adopted 1/22/07.
3-5	Develop and implement system for elimination of illicit discharges	Dept. of Public Works	Based on prioritized results in BMP#3-3, determine procedures to identify and remove illicit connections to drain; maintain records.	BMP Completed. Woburn adopted the <i>Illicit Discharge Detection and Elimination – A Guidance Manual for Program Development and Technical Assessments</i> prepared by the Center for Watershed Protection and Robert Pitt (October 2004) for its IDDE program.	City will continue the illicit connection identification and removal as budget allows and modify the written IDDE Program as necessary upon reissuance of the General Permit.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
4-1	Continue to apply Standard 8 of MA Stormwater Policy	Conservation Commission	Standard 8 of the MSP applied during the permit term	City applied Standard 8 as necessary to all relevant development projects. Approx. 20 development plans were reviewed by the Conservation Commission during the Permit Year.	BMP completed. Continue existing program.
4-2	Procedures for Collection of Public Comments	Engineering Department	Maintain existing procedure throughout permit term	Public comments are received/reviewed and filed accordingly.	BMP completed. Continue existing program.
4-3	Continue inspections for erosion control measures at construction sites within Conservation Commission review	Conservation Commission	Maintain existing policy throughout permit term. Number of construction sites inspected each year	City completed construction site inspections for erosion and sediment control at approx. 20 sites during the permit year.	BMP completed. Continue existing program.
4-4	Procedure for Control of Discarded Building Materials	Board of Health and Building Department	Maintain existing procedure throughout permit term. Number of demolition permits issued each year.	18 demolition permits were issued by the City. Every applicant is required to complete a debris disposal form, which includes the location of the facility that will be accepting the debris.	BMP completed. Continue existing program.
4-5	Amend Subdivision Regulations to Require Erosion and Sediment Control Plan for Sites Disturbing More than 1-acre	Engineering Department	Draft amendment to regulations by May 1, 2005.	The City adopted Title 13 Public Services, Section IV, Stormwater, Illicit Discharge/Connection and Construction Site Management, that regulates new development and redevelopment that disturbs 20,000 square feet or more of land. The ordinance defines performance standards (Massachusetts Stormwater Management Standards), enforcement authority (Building Commissioner and Police Department), and requires the control of waste.	BMP Completed. Continue existing program. Upon reissuance of the General Permit, the City will determine if the Ordinance will need to be modified or Regulations adopted to meet the new permit requirements for construction site runoff control.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
				Stormwater regulations are being developed by the City to formalize inspection, reporting, and enforcement procedures.	
4-6	Amend Zoning Ordinance to Require Erosion and Sediment Control Plan for Sites Disturbing More than 1-acre	Engineering Department	Draft amendment to regulations by May 1, 2005.	See BMP 4-5 above. The City determined to address this BMP through adoption of a General Ordinance instead of Zoning amendments.	BMP Completed. Continue existing program.

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5-1	Continue to implement City's Planning Board Rules and Subdivision Regulations	Engineering Department	Continue enforcement of existing regulations throughout permit term. Number of subdivisions reviewed each year.	City has enforced Planning Board Rules and Regulations for all projects that have come under its review. The City reviewed 2 site and subdivision plans.	BMP completed. Continue existing program.
5-2	Maintain Policy Ensuring Long-term Maintenance of Private Structural BMPs	Engineering Department	Maintain existing policy throughout permit term. Number of private structural BMP O&M plans submitted by developers each year.	There were 5 projects reviewed during this permit period that required private structural BMPs with long-term operation and maintenance. Site plans include specific stormwater maintenance requirements for most projects. Separate "Stormwater O&M Plans" are generally required for larger projects. The Conservation Commission requires submittal of an annual report as a standard condition.	BMP completed. Maintain existing policy.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
5-3	Adopt Massachusetts Stormwater Policy Standards #,2, 3, 4, 7, and 9 in City ordinances	Engineering Department	Draft amendment to regulations by May 1, 2005	<p>The City adopted Title 13 Public Services, Section IV, Stormwater, Illicit Discharge/ Connection and Construction Site Management, that regulates post-construction stormwater management in new development and redevelopment that disturbs 20,000 square feet or more of land. The ordinance defines performance standards (Massachusetts Stormwater Management Standards) and enforcement authority (Building Commissioner and Police Department).</p> <p>In addition, the City regulates post-construction stormwater runoff from new and re-development through its Wetlands Ordinance and its Subdivision Rules & Regulations. The Board of Health, Conservation Commission, Engineering Department, and Planning Board review components of proposed development/ redevelopment projects and, as applicable, perform inspections after construction to assure stormwater systems are functioning as designed.</p>	BMP completed. Continue existing program. Upon reissuance of the General Permit, the City will determine if City Code will need to be modified or Regulations adopted to meet the new permit requirements for post-construction stormwater management.

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 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6-1	Continue Street Sweeping Program	Dept. of Public Works	Sweep all streets in the City twice annually	The streets are swept by the City twice each year, and constantly during the summer.	BMP completed. Continue existing program.
6-2	Continue Catch Basin Cleaning Program	Dept. of Public Works	Clean 75% of catch basins in City each year. All CBs cleaned on a three year rotating schedule.	<p>More than 75% of the approximately 4,100 catch basins are cleaned by the City each year, and those in sensitive areas are cleaned twice. The volume of the material removed from the catch basins is recorded and disposed of at a MassDEP approved solid waste facility.</p> <p>The City has begun using iPads for their catch basin cleaning and field inspections. Most of the MS4 mapping has been transferred to the iPad program.</p> <p>In addition, 3,000 to 4,000 feet of the drain system has been heavily cleaned and video inspected. In September / October 2014 DPW cleaned and TV'd another 10,000+ linear feet of drain line on Main Street. The City properly disposed of the material removed from the drain pipes during cleaning.</p>	BMP completed. Continue existing program.
6-3	Continue Salting/ Snow Removal Practices	Dept. of Public Works	Continue existing practices throughout permit term.	Winter deicing materials are stored in covered areas and spreaders were calibrated as needed to limit salt. Records of deicer use are kept by DPW. Alternative deicing methods were used where practical and near sensitive receptors.	BMP completed. Continue existing program.
6-4	Hazardous Waste Response Program	Dept. of Public Works	Continue existing program throughout permit term	The City maintained spill kits and followed Spill Prevention Control and Counter Measure Plan.	BMP completed. Continue existing program.

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
6-5	Continue Vehicle Washing Practices	Dept. of Public Works	Continue existing practices throughout permit term	The City constructed a new DPW facility that includes a washing station for City vehicles so wash water no longer discharges to water bodies or the MS4.	BMP completed. Continue existing program.
6-6	Continue Vehicle Maintenance Practices	Dept. of Public Works	Continue existing practices throughout permit term	Municipal vehicle maintenance, including police vehicles, was performed in a garage that has oil and grease traps and an oil/water separator.	BMP completed. Continue existing program.
6-7	Park and Landscape Maintenance	Dept. of Public Works	Continue existing practices throughout permit term	The City does not use fertilizers near Horn Pond and the Aberjona River.	BMP completed. Continue existing program.
6-8	Develop/Implement Employee Education/Training Program	Dept. of Public Works	Stormwater related training during permit term for each appropriate employee	DPW supervisors and employees are up to date on all training, including illicit discharges and pollution prevention in municipal operations. The City developed posters presenting efforts by DPW and the City on the stormwater program that are hanging in the DPW lobby. These are used to increase awareness of stormwater issues for all DPW employees.	City to continue training of employees on stormwater impacts during permit term.

7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA)

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 12 (Reliance on non-municipal partners indicated, if any)	Planned Activities
	Not Applicable				
Revised					

Part IV. Summary of Information Collected and Analyzed

The following summarized Woburn's outfall inventory, dry weather screening, and follow up activities completed and planned under the City's Illicit Discharge Detection and Elimination Program. More detailed summary reports and laboratory data are available at the Engineering Department.

- A comprehensive field program was undertaken in Fall/Winter 2003 to walk along the banks of all water bodies (Horn pond and other ponds) and rivers and streams (Aberjona River, Middlesex Canal, Shaker Glen Brook, etc.) to locate and inspect stormwater outfalls. This field program consisted of a substantial effort to locate the outfalls and was required because the city had limited mapping of the existing outfalls. As a result, over 600 outfalls were located and the physical features and status of each was recorded on a field inspection sheet. Each outfall was photographed and the data was summarized in two large binders and an electronic database. Approximately 1/3 of the outfalls are actually outfalls from private property and are not owned by the city.
- Follow-up field inspections of the outfalls were performed between 2004 and fall 2009 to identify any outfalls with dry weather flow. To-date, each city owned outfall has been inspected at least twice during the permit period.
- Approximately forty five (45) outfalls have had dry weather flow during the comprehensive dry weather outfall screening program conducted by the City. Most of the outfalls that have had dry weather flow during these inspections have been sampled at least three times over the last 4 years. Laboratory analysis of the flow has shown that most of the outfalls have no evidence of contamination from illicit sewer connections. At many of the outfalls, the existence of dry weather flow from the outfall is not consistent from inspection to inspection and laboratory sampling indicates no presence of any significant bacteria. Thus, these outfalls have been eliminated from further study.
- There are ten (10) outfalls with consistent dry weather flow during most of the inspection periods and laboratory analyses results that indicated the presence of some level of bacterial contamination. However, based on repeated testing results of these outfalls coupled with the lack of other illicit discharge indicators (i.e., surfactants, odors, floatables etc.) and field inspections, the City has concluded that (with one exception) the presence of coliform in the dry weather flow from these outfalls is probably caused by background contamination from the watershed related to animal feces and is not evidence of bacteriological contamination from a potential illicit sewer connection. Some of the background animal contamination has been confirmed by TV inspections of the pipe and visual observations of animal feces around catch basins that contribute to the outfalls.
- One outfall has had consistent dry-weather flow and consistently high bacteria concentrations and is suspected to have an illicit connection. The City repaired the failing sewer adjacent to this drain line. Outfall sampling in the Fall of 2008 indicate a presence of bacterial contamination, however there are no signs of an illicit connection (i.e., odor, solids, floatables, surfactants, etc.). During the Main Street drain cleaning and TV inspections (see BMP 6-2) the City identified a possible cross-connection from a private property. The City is currently working with the property owner to locate and remove the suspected cross-connection.
- Ongoing efforts are being made by the Department of Public Works, working with Weston & Sampson, Inc. to identify and remove illicit connections that may be impacting outfalls OF-119, OF-118 and OF-120. Major sewer system improvements are also being performed within these tributary areas for infiltration/inflow reduction which could have a beneficial impact on the water quality of these outfalls.