



Cambridge Watershed Site Monitoring Program Report

December, 2015

Introduction

The Cambridge Watershed Site Monitoring Program Report is a summary of the monitoring, outreach, and planning efforts of the Cambridge Water Department (CWD)'s Watershed Management Division. Through the Site Monitoring Program, CWD identifies possible sources of contamination in the water supply, seeks mitigation of impacts through the implementation of Best Management Practices (BMPs), and explores opportunities to realize improvements to watershed water quality. This report contains status updates, as well as locational maps, for the following sites of interest during 2015:

- Twelve (13) new construction and redevelopment projects completed since the previous Cambridge Watershed Site Monitoring Report, issued June 2014
- Fourteen (13) active construction or long term monitoring sites
- Twelve (12) proposed projects for which CWD completed site plan review and submitted formal comments and recommendations

The following sections contain detailed updates on the abovementioned watershed sites.

Projects Completed from Previous Period

Cambridge

Kingsley Park Improvements Project – Construction is complete and the site has been stabilized. No erosion or sedimentation issues were observed by CWD or the Cambridge Conservation Commission.

Lincoln

Trapelo Road Gatehouse – RH White contractors have finished repairs to the interior and exterior of the gatehouse. Stop logs were installed but the gatehouse is not currently used to manage reservoir water levels (gates are left open allowing unrestricted water flow between the upper and middle basins). CWD is currently investigating whether active management of the gates can improve water quality in the Hobbs Brook Reservoir.

Waltham

MassDOT completed the Waltham portion of the *Route 128 Resurfacing Project*, although “as-built” plans were not included in the final contract. A new stormwater management system, at the Route 20 interchange, was installed late in 2012 as part of this project. CWD

water quality monitoring downstream of the system found that nitrate levels have increased since the pond came online. The pond system appears to be functioning properly during storm events; CWD suspects that the system receives an insufficient amount of baseflow to regularly flush the system and prevent nutrient build up. MassDOT agreed to install a water tight weir to direct more baseflow into the stormwater pond system, although the installation process has not yet begun.

Stony Brook Office Park – Stony Brook Office Park maintains a parking lot abutting a steep slope of the Stony Brook Reservoir. Granite curbing was installed along the perimeter of the parking lot facing the Stony Brook Reservation. This curbing directs parking lot runoff into catch basins and newly installed Contech® water quality units. Stormwater discharges to level spreaders which protect steep slopes from erosion. Construction was completed summer 2014.

Wyman Street Resurfacing – In partnership with Hobbs Brook Management, the City of Waltham conducted a road-resurfacing, sidewalk, and stormwater improvement project. The road was repaved and new curbing was installed. Underground water quality units were installed to treat stormwater discharges to a major wetland and an intermittent stream system feeding the Hobbs Brook Reservoir. Sediment forebays were constructed at other upland roadway outfalls. Hobbs Brook Management agreed to assume right-of-way stormwater infrastructure maintenance responsibilities from Waltham.

Winter Street Resurfacing – Road resurfacing over the Winter Street Dam was completed on June 9, 2014. Striping, some curbing and other finishing work is also complete. A Cape Cod berm was added to prevent overland flow and further erosion on the downstream side of the dam near AstraZeneca.

99 Third Avenue – Construction is complete. The new stormwater system includes pretreatment from a bioswale and an underground infiltration system in the eastern portion of the site. Runoff that does not enter the infiltration system is treated by deep sump and hooded catch basins, as well as a Stormceptor®, and discharges into the MassDOT drainage system.

385 Winter Street – Site redevelopment and construction are complete. No erosion issues were observed. Prior to construction, runoff discharged to the MassDOT Winter Street Bridge basin before entering the Cambridge water supply. Stormwater management from this project has improved through the installation of a subsurface detention system, two proprietary tree-box filters, and a Stormceptor®.

275 Wyman Street Redevelopment – Construction of this Hobbs Brook Management property appears to be complete, with parking lot runoff now routed to proprietary water quality units and a retention pond. A portion of clean rooftop runoff is now recharged in underground chambers. CWD conducted a site inspection on 7/1/2015 prior to the completion of construction. All erosion control measures appeared to be operating properly.

From a previous agreement between proponents, CWD, and the Waltham Conservation Commission, this project triggers the assessment and restoration of the downstream 404 Wyman Street wetland complex. Construction has not yet begun on the wetland restoration.

Weston

Field Elementary School Redevelopment Project –The project improved stormwater quality leaving the site by infiltrating rooftop runoff and routing some parking lot runoff through two proprietary underground water quality units. No major issues were observed during construction. Amendments to the project included the minor reshaping, expansion of feeder roads to improve traffic. Construction is complete.

Sibley Road Reconstruction – The Town of Weston completed the reconstruction of Sibley Road. The Town added a new catch basin and proprietary water quality unit to improve the water quality of stormwater discharging to Stony Brook. CWD is working with the Town to correct the issue of storm flows bypassing this new collection system and discharging untreated onto City of Cambridge property. To address channelization on Cambridge property, rip rap was added to the outlet structure leading from Sibley Road to the Cambridge parcel. CWD also determined that the erosion controls put in place during construction can now be removed.

Weston Police Station, 180 Boston Post Rd. – The new stormwater management system for the Police Station redevelopment encompasses three catchments. Two of the catchments pretreat stormwater in deep sump catch basins before infiltration in rain gardens. The third catchment contains an oil/grit separator and subsurface infiltration system. This site is an improvement over existing conditions, when untreated stormwater was directly discharged into the site wetlands. As of 11/19/2015, the site was stabilized and all vegetated areas were planted and hydro seeded. No erosion control issues were observed during construction.

44 School Street – The Brook School Apartments project expanded an existing parking lot. The expansion was mitigated by pre-treating and recharging the majority of runoff, and directing existing runoff to a vegetated swale before discharging into a wetland, which is a water supply tributary. The Weston Conservation Commission issued a Certificate of Compliance on July, 7 2015. The CWD also conducted a site inspection on July 13, 2015 and observed no issues with the completed construction.

Active Construction and Site Monitoring

Cambridge

480 Concord Ave – As of 6/19/2014, Fresh Pond Gas continues exploratory groundwater and soil sampling for site characterization under MCP. Groundwater sampling indicates that gasoline contaminants are known, in relatively low concentrations and not migrating.

343 Fresh Pond Parkway – Mobile Station #1405 continues to monitor groundwater and soil contamination. There is no active treatment, only monitored natural attenuation (MNA).

Lexington

Lexington Rest Stop – URS continues quarterly site inspections to identify potential water quality risks, assign required actions, and document compliance. The most recent report (October 2015) indicated the need to repair the damaged pavement and asphalt. This damage makes the soil susceptible to contamination from spills and can contribute sediment to runoff.

Waltham

Route 2 Bridge Reconstruction and Route 128 Resurfacing Projects – Construction is underway for this project, which will construct **5** new stormwater treatment and spill containment basins along Route 2, improve **8** existing basins along Route 128, and create vegetated water quality swales in the Route 2 median. CWD actively participated in the design phases of this project by reviewing and commenting on proposed plans. CWD received the 100 % design plans in August 2015. Regular site inspections are performed by Prime Engineering every 14 days and within 24 hours after rain events greater than 0.25 inches. CWD conducted joint inspections with Prime Engineering in June, September, and November 2015.

1265 Main Street (Former Polaroid Site) – Phase I of the project is ongoing. Regular Stormwater Pollution Prevention Plan (SWPPP) inspections are performed by RJO'Connell & Associates. CWD last inspected the site on November 12, 2015 and no major issues were observed. Progress can be followed here <http://1265main.wordpress.com/>.

10 - 52 Second Avenue – Construction is underway to build a new parking deck. Surface runoff will be treated by a Stormceptor® proprietary water quality unit.

205/225/231/ Second Ave – CWD reviewed the Notice of Intent dated 3/24/2015 for phase II of the site redevelopment and determined that the finalized project will be an improvement over existing conditions. The stormwater management system will include raingardens and a subsurface infiltration system, as well as treatment with deep sump catch basins. The rain gardens were completed during Phase I of the project. Demolition of an existing one story office building associated with Phase II is now complete.

168 (130/180) Third Avenue - CWD site visits throughout spring, summer, and fall of 2015 revealed excessive sediment in the construction entryways, missing silt sacks in catch basins, unprotected stock piles of soil, and insufficient perimeter erosion controls. Excessive sediment was observed in runoff leaving the site during storm events on 8/11/2015 and 9/30/2015. A site walk to discuss improving erosion control was held on 10/13/2015. The site walk was conducted by CWD and GEIS staff. Representatives from and VHB, Inc. and AJ Welsh were also present. Erosion control improvements were discussed, such as adding more straw wattles along the site perimeter, increasing street sweeping frequency to daily from weekly, and installing a curb cut filter. A follow up site visit by CWD on 10/28/2015 showed that erosion control measures discussed previously had been addressed. However, CWD observed that washwater from masonry equipment cleaning had been directed into a stormdrain, contrary to the provisions outlined in the EPA

Construction General Permit. CWD requested that the washwater be disposed of in accordance with the permit; GEIS sent CWD documentation of compliance.

170 Tracer Lane – Construction is underway to replace the existing office building with a new structure in the same footprint. The redevelopment will decrease the total impervious area on the site, and will incorporate stormwater treatment in the form of bio retention areas, deep sump and hooded catch basins, and Stormceptors®. CWD staff observed excessive sediment piled on a silt fence near the Tracer Lane tributary as well as insufficient street sweeping. Corrective actions were taken by the site managers.

175 Wyman Street – Hewlett Packard/GZA remediation of TCE/PCE groundwater plume is ongoing. The latest surface water sampling results in the Hobbs Brook Reservoir indicate no migration of known VOCs into the reservoir.

Weston

Sibley Road Mobil Station, 84 Boston Post Road – Groundwater & Environmental Services (GES), Inc. is monitoring levels of MTBE and other petroleum-associated groundwater contamination near the Stony Brook. Active, on-site groundwater treatment has ceased, but contaminants are being regularly monitored for rebound and future determinations on continuing or discontinuing active remediation. The latest groundwater results show no evidence of increasing concentrations, so the treatment system remains off. Surface water sampling in the abutting Stony Brook shows trace, if any measurable concentrations of known site contaminants.

Cambridge School of Weston – Construction of a new 40,000 sq. ft. Health and Fitness Center is underway. This project is considered new construction under the Wetlands Protection Act. Runoff from the new impervious areas will be treated with a proprietary water quality treatment unit, then routed to a subsurface infiltration system. Overflow from the infiltration system will be routed into an existing drainage system that discharges into a wetland.

Warren Ave Housing Redevelopment – Construction is ongoing for this three building redevelopment project, which includes the repurposing of the old Water Department Superintendent Residence. The final project will include a new septic system to service all three buildings. A site visit on October 29, 2015 after a storm event revealed that excessive sediment in runoff had breached a silt fence and entered an adjoining wetland. Clean up efforts were underway at the time of the visit. A follow up visits found that action had been taken to address the erosion issues.

Site Plan Review for New Projects

Lincoln

Care Dimensions Hospice 121-129 Winter St., Waltham/Lincoln – See description in Waltham section.

Lexington

Route 2 and Route 95 Drainage Ditch Restoration – CWD reviewed MassDOT plans to remove *Phragmites* and accumulated sediment from a drainage ditch located in the 95 / Rt. 2 clover leaf abutting the Hobbs Reservoir.

435 and 439 Lincoln St. Subdivision – CWD reviewed plans for a 14 unit subdivision on Lincoln St., across from the Hobbs Reservoir. CWD approved of the design and submitted comments to the Lexington Conservation Commission. CWD is working with the proponent to develop a trail that will ultimately connect to Minute Man National Historical Park.

Waltham

Care Dimensions Hospice 121-129 Winter St., Waltham/Lincoln – CWD provided feedback on stormwater plans for the proposed Hospice development. CWD comments resulted in a redesign of the stormwater management plans to increase stormwater infiltration relative to the initial proposal. The site is located in both Waltham and Lincoln. CWD wrote a letter of support to the Waltham City Council on 11/2/2015 expressing no objections to the project. CWD is in the process of further reviewing the Lincoln portion of the project and will submit comments to the Lincoln Zoning Board of Appeals and the Lincoln Planning Board.

135 Second Avenue – CWD wrote a letter of support to the Waltham City Council. Currently a warehouse, the proposed project will create a 138+ room hotel. The new stormwater management, which includes water quality treatment units and two subsurface infiltration systems, will be an improvement over existing conditions since stormwater currently flows untreated into wetlands feeding Stony Brook.

256 Second Ave – A new Notice of Intent was filed with the Waltham Conservation Commission in December 2015 for the construction of a Marriot Hotel and associated parking lot. The site currently hosts a demolished office building and parking lot. The finalized project will provide treatment of parking lot runoff and be sized to infiltrate 100 percent of stormwater from the 100 year design storm. The project also proposes to make significant improvements to a MassDOT drainage swale that abuts the site. Stormwater currently sheetflows without treatment to Second Ave.

341 Second Ave – CWD reviewed plans for the development of a 6-story residential facility, Broadstone Watch City. The site currently contains a vacant one story warehouse and parking lot with no stormwater treatment. The completed project will treat and infiltrate 100 percent of runoff from the Water Quality Recharge Volume. CWD wrote a letter on 12/15/2015 to the Waltham Zoning Board of Appeals supporting the project.

200 Smith Street – CWD is working closely with the proponent to review proposed stormwater management systems for the redevelopment of this former US Post Office shipping and receiving site. The proponent submitted a Massachusetts Environmental Protection Act (MEPA) Environmental Notification Form on 11/2/2015 and presented to the Waltham Conservation Commission on 1/14/2016. CWD submitted comments supporting the project to both MEPA and the Waltham Conservation Commission.

132 West St. – CWD wrote a letter of support to the Waltham Board of Survey and Planning on November 2, 2015. This redevelopment project will use deep sump hooded catch basins and bioretention ponds. The new stormwater management system will increase infiltration rates at the site and increase the level of stormwater treatment compared to existing conditions.

Weston

Coburn Meadows Restoration – The Town of Weston Conservation Commission plans to restore a wet meadow overgrown with Buckthorn and other woody plants. The restoration may involve the use of targeted aerial or cut and wipe herbicide application. The proposed herbicide is Renovate 3® which has been approved by the EPA for use in open water habitats. CWD supports the restoration and believes the herbicide application will not affect the drinking water supply.

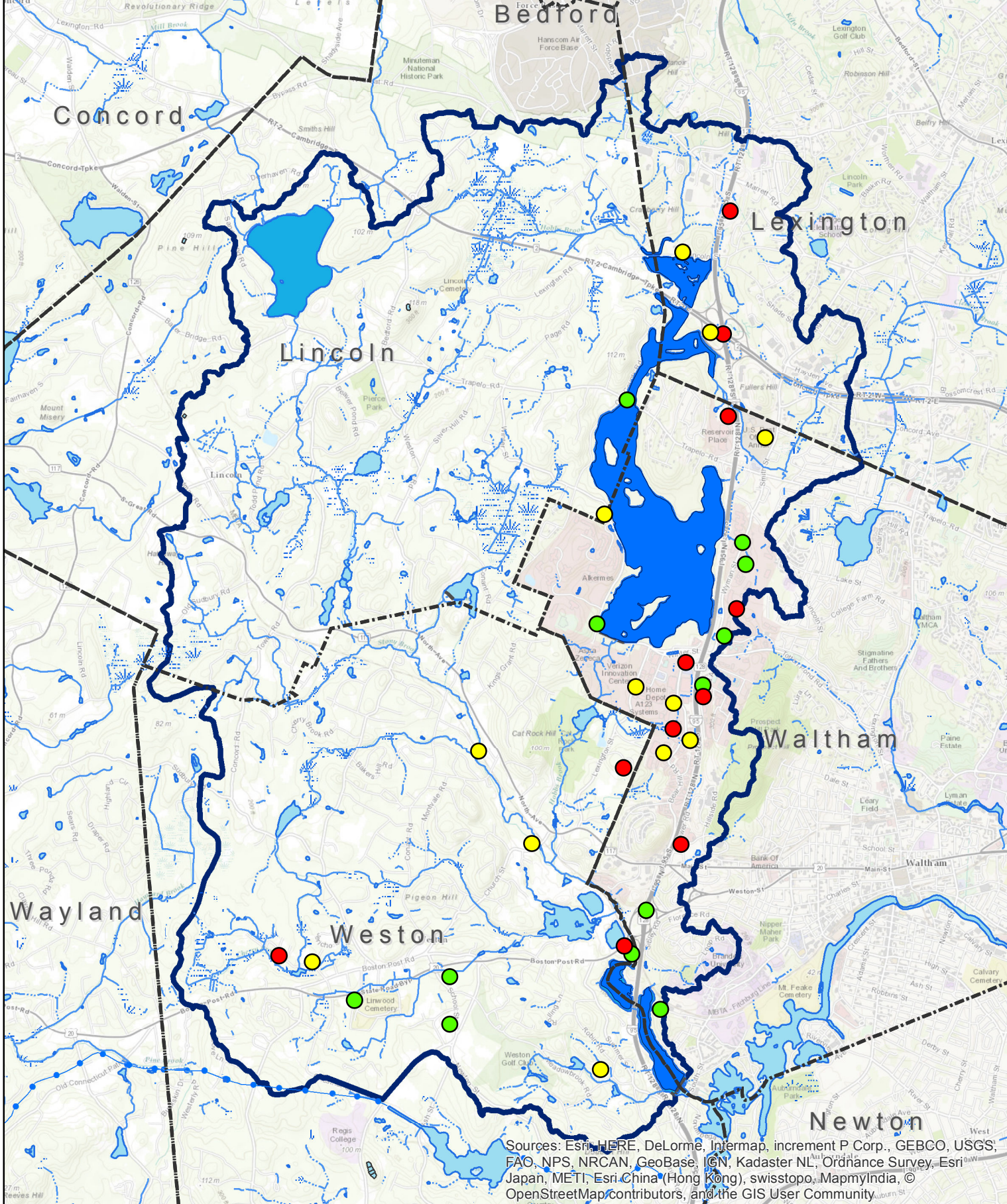
Meadowbrook School – This project proposes to build a new learning center over an existing building foot print, with a slight loss of grass area to roof area. The proponent also plans to construct a 3,272 square foot parking lot in the Zone A and 100 foot wetland buffer zone. Runoff from the lot will be treated in a Stormceptor® prior to infiltration in a rain garden.

MBTA Culvert Replacement – CWD reviewed plans to replace a culvert under MBTA rail tracks that cross Stony Brook upstream of Viles St. CWD had no objections to the replacement.

25 Warren Ave – A Notice of Intent was submitted for a septic system replacement. CWD requested documentation that the septic system complied with the appropriate setback requirements for Title V since a small corner of the property is within the Zone A.

Please direct any questions or comments about this report to

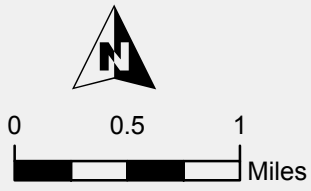
Jamie O’Connell, Watershed Protection Supervisor
City of Cambridge Water Department
250 Fresh Pond Parkway
Cambridge, MA 02138
joconnell@cambridgema.gov
617-349-4781



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Legend

- Site Plan Review 2015
- Reported Active Sites 2015
- Completed Projects 2015
- Reservoirs
- Watershed Divide



Cambridge Water Department
 Site Monitoring Report
 December, 2015





Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © Google, OpenStreetMap contributors, and the GIS User Community

Legend

- Site Plan Review 2015
- Reported Active Sites 2015
- Completed Projects 2015
- Reservoirs

**Cambridge Water Department
Site Monitoring Report
December, 2015**

