City of Cambridge | Massachusetts Water Resources Authority | City of Somerville

JOINT PUBLIC NOTICE
APRIL 2012

Alewife Brook Combined Sewer Overflows Progress Update

This notice is required by the Massachusetts Department of Environmental Protection (DEP) as an annual update on the progress of Combined Sewer Overflow (CSO) control measures that are underway to improve the water quality of Alewife Brook. You are receiving this notice bacause your property lies within the extended, 100-year floodplain of Alewife Brook as established and currently in effect by the Federal Emergency Management Agency (FEMA).

The water quality of Alewife Brook is often impaired due to bacteria and other pollutants from a number of sources, including cross connections between sanitary sewers and storm drains, urban stormwater runoff, and CSOs. During both wet and dry weather, the water quality of Alewife Brook can be impaired and fail to meet state bacteria standards for fishing and swimming.

Portions of Cambridge and Somerville are served by combined stormwater and sanitary sewer systems common in older cities. Seven CSO outfalls along Alewife Brook can release an untreated mix of stormwater and sanitary flow during large storms when stormwater can overwhelm the capacity of the combined sewers. These discharges relieve the sewer system, preventing sewage backups into homes, businesses and streets, but they also impair water quality.

As part of the Boston Harbor Case (D. Mass. C.A. No. 85-0489-RGS), the Massachusetts Water Resources Authority (MWRA) is required to undertake certain corrective actions to reduce or eliminate CSO discharges along Boston Harbor, the Mystic, Charles and Neponset Rivers and Alewife Brook. MWRA, in cooperation with the cities of Cambridge and Somerville, is currently designing and constructing several CSO projects that, when completed, will significantly reduce CSO discharges to the Alewife Brook.

Substantial design and construction progress has been made and significant work is underway to implement the six projects that comprise the long-term CSO control plan for Alewife Brook on schedules mandated by the Federal District Court Order in the Boston Harbor Case, as follows:

1. CAM004 Stormwater Outfall and Wetland Basin (CambridgePark Drive Area Drainage Improvements and Stormwater Wetland Project) will convey stormwater flows removed from the combined sewer system to an innovative stormwater wetland. The constructed wetland basin will attenuate the stormwater flows that will be removed from the combined sewer system and provide an additional level of water quality treatment prior to draining the stormwater to the Little River and Alewife Brook. The wetland will also contribute to the ecological and recreational goals of the Department of Conservation and Recreation's (DCR) Master Plan for the Alewife Reservation. Cambridge commenced construction in the spring of 2011. The stormwater outfall and wetland basin is scheduled for completion by April 2013, and project-related improvements to the Alewife Reservation will be completed by June 2013.

2. CAM004 Sewer Separation (Alewife Sewer Separation Project: Huron A, Huron B and Concord Avenue) will install new storm drains in neighborhoods along Huron and Concord avenues to remove stormwater from the overburdened combined sewer system, protect Fresh Pond Reservoir, allow Cambridge to eliminate CSO discharges at CSO Outfall CAM004, and reduce CSO discharges at the other outfalls, thereby improving water quality in the Little River and Alewife Brook. Cambridge completed early work along Fresh Pond Parkway in 2000-02 and is now designing remaining elements of the project. Field investigations and design work are well underway, and Cambridge is nearing completion of design for the first of three planned construction contracts (Huron A), for which Cambridge plans to commence construction by September 2012. Cambridge plans to award the last two construction contracts (Huron B and Concord Avenue) sequentially and complete all sewer separation work by December 2015.

3. CAM400 Manhole Separation removed stormwater from sewer systems in the Whittemore Avenue area by separating manholes that were common to the storm drain and sewer systems. Cambridge completed construction of this project in March 2011, thereby eliminating CSO discharges from CSO Outfall CAM400 and converting it to a dedicated stormwater outfall.

4. Interceptor Connection Relief and Floatables Control upgraded the connections between Cambridge's and MWRA's sewer systems to provide greater capacity and also fitted certain CSO outfalls with floatables control. Cambridge completed construction of this project near the intersection of Alewife Brook Parkway and Massachusetts Avenue in October 2010.

5. Control Gate and Floatables Control at Outfall MWR003 and Rindge Ave. Siphon Relief will help minimize overflows while controlling sewer system flooding in very large storms. The outfall and siphon are located in the Alewife Reservation immediately behind the MBTA Alewife Station. MWRA recently commenced design of this project. Flow monitoring, field surveys and subsurface investigations will be performed over the next several months. Construction is scheduled to begin by August 2014 and be complete by October 2015.

6. Interceptor Connection Relief and Floatables Control at Outfall SOM01A will reduce CSO discharges from Somerville's Tannery Brook Conduit and provide floatables control for remaining discharges. The outfall is located off Alewife Brook Parkway just north of Massachusetts Avenue. MWRA recently commenced design of the project. Flow monitoring, field surveys and subsurface investigations will be performed over the next several months. Construction is scheduled to begin by September 2013 and be complete by June 2014.

Together, these projects are predicted to reduce average annual CSO volume to Alewife Brook by 85% (from 50 million gallons in 1997 to 7.3 million gallons), reduce the frequency of discharge from 63 times a year to seven times a year on average, reduce the number of CSO Outfalls from an original 8 to 5, and bring CSO discharges into compliance with Class B ("fishable/swimmable") water quality standards 98% of the time. Work already completed by MWRA, Cambridge and Somerville has significantly reduced the number of CSO events and the total volume discharged annually to the brook. The ongoing work is in addition to sewer separation work completed by the City of Somerville in the 1980s and 1990s that closed several other CSO outfalls.

MWRA estimates that average annual CSO discharge volume to Alewife Brook is approximately half what it was in 1997, primarily as a result of the work Cambridge has completed to-date to implement MWRA's long-term control plan, as well as improvements completed by MWRA in 2008 to upgrade pumping capacity at its Alewife Brook Pump Station. The long-term control plan projects are scheduled to be complete by December 2015, in compliance with the Federal Court Order.

It is important to understand that floodwaters in all cases can present health risks, and proper precautions are necessary to minimize these risks during flooding events. Public health officials recommend avoiding contact with the brook during rainstorms and for 48 hours afterwards, as there may be increased health risks due to bacteria or other pollutants. DEP has developed guidance for homeowners for responding to flooding or sewer backups, which can be found at http://www.mass.gov/dep/water/laws/flooding.htm.

For more information on CSOs and the CSO control program, visit MWRA's, Cambridge's and Somerville's websites, at www.mwra.com, www.cambridgema.gov/theworks.aspx, and www.ci.somerville.ma.us. MWRA recently issued its CSO Annual Progress Report for 2011, which describes the projects and progress made with the regional long-term CSO control plan. The report can be found on MWRA's website at http://www.mwra.com/cso/csoannualreports.htm.

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