



## Alewife Reservation Constructed Wetland Project Overview

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The City of Cambridge's Department of Public Works (DPW) has been working with the Massachusetts Water Resources Authority (MWRA) to design and construct various sewer separation and stormwater management projects in the Alewife watershed as part of the Boston Harbor Cleanup court case. These projects are designed to control combined sewer overflows (CSO) to the Alewife Brook/Little River in accordance with MWRA's Long Term CSO Control Plan (LTCP) for the Alewife Brook, and when completed will reduce CSOs to the Alewife Brook/Little River by 84%. The projects outlined in the LTCP are supported by the Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (DEP), and the United States Department of Justice, all of whom are parties to the Boston Harbor Cleanup court case, and are required by the court to be constructed under a court ordered schedule.

The LTCP for Alewife Brook includes a sewer separation and stormwater management project that includes a new constructed stormwater wetland/outfall to the Alewife Brook on DCR property. During the design of this project DPW worked closely with staff at DCR so that the design of the constructed stormwater wetland would provide significant public benefit and add ecological value to the Alewife Reservation. In addition, many community meetings were held discussing all aspects of this project. During this same time, DCR staff was developing a Master Plan for the Alewife Reservation and Alewife Brook Parkway. The DCR planning objectives, along with active solicitation of suggestions from the public, were used to articulate four comprehensive master planning goals:

- Improve water quality and restore natural hydrology;
- Protect and enhance wildlife habitat;
- Improve recreational, educational, and other cultural opportunities; and,
- Provide for maintenance that minimizes costs and maximizes effectiveness.

In order to design a stormwater wetland system that could be integrated into the Alewife Reservation, the above goals were integrated into the design and planning process. DPW undertook a wildlife and habitat assessment to obtain a clear understanding of the ecological conditions and landforms, and an assessment of the upland plants to integrate replanting of native species and to protect large canopy trees. We believe that the design and function of the stormwater wetland will help achieve the above master plan goals. Specifically, the design includes:

- A stormwater wetland to attenuate and treat stormwater before it discharges into the Little River;

- Passive recreational amenities such as walking trails, boardwalks, scenic overlooks and interpretive signage;
- Enhanced habitat through the provision of native plantings designed to provide food and cover, islands to provide breeding grounds isolated from predators, and an oxbow-like wetland designed to provide improved fish breeding habitat for alewife and blueback herring;
- Outdoor educational opportunities including signage, an earthwork amphitheatre designed with seating for a class of students, a trail and boardwalk system providing the community with a close-up view of a functioning wetland while learning about the management and impact of urban stormwater runoff.
- Interconnected trails for recreational walking/running, access for bird watching, nature walks and other recreational activities.
- A diversity of habitat zones including shallow marsh, deep-water marsh, open water, and tree islands.

The Constructed Stormwater Wetland is an integral part of the Massachusetts Water Resources Authority's Long Term Combined Sewer Overflow Control Plan to the Alewife Brook (Boston Harbor). The wetland

- Enables the sewer separation and infrastructure renewal of the Concord/Huron Avenue Area in Cambridge (420 acres)
- Sewer Separation will reduce Combined Sewer Overflows to the Alewife Brook by 43.6 million gallons annually

The Constructed Stormwater Wetland, including the oxbow, main basin, vegetated swale and forebay, will be maintained by the City of Cambridge; and, DCR will operate and maintain all other recreational/educational enhancement components within the Alewife Reservation.