

Green Infrastructure Program

Community Partner Profiles

2011 Partners

REGION 1: Chelsea, Massachusetts

Community Background

The City of Chelsea is a small community of about 37,000 located to the northeast of Boston. One of eight communities in the Mystic River watershed, the city is bounded by the Mystic River to the southwest and a tributary known as Chelsea Creek to the east and south.

Like many of the waterways within the Mystic River watershed, Chelsea Creek is highly industrialized and severely degraded. All of the jet fuel for Logan International Airport is stored along Chelsea Creek, as well as 70-80% of the region's heating oil and road salts for 250 Massachusetts communities. The creek is also bordered by freight forwarding companies, abandoned boat salvage yards, a tannery, and abandoned contaminated land.

The industrial character of Chelsea Creek and the contamination of its water, fish, and sediment disproportionately expose the residents of Chelsea and neighboring communities to environmental and public health hazards. Chelsea Creek is not only the most contaminated tributary flowing into Boston Harbor, but also the second most polluted water body in Massachusetts. Given that Chelsea Creek connects some of the lowest income and most diverse areas of Chelsea, Revere, and East Boston, many view this as a case of environmental injustice. Residents of Chelsea not only experience higher than average exposure to environmental degradation, but lower than average access to environmental amenities as well. Compared to other Boston neighborhoods and nearby communities, Chelsea and neighboring East Boston have the lowest amounts of open space per person.

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Drivers for Green Infrastructure

Among the drivers of green infrastructure in the City of Chelsea are the Mystic River Watershed Association, the EPA-convened Mystic River Watershed Initiative, and the next generation of small municipal separate storm sewer system (MS4) permit requirements. In 1972, the Mystic River Watershed Association (MyRWA) was established as a volunteer organization to mobilize activists to protect and restore the Mystic River. In 2008, EPA New England launched the Mystic River Watershed



Figure 1: Salt pile along the Mystic River in Chelsea, MA. Photo courtesy of the [Mystic River Watershed Association](#).

Initiative to engage MyRWA and 21 other organizations in a collaborative effort to restore the Mystic River. Both of these efforts seek not only to improve water quality in the Mystic River, but to improve livability in neighboring communities as well. Green infrastructure is recognized as an important tool in addressing these interconnected goals.

Another driver of green infrastructure is the [next generation general permit for small MS4 communities](#) in north coastal Massachusetts. Among other provisions, this permit requires post-development recharge to approximate pre-development recharge, and emphasizes source controls that retain and treat precipitation where it falls.

Green Strategies and Programs

Stakeholders in the Mystic River watershed have identified enhancing open space and public access to waterways as key steps in improving environmental outcomes and community livability. By creating and protecting open space and greenways, water quality can be improved while community amenities are enhanced. Massachusetts Environmental Trust awarded a total of \$508,500 to five projects to improve public access to the Lower Mystic River through creating, expanding or enhancing opportunities for biking, hiking, walking, non-motorized boating, picnicking and other riverfront outdoor public recreation in the Lower Mystic River Watershed. The grants are made possible by the purchase of specialty environmental license plates, fees for which fund the Massachusetts Environmental Trust.

Stakeholders in the Mystic River watershed are also engaged in community outreach and education to bring the ideas of green infrastructure to the residential and commercial sectors. The Mystic River Watershed Initiative convenes several community events each year, including summits, workshops, and outdoor activities. The Initiative launched with a large watershed summit in April 2008, which addressed flooding, industrial contaminants, bacteria delivered by stormwater, and public access and was attended by over 150 stakeholders. In April 2011, the Mystic River Watershed Initiative convened a stormwater workshop in Chelsea to review new provisions of the draft MS4 permit and educate participants on low impact development techniques. EPA Region 1 has also contributed to outreach efforts. In 2010, EPA awarded the Mystic River Watershed Association and community partners \$9,000 to conduct stormwater education and outreach.

To build on the planning and outreach efforts described above, the EPA Green Infrastructure Partnership will provide technical assistance to the City of Chelsea to identify and address the barriers posed by local codes and ordinances, and to recommend a suite of green infrastructure practices suitable for Chelsea's poorly draining soils.

For more information: [Mystic River Watershed Association](#), [EPA New England - Mystic River](#)