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Green Boston Harbor Project (GBH), Community Environmental Stewardship: Applied research, education and outreach

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Vision & Mission
 “to be healthy, wealthy and sustainable”

Community Environmental Stewardship:
 applied research, education and outreach



Mystic River Watershed Community

Stormwater Educational Program



WHEN: 2010 and ongoing

WHO: UMass Boston/GBH; EPA; Mystic River Watershed Association; Tri-CAP; Friends of Alewife River; Conservation Law Foundation; Chelsea Creek Action Group

WHAT: UMass Boston and Dr. Frankic were recently selected by the EPA Region 1 to lead the urban watershed restoration in the Boston area. The formal MOU was signed on Dec. 21, 2011.

As a result, EEOS capstone classes have had the opportunity to work on several (7) pilot sites selected by local communities; Student projects have contributed to stewardship activities addressing water quality, restoration, and fish advisory in Mystic River areas. GBH helped developed the summer stormwater summer educational program with local communities and youth green teams.



The GBH methodology is derived from a 1500 year old Native Hawaiian *Ahupua'a* approach. This approach defines sustainable relationships among land, water and humans from the tops of islands to the coral reefs and open ocean. GBH seeks a similar interconnection between the City of Boston and Boston Harbor: from watersheds to the harbor and its coastal habitats and islands.

Cape Cod Community

Wellfleet Harbor



WHEN: 2010 and ongoing

WHO: UMass Boston/GBH; Town of Wellfleet; Environmental Partners Group

WHAT: Wellfleet Harbor is a unique ecosystem that is also home to a centuries old shellfishing industry and a growing aquaculture tradition of oysters and hard clams.

Our Oyster Propagation Project established an approximately two acre oyster settlement ground at the Duck Creek site in the Wellfleet Harbor and is expected to provide the following benefits:

- approximately 2.5 million additional oysters annually
- potential increase in commercial shellfish value of \$1 million
- 140 million gallons of increased water filtration daily,
- 3,500 pounds of nitrogen sink per year,
- and this project site will be coupled with near by salt marsh restoration in Mayo Creek.



Neponset River Watershed Community

Youth Green Teams



WHEN: 2009 and ongoing

WHO: UMass Boston/GBH; Southwest Corridor CDC; Neponset River Watershed Association; NPS; City of Boston

WHAT: Youth environmental stewardship education. Youth green teams spend summers cleaning up watershed areas and canoe the Neponset river. They sample and analyze river water quality and report their findings and recommendations to public officials and local communities. Dr. Frankic and GBH received a Stewardship Award from the City of Boston.



WHEN: 2012 and ongoing

WHO: UMass Boston/GBH, Friends of Wollaston Beach, City of Quincy;

WHAT: Restoration of keystone coastal habitats to improve beach water quality;

Wollaston Beach



Savin Hill Cove & Bay

WHEN: 2008 and ongoing

WHO: UMass Boston/GBH; Dorchester Yacht Club; Savin Hill Neighborhood Association; DMF; Thompson Island Outward Bound

WHAT: Establish biomimicry-based “Living Labs” for multi-habitat (salt marsh, shellfish, and eelgrass) restoration of keystone coastal habitats.

This project will establish the first biomimicry living lab in the coastal US, at the Savin Hill Cove (Cove). The Cove is located between a Vietnam Memorial, the Savin Hill Yacht Club and UMass Boston. The site, owned by UMass Boston, is ideal for teaching ecoliteracy, and having a living lab for applied science to “teach and learn by doing biomimicry” right near the campus. The Cove is an example of one of the most degraded and polluted sites in the Boston Harbor – but it still has life, in a fringe salt marsh, few shellfish (recently found oysters), and shorebirds, that will teach students about the resiliency and tenacity of coastal ecosystems.



Fort Point Channel

WHEN: 2011 and ongoing

WHO: UMass Boston/GBH, SHIFTBoston; Harvard Graduate School of Design; Harvard Extension School; Friends of Fort Pt Channel, City of Boston;

WHAT: Design biomimetic floating salt marsh to improve water quality in degraded channels where shoreline space is limited.



Native American Tradition

WHEN: 2009 and ongoing

WHO: GBH, UMass Boston, Native American Institute; Local Native American communities; DMF, NPS Boston Harbor Islands

WHAT: Build a replica fish weir and Seed soft shell clams to restore their population on Thompson Island, which sits at the confluence of the three rivers draining into Boston Harbor; the site sacred to Native American Communities.



Waquoit Bay

WHEN: 2007-2010

WHO: GBH; Waquoit Bay National Estuarine Research Reserve (WBNERR); Upper Cape religious communities

WHAT: A community-based participatory research (CBPR) project that involved listening to the needs of the various religious communities in the Upper Cape area (conversations, interviews, surveys, and as a participant observer at events and service) around the issues of coasts, climate change, and community stewardship.

The project then implementing selected programs and events as suggested, including energy events and environmental education.

