

Atlas Tack Restoration:

Fresh and Saltwater Ecosystem Assessment at a Former Superfund Site

By **Dr. Susan Peterson**

The Office of Campus and Community Sustainability at the University of Massachusetts Dartmouth has assembled a group of scientists and environmental educators to assess the restoration of the Atlas Tack Corporation Superfund Site. The site is about 20 acres of upland, freshwater wetland, and salt marsh on Buzzard's Bay near the center of Fairhaven, MA. It was placed on EPA's National Priority List in 1980 and EPA has since been responsible for protecting the public from contaminants at the site as well as site evaluation, remediation planning, negotiations with the property owners, and implementation of the remediation. The clean up should be finished in Fall 2007.

The site abuts the Fairhaven bike path and is bisected by the hurricane barrier. It is within a few blocks of an elementary school, the town hall, the town library, and various churches. Together with 20 contiguous acres of wetland owned by the town and private groups, the Atlas site is the largest piece of open land left in that area of the town, and habitat for a significant population of birds and other wildlife.

Our goals are to contribute to the science of wetland restoration, support community educational programs, and assess the future of the wetlands as a bird sanctuary and/or sustainability educational center. To do this we need permission from the property owners to access the wetland and oversight from US EPA/MA DEP on sampling protocols to protect the health and well being of the researchers. Preliminary funding has been granted by the Jessie B. Cox Charitable Trust.

Science objectives

The restoration of the wetland includes the removal and replacement of sediments, followed by replanting. The pattern of restoration provides a valuable scientific opportunity because restored marsh areas occur side-by-side with undisturbed marsh against which to judge the recovery of restored portions.

The research team includes:

Ms. Susan Jennings, Director of the Office of Campus and Community Sustainability
Dr. Susan Peterson, Project management and community outreach from Teal Partners
Dr. Eli Stahl, UMD biologist to lead the microbial sampling and analysis
Dr. Tara Rajaniemi, UMD biologist to lead vegetation, sediment and chemical analysis
Chad McGuire, Esq. to assess legal options and site considerations
Liz Newlands, to lead the bird use and population assessment from Mass Audubon
Dr. Nancy O'Connor, UMD biologist to lead invertebrate sampling
Dr. Ken Oliveira, UMD biologist to lead fish population assessments
Dr. David Welty and Joseph Yarmac of the Fairhaven High School science department, to lead student participation.
Ms. Jennifer Marshall, SEEAL Coordinator, to incorporate the science into standards-based curricula for regional schools.

EPA will have directed expenditure of over \$25 million dollars at the Atlas Tack site by the time remediation is completed. We see an opportunity to achieve multiple benefits from the site – for research as outlined above, for community education and development, and for incorporating the results of new science into public policy about superfund sites and methods for their remediation.