

Overview

The Fowl Meadow Purple Loosestrife Biological Control Project is a five-year collaborative wetland restoration project, begun in 2008, and based in freshwater wetlands of the Neponset River Watershed in Massachusetts, USA. The project uses *Galerucella californiensis* and *G. pusilla* beetles and larvae as a biological control agent to control and reduce the presence of exotic, invasive Purple loosestrife (*Lythrum salicaria*) in the Fowl Meadow wetlands and surrounding area. The project is implemented by a partnership of the 501c3 nonprofit organization the Neponset River Watershed Association and the Massachusetts Department of Conservation and Recreation - South Region, with significant help from a large corps of volunteers. Project guidance is provided by the Wetlands Restoration Program (recently re-named the Division of Ecological Restoration) of the Massachusetts Office of Coastal Zone Management. Through reducing the presence of Purple loosestrife in the extensive Fowl Meadow wetlands, we hope to encourage the growth of native wetland plant species, the improvement of habitat for native wetland wildlife, and the return of native wetland wildlife. The project has provided an opportunity to educate local communities and the Metro Boston public about local wetlands (i.e., wetland "health", what lives in wetlands, how wetlands are significant, and how to be a good wetland neighbor and steward); native vs. exotic, invasive species; and biological control agents. Now in our third project year, we have observed significant effects on the Purple loosestrife populations in our wetland treatment sites and also in surrounding wetlands. Purple loosestrife is visibly fed upon and damaged by the biocontrol insects, is shorter and sports far fewer than normal (if any) flowers during the growing season. We are looking forward to implementing the next several years of this project and observing more of the outcome.

Project Details

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Lead entity types:

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NGO / Nonprofit Organization

Adaptive management

Describe adaptive management processes and mid-course corrections taken to address unforeseen challenges and improve outcomes in each of the following categories:

Other:

We look forward to conducting a full project evaluation at the end of the five-year project in 2012.

State of Progress:

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Implementation

Project Start:

2008-02-01

Project End:

2012-09-01

Global Regions:

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Americas

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Northern America

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World

Countries:

•

United States of America

Ecosystem Functional Groups / Biomes:

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Palustrine wetlands biome

Extent of project:

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Other

Extent of restoration:

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Other

Degradations:

- Invasive species

Description:

The wetlands have been degraded by infestation by Purple loosestrife, hydrology changes due to ditching and surrounding development, and pollutants received via stormwater runoff, among other factors.

Planning and Review**Goals and Objectives****Was a baseline assessment conducted:**

unsure

Was a reference model used:

RM5

were_goals_identified:

YES

Goals and objectives:

- Other

Goals Description::

Fowl Meadow has been known to host endangered, threatened and special concern species, and has been designated part of an Area of Critical Environmental Concern. The site also is a popular public destination for passive recreation and education. Unfortunately, exotic, invasive Purple loosestrife has a strong presence in the Fowl Meadow wetlands and in other local wetlands. Through reducing the presence of Purple loosestrife in the extensive Fowl Meadow wetlands, we hope to encourage the growth of native wetland plant species, the improvement of habitat for native wetland wildlife (including an endangered species previously recorded at Fowl Meadow), and the return of native wetland wildlife. Landowner the MA DCR was supportive of implementing the biocontrol project at Fowl Meadow and Brookwood Farm, with guidance from the Wetlands Restoration Program (WRP) of the MA Office of Coastal Zone Management. WRP helped us to determine project goals and strategy. Local communities in which the specific treatment sites are located also have been supportive of this project to control an exotic, invasive species, including the Towns of Milton and Canton and the City of Boston.

Stakeholder Engagement**Were Stakeholders engaged?:**

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Description of Stakeholder Involvement:

This project is implemented by the Neponset River Watershed Association with the Massachusetts Department of Conservation and Recreation - South Region. We receive project guidance from the Wetlands Restoration Program (now called the Division of Ecological Restoration) of the MA Office of Coastal Zone Management. Volunteers from the communities surrounding the project sites help to implement the project. These volunteers consist of local residents, classes at local schools, members and staff of local environmental conservation organizations, staff of other local organizations, and more. Project partner the MA DCR is the landowner of our treatment sites.

Ecosystem Activities and Approaches

General Activities: This is a 5-year project. We are following project protocols provided by the Wetlands Restoration Program of the MA Office of Coastal Zone Management, Cornell University, University of Connecticut and University of Minnesota. In Project Year 1: We selected treatment sites, set-up study plots, and in the late spring, monitored study sites. We purchased biocontrol beetles from a beetle-supplier and released these beetles in the field during the summer. In the late summer/early fall, we monitored the field sites. In Project Year 2, we recruited volunteers, trained them to cultivate biocontrol insects, and purchased seed biocontrol beetles. Throughout the spring and early summer, we

worked with the volunteers to raise the insects. We also monitored the treatment sites. In the early summer, we released the cultivated beetles at the field sites. In the late summer, we monitored the sites. Now in Project Year 3, we plan to repeat the project activities of Year 2. Please contact NepRWA for more information: 781-575-0354, staff@neponset.org.

Project Outcomes ×

Eliminate existing threats to the ecosystem: Now in our third project year, we have observed significant effects on the Purple loosestrife populations in our wetland treatment sites and also in surrounding wetlands. Purple loosestrife is visibly fed upon and damaged by the biocontrol insects, is shorter and sports far fewer than normal (if any) flowers during the growing season. Factors limiting recovery of the ecosystem: The Fowl Meadow wetlands are affected by a variety of factors - e.g., presence of exotic, invasive species; decades-old man-made changes to hydrology; pollutants; surrounding development and impermeable surfaces; etc. Also, there is only a limited number of local staff, staff time and funding available to work towards correcting problems in Fowl Meadow. Economic vitality and local livelihoods: Hands-on participation in the project, whether in the form of site-monitoring, Beetle-Ranching, or any number of other project activities, has provided volunteers of a variety of ages, backgrounds and affiliations with a way to fully engage in a local environmental conservation project. Additionally, we have heavily publicized the project via on-line pictures and text, mass e-mails, newspaper stories, radio and TV. Thus, many people who have not had hands-on experience in the project have benefited from seeing, hearing and reading about the local wetland restoration project.

Monitoring and Data Sharing ×

Does the project have a defined monitoring plan?:

NO

Open Access URL:

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Long Term Management ×

STAPER ×



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