

Cattail Marsh

by Shelley Matthews

YEAR
5

is located within Fernhill Wetlands, Forest Grove, Oregon



BEFORE

Experimental strategies to control non-native reed canary grass included “stomping” and covering



AFTER

Inundation was the most effective method for controlling reed canary grass



The Cattail Marsh project was a collaborative effort spearheaded by the Biology Department at Pacific University in Forest Grove and the Fernhill Wetlands Council. The objective of the restoration was to enhance wildlife diversity of the area by adding native plant species and diversifying the habitat.

Prior to implementing the project, the 17-acre Cattail Marsh was covered primarily by reed canary grass (*Phalaris arundinacea*) and cattails (*Typha latifolia*). There were also small populations of beggar's tick and water smartweed (*Bidens frondosa*, *Polygonum amphibium*), and thirty to fifty percent of the exposed surface area of the water was covered in duckweed and waterfern (*Lemna minor* and *Azola mexicana*). The marsh is surrounded by a raised dike / dirt road.

The project was planned and implemented by Dr. Stockhouse's "Wetland Restoration / Planning" class. Students undertook aggressive cattail and reed canary grass control measures (primarily stomping and cutting) and introduced twenty-five native plant species. They also built bird, goose, and wood duck boxes to attract a greater abundance of these targeted birds.

Subsequent biology classes monitored the site for five years after project completion and collected data on cattail, reed canary grass, bullfrogs, marsh wren populations, and other vertebrate and invertebrate populations. Inundation and dewatering cycles were implemented over time as management strategies. Data from staff gauges and piezometers was recorded on a regular basis to monitor ground and surface water levels.

Benefits

- Increased plant and animal diversity.
- Enhanced the corridor between two adjacent mitigation projects.
- Provided an area of study and research for future educational purposes.
- Increased community involvement and enhanced awareness of aesthetic values of wetlands.
- Created a more efficient biofilter for floodwaters.

Budget

Total Proposed – \$43,381

Total Actual – \$84,056 (estimated)

Metro/U.S. Fish and Wildlife Service grant award – \$6,500

Grant Dollars Spent - \$2,309

Helpful Hints – what worked, what didn't

- Be flexible as to the weather. Two major flood seasons caused long periods of high water and slowed this project considerably.
- Be ready to change plans quickly as in-kind gifts become available.
- The Grant Coordinator should plan on spending many hours coordinating and supervising "in-kind" help.

- The Wetlands Restoration Class format worked very well. Students gained first hand experience in the design and implementation of real-time wetlands restoration and enhancement.
- Numerous elementary, junior high, and high school students gained insight into wetlands enhancement and design along with their teachers and parents.
- The aggressive stomping of cattails limited growth over two growing seasons. Repeated stomplings will help to prepare sites so that wildlife habitat can be enhanced.
- Per Dr. Stockhouse, the amount of out-of-class time spent orchestrating this effort was excessive, as was the time waiting for the official OK to begin the actual ground-work.

Partners

Pacific University
 Fernhill Wetlands Council
 The City of Forest Grove
 Unified Sewerage Agency
 Gene Herb, retired from the Oregon Department of Fish and Wildlife

Contact

Prof. Robert Stockhouse, Department of Biology, Pacific University (503) 359-2254

Timeline and Tasks

January – May 1996	Initial planning: met with the U.S. Fish and Wildlife Service, Gene Herb, Fernhill Wetlands Council, and other agencies
September – December 1996	Pacific University students designed wetland restoration and made formal presentation to Metro, Fernhill Wetlands Council, and Friends of Fernhill Wetland
January – December 1997	Pacific University students coordinated all volunteer labor; propagated, ordered and planted plants; installed snags; and built bird boxes