What?

5 Star Grant from the National Fish and Wildlife Foundation (NFWF) for a Wetland Nursery and Demonstration Site

- ★ Wetland nursery established for future plantings
- ★ Demo cove of protected wetland plantings established at Lake Wister July of 2006
- ★ Commitment from partners for continued plantings in the future

Why?

Lake Wister has very poor shoreline habitat for fish or wildlife. Establishing a *lacustrine (lakeshore)* wetland will greatly improve that habitat. Once these plants populate the shoreline they will further improve the lake by reducing erosion, sediment resuspension and excess nutrient loads in the lake.

Given Wister's wide fluctuation in lake levels and exceptional herbivory pressure aquatic plants have not established there. The Five Star NFWF Grant was the impetus that required and brought together multiple organizations to begin this important work to improve Lake Wister.

Aquatic plant community at Lake Murray

Although the plants cannot improve the water quality flowing into the lake, the establishment of a native aquatic plant community represents an inexpensive, long term step to enhance the lake. This project is intended to initiate the first step in a process that can support more wildlife and even lead to a better, cleaner lake. If continued over a period of five to ten years, the lake should realize a significant improvement in its overall quality.

How?

By planting starter colonies with long term protection from herbivores that will seed and spread throughout a cove. Softstem bulrush is a tall fast colonizing drought and flood tolerant plant that can withstand Wister's fluctuations. Water willow is another herbaceous plant that is easy to propagate and spreads easily.

Nursery: With permission and assistance from the McAlester Army Ammunition Plant (MAAP), softstem bulrush tubers were extracted from MAAP's Brown Lake and transported to the Wister area. These tubers were planted in former fishery ponds at the Kerr Center for Sustainable Agriculture to act as a source for future planting efforts.

Digging bulrush at MAAP for transplanting to Wister Lake

Planting Site: Three large pens and 30 tomato cages were constructed of plastic coated wire that will protect the plants for many years. These plants, once established, will produce a seed bank that will establish a stable aquatic community over the years to come. Over time, as the community spreads, other species will begin to take hold in the lake, leading to a diverse community able to support fish, wildlife, and waterfowl. These benefits will not be realized immediately. This type of environmental restoration will take years to realize its optimum potential.

What Next?

This project only dealt with a small portion of the lake. Future plantings will be needed throughout Lake Wister's many acres of shallow mud flats. Funding for more caging and labor is necessary to continue this work throughout the lake and PVIA is committed to carry on this work. Additional pens will be built and planted in other coves as well as maintenance of the nursery and the existing pens. Additional species may also be introduced as resources allow.

Planting bulrush tubers in 100' x 50' plastic coated pen

Where?

The plant nursery was established at the Kerr Center for Sustainable Agriculture east of the lake.

Initial planting was at Quarry Island Cove, Lake Wister Oklahoma.

Who?

* Oklahoma Water Resources Board (OWRB)
* National Fish and Wildlife Foundation
* Poteau Valley Improvement Authority (PVIA)
* McAlester Army Ammunition Plant
* Kerr Center for Sustainable Agriculture (KCSA)
* U.S. Army Corps of Engineers
* Department of Wildlife Conservation
* LeFLore County Rural Water District #14
* City of Poteau
* James Hamilton Correctional Facility

MUCH MORE WORK NEEDS TO BE DONE!!!

If you would like to help or just want more information please call:

PVIA - (918) 655-7500

KCSA - (918) 647-9123

OWRB - (405) 530-8800 Water Quality Div.

Softstem bulrush

(Schoenoplectus tabernaemontani)

Wildlife Uses:
Provide food and cover for fish, muskrats, raccoons, and otters. The hard-coated fruits are an important and common food source for ducks, shore birds, and marsh birds. Provide nesting cover for water birds, waterfowl, and marsh wrens.

Characteristics:
Tall, perennial, herbaceous plant that grows 1.5 - 9 ft. tall. The leaves are highly modified into long sheaths that closely girdle stem bases. The stems are up to 0.8" thick, obscurely three-sided and spongy. The flowers are borne in an open inflorescence of many stalked, budlike spikelets, covered by reddish brown scales below the top of the stem. The fruit is a brownish gray achene. Rhizomes are scaly and stout. Reproduction is both by rhizomes and seeds.

Planting:
Spread via rhizomes (tubers) is prolific and best for new introductions. Plantings may be done using thick energy laden tubers from the months of May through August. When possible use potted plants with well established root systems.

Mature Softstem bulrush stand

LAKE WISTER 5 STAR WETLAND RESTORATION PROJECT

Summer 2006

State of Oklahoma
OWRB
WATER RESOURCES BOARD
the water agency