

Who?

Oklahoma Water Resources Board, in cooperation with United States Environmental Protection Agency, Poteau Valley Improvement Authority, Oklahoma Conservation Commission, US Army Corps of Engineers, Oklahoma Department of Wildlife Conservation, Kerr Center for Sustainable Agriculture, Carl Albert State College, City of Tulsa, and Department of Tourism and Recreation

What?

Lake Wister Native Plant Establishment, Phase II. An attempt to demonstrate a way in which establishment of a native aquatic plant community in Lake Wister can reduce sediment and excess nutrient loads in the lake, and provide habitat for wildlife, fish, and waterfowl.



When?

May through August, 1999

Where?

Lewis Creek Arm of Lake Wister



Why?

Lake Wister, created in 1949 by impoundment of the Poteau River by the US Army Corps of Engineers, suffers from degraded water quality due to poor quality water flowing into the lake and recycling of sediments and nutrients in the lake. A diverse, native aquatic plant community in Lake Wister would serve to minimize sediment and nutrient recycling in shallow areas.



An intensive study conducted by the OWRB in 1995 led to the USEPA funding a project to demonstrate the potential benefits of a plant community to maximize in-lake water

quality. Although this demonstration cannot improve the water quality flowing into the lake, the establishment of a diverse native aquatic plant community in Lake Wister represents a relatively inexpensive, long term step to improve lake water quality. The establishment of plant communities should provide habitat for fish and wildlife. This project is intended to demonstrate one step in a process that can lead to a better, cleaner lake. If performed over a period of five to ten years, the lake should realize a significant improvement in the overall water quality.

How?

Through a series of test plantings over the past two years, several species have been identified that are capable of surviving the particular environmental conditions of Lake Wister. During the summer of 1999, these plants will be harvested from several local lakes, and transplanted into the Lewis Creek arm of Lake Wister. These plants, once



established, will produce a seed bank that will help to establish a stable aquatic community over the years to come. Over time, as the water clarity improves, other species will begin to establish in the lake, leading to a diverse community that will help support fish, wildlife, and waterfowl. The plants that have been chosen are all native to the area. In addition, a 2100 foot line of round hay bales will be installed in the Lewis Creek arm of the lake to help protect the shoreline from erosion.

It should be understood that these benefits will not be realized immediately, and that this sort of environmental restoration will take years to realize its optimum potential. The project currently underway will only deal with a small area of shoreline, and will not serve as an immediate cure-all. Future plantings will be needed to address the entire lake.

The Oklahoma Water Resources Board and all its cooperators wish to thank you for your interest in our project. If you wish further information on this project, feel free to contact the Oklahoma Water Resources Board at (405)530-8800, 3800 N. Classen, Oklahoma City, OK 73118.



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LAKE WISTER HABITAT RESTORATION PROJECT



SUMMER 1999

**Oklahoma Water
Resources Board**