

Brown's Lake, Habitat Rehabilitation and Enhancement Project, Pool 13

Rock Island District

Pool 13, Upper Mississippi River Miles 544.0 - 546.0, Jackson County, Iowa

RESOURCE PROBLEM: This valuable backwater area had gone from a lake that was up to 6 feet deep to a 12- to 18-inch deep marsh complex. Continued siltation increased the probability of winter fish kills and negatively impacted what has been an important migratory waterfowl area, fishery, and furbearer area. The ongoing siltation process would have transformed the area into lowland brush habitat, further reducing the available open water and submergent/emergent aquatic vegetation in Pool 13.



PROJECT FEATURES:

- Construct a deflection levee to prevent Mississippi River flood flows and associated sedimentation from directly entering the Brown's Lake complex;
- Operate a water control structure in the deflection levee to allow the flow of oxygenated water during periods of normal flow;
- Improve the inlet channel to restrict/reduce river debris and sediment from reaching Upper Brown's Lake;
- Place approximately 370,000 cubic yards of hydraulically dredged fine-grained sediments into a terrestrial site to depths of 6 to 8 feet; and,
- Plant dredged material with mast producing trees.

PROJECT OUTPUTS: The project has reduced the ongoing siltation. Dredging has provided refuge for fish in deeper water during winter and increased habitat diversity. Estimated angler effort and catch has increased 50% and 117%, respectively, in Lower Brown's Lake and Lainsville Slough following rehabilitation. Upper Brown's Lake had angler effort and catch increase by a factor of 10 since project completion. The majority of the mast tree plantings on the dredged material were lost due to flooding in 1993. The trees were not replanted.

FINANCIAL DATA: General design costs were \$260,000, and construction costs were \$1,832,000. Annual costs for operation, maintenance, and repair are estimated at \$11,300 and are the responsibility of the U.S. Fish and Wildlife Service. The Iowa Department of Natural Resources is the non-Federal project sponsor.

STATUS: Project construction was completed in September 1990. An initial performance evaluation report was distributed in May 1993. Supplemental performance evaluation reports were distributed in April 1997 and in January 2004. Performance monitoring is continuing.