

FACT SHEET

MCGREGOR LAKE RESTORATION HABITAT PROJECT POOL 10, UPPER MISSISSIPPI RIVER, WISCONSIN ENVIRONMENTAL MANAGEMENT PROGRAM

LOCATION

McGregor Lake is located within a mid-river island in Pool 10 on the Wisconsin side of the main navigation channel of the Mississippi River between the cities of McGregor, IA, and Prairie du Chien, WI. The 200-acre lake is at rivermile 634 and is bordered on the west by islands separating it from the main channel and on the east and south by a long peninsula that separates it from the East Channel of the Mississippi River.

EXISTING RESOURCES

The backwater complex is horseshoe-shaped with a narrow band of island protecting it from inflows from the main channel of the Mississippi River and the East Channel. The lake is "rimmed" with a narrow band of vegetation from shore to approximately 1 foot of water (wet meadow, emergents and submersed, respectively). Fish sampling done in 2001 by the Iowa DNR documented that the fish community is comprised of typical backwater species and their populations are considered low due to the poor quality of habitat in the area. Summer and winter dissolved oxygen levels can become low due to lack of depth. The average depth of McGregor Lake is 0.72 meters (range 0-1.2 meters). Table 1 provides a summary of the habitat in 1989 and Figure 1 shows locations of the habitat conditions.

Table 1. Comparison of 1989 habitat types and desired conditions

Environmental Pool Plan LC/LU	1989 Conditions (acres)	Desired Conditions (acres)	Change (acres)
Emergents	86	114	+28
Submersed	104	112	+8
Open Water	248	198	-50
Grassland/Wet Meadow	6	6	0
Forest	129	114	+15
Terrestrial – Floodplain Forest (Trees/Grasses)		30 (Added to Forest)	

PROBLEM IDENTIFICATION

The main problems in the area are loss of overwintering areas and loss of fish and wildlife nursery habitat. The lake is a wide expanse of shallow water with little habitat diversity. Since 1989, there has been a decrease in the amount of emergent and submersed vegetation, loss of depth in the backwaters, and island erosion along the main channel and East Channel. The majority of habitat decline is from the impacts of sedimentation due to changes in connectivity to the area brought on by impoundment by the locks and dams. Island erosion is partially due to the above reason, and also from recreational boat traffic and loss of trees in the area. Wind and wave action re-suspends

sediments and prevents establishment of vegetation. Flow from the main channel and East Channel threatens to break through the barrier islands into the lake.

McGregor Lake may serve as a spawning marsh for riverine species of fish, but its primary fishery value is for backwater fish and wildlife species. All of these species are being impacted by a slow decline in habitat quality, especially low dissolved oxygen levels.

PROJECT GOALS

Project goals are derived from the Environmental Pool Plans (EPPs), Pools 1 through 10. As described in the EPPs, improving environmental conditions for fish and aquatic wildlife, increasing emergent vegetation, and maintaining the coverage of submersed vegetation is desired. Island construction and stabilization, increased water depths in McGregor Lake, and promotion of floodplain forest regeneration are also desired for the area. The project habitat area objectives are quantified in Table 1. The project goals are as follow:

Maintain/Enhance/Create quality habitat for all native and desirable plant, animal and fish species

- Restore the quality of backwater fish overwintering habitat
- Restore the quality of migratory bird habitat with an emphasis on dabbling ducks and wading birds
- Protect existing and construct additional islands

These goals are consistent with identified needs in the Habitat Needs Assessment for backwater, side channel, and island habitat.

PROPOSED PROJECT

The proposed project features are shown in Figure 2. Dredging into the lake and providing areas of deeper water will improve the habitat quality for many fish species. The dredged material could be used to strengthen the peninsula, construct islands and fill in any areas of potential breakouts. Additional features to improve dissolved oxygen levels and habitat structure in the area would be considered, including dredging of adjacent sloughs. For example, cedar bundles anchored and dropped into the dredge cut to provide fish shelter or a flow control structure placed in the peninsula to introduce fresh water into the lake to increase dissolved oxygen levels and connectivity could be considered.

PROJECT OUTPUTS

The project would result in 200 acres of diversified and productive habitat in McGregor Lake for fish species with increased vegetation growth to provide cover and food for young fish. Increased water depth and access channels would allow fish movement into and out of the lake to overwinter. Also, the slack water habitat in the lake would be protected from main channel and East Channel flows to promote the growth of aquatic vegetation for the benefit of migratory waterfowl.

IMPLEMENTATION CONSIDERATIONS

A primary implementation consideration will be the potential for archeological resources in the area. Thorough review, survey and coordination with state and Federal authorities will be necessary. The presence of the Higgins' Eye pearly mussel could constrain or limit some proposed actions. Soil borings will be needed to determine the characteristics of the bottom sediment in McGregor Lake.

FINANCIAL DATA

The proposed project features are located in an area managed as part of the Upper Mississippi River National Wildlife and Fish Refuge. Therefore, the project cost would be 100 percent Federal. The project lands are managed by the U.S. Fish and Wildlife Service (USFWS). Therefore, in accordance with Section 107(b) of the WRDA 1992, all costs for operation, maintenance, and rehabilitation of project features would be the responsibility of the USFWS. During the study, if any additional project features are proposed that are located outside the Refuge boundaries, the Wisconsin DNR would likely be the non-federal sponsor and would be required to provide the cost-share for those features. The estimated cost of the proposed project is shown below.

Project Feature	Quantity	Cost (\$)
Islands	26 acres	3,130,000
Dredging	28 acres	2,150,000
Island Protection	1,300 feet	120,000
Aquatic Structure	2 acres	200,000
Planning, Design, Construction S&A		800,000
TOTAL COST		6,400,000
Operation and Maintenance	Annual Cost	1,250

STATUS OF PROJECT

The Fish & Wildlife Work Group, the River Resources Forum, and the System Ecological Team (SET) have endorsed this project.

POINTS OF CONTACT

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Figure 1 – 1989 Habitat Conditions at McGregor Lake

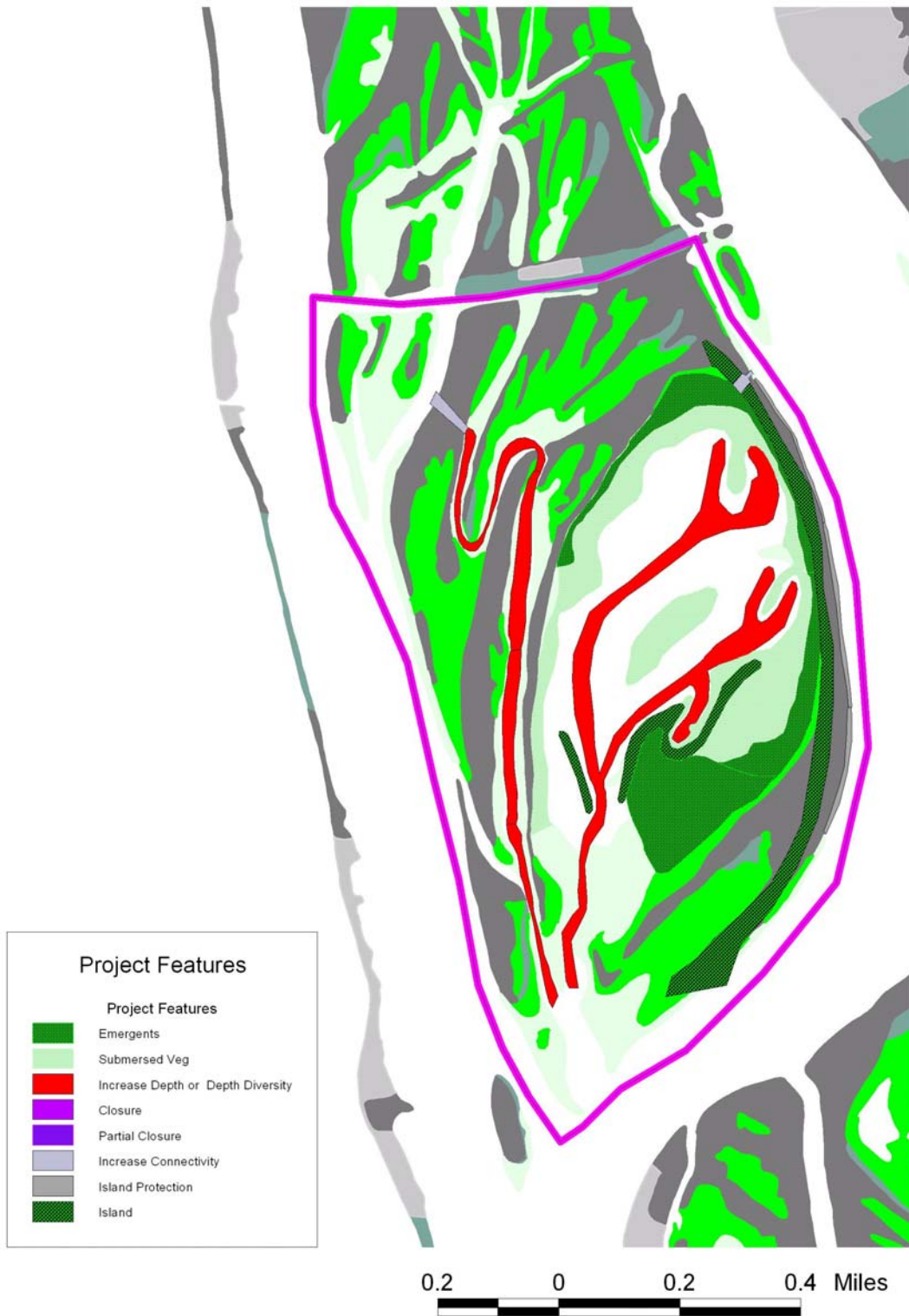


Figure 2 – McGregor Lake Project Features