

FACT SHEET

BASS PONDS, MARSH, & WETLAND HABITAT RESTORATION PROJECT MINNESOTA VALLEY NATIONAL WILDLIFE REFUGE, MINNESOTA ENVIRONMENTAL MANAGEMENT PROGRAM

LOCATION

Three areas located on the Minnesota Valley National Wildlife Refuge in urban floodplain areas near Bloomington, Minnesota, are included in the project area. The “**Bass Ponds**” floodplain marsh area is located in the Long Meadow Lake Unit at Minnesota River mile 7. It is bounded by Bloomington on the north and west and Lower Long Meadow Lake on the south and east. The “**Marsh**” area includes two lakes, Continental Grain Marsh and Fisher Lake at Minnesota River miles 17 to 18. It is bounded by the Minnesota River on the north and east, State Highway 13 on the south, and Blue Lake on the west. The “**Wetlands**” area is located in the Long Meadow Lake, Wilkie, and Bloomington Ferry Units at Minnesota River miles 5 to 11 and 14 to 21. It is bounded by Interstate 494 and Bloomington on the north and by the Minnesota River or State Highway 13 on the south.

EXISTING RESOURCES

Originally created for a private hatchery, the Bass Ponds consists of three small wetlands in the floodplain area of the Minnesota River (Minnow, Little Bass, and Big Bass). The wetlands once supported a variety of wetland dependent species such as dabbling ducks, wading birds and rails, in addition to a variety of emergent and submergent vegetation. These ponds are used for environmental education.

The Marsh area within the floodplain supports waterfowl and other wetland dependent species such as the bald eagle, great blue heron and white pelican. Water levels in these lakes are periodically drawn down through water control structures to promote the growth of emergent marsh vegetation such as cattail, bulrush and moist soil plants.

The Wetlands area of the floodplain is converted agriculture land now managed for wildlife and native plant communities, including bottomland hardwoods, wet meadow, permanent wetlands, and associated wildlife species.

PROBLEM IDENTIFICATION

In the Bass Ponds area, Minnow Pond has silted in due to drainage from an urban area. Prior to degradation, Minnow Pond functioned as a filter for a tremendous amount of silt from the bluff in a continuously running spring that flows through the complex, into Long Meadow Lake, and out to the Minnesota River. Siltation is preventing water from entering the Bass Ponds system. The Little and Big Bass Ponds control structures were old and failing when the Refuge was acquired in 1976, so provide very limited operational capability to manage water levels. Overall, the wetlands are degraded and provide little or no wildlife or water quality benefit.

In the Marsh area, the wetland habitat is declining in both lakes because of siltation from high flow conditions on the Minnesota River. As the wetland habitat is reduced, the area will be able to support less and less waterfowl and other wetland dependent species. At Continental Grain

Marsh, the riverward side of dike is eroding and the effectiveness of this important marsh area will be eliminated if the dike is breached. Efforts are currently underway to determine the main cause of dike erosion (groundwater movement or river flows). The marsh is also draining from the west side into a designated trout stream (Eagle Creek) and may be causing degradation of the stream.

In the Wetlands area, it is estimated that there were hundreds of small, temporary (ephemeral) wetlands along the Minnesota River between the natural levee and the toe of the bluffs before the floodplain area was settled and farmed. Due to farming in the floodplain and river deposition, most of the ephemeral wetlands which historically existed have been eliminated. These temporary wetlands provided habitat for a wide variety of wetland-dependent wildlife, including dabbling ducks, shorebirds and migratory song birds, as well as amphibians and invertebrates that are not typically found in permanent wetlands. They also improve water quality by slowing down runoff from the bluffs and filtering the water before it enters the Minnesota River.

PROJECT GOALS

Project goals are derived from the Environmental Pool Plans (EPPs), Pools 1 through 10. As described in the EPPs, the desired future for this area is to maintain an interspersed of high quality habitat. The project goals are as follow:

Maintain/protect/enhance/restore quality wetland habitat for all native and desirable plant, wildlife, and fish species.

- Protect, enhance, and restore 15 acres of wetland habitat. This will, in turn, protect the 1,500 acre Long Meadow Lake wetland complex
- Protect, enhance, and restore 569 acres of emergent marsh and riparian habitat (206 acres in Continental Grain Marsh and 363 acres in Fisher Lake)
- Protect, enhance, and restore 100 acres of ephemeral wetland habitat

These goals are consistent with identified needs in the Habitat Needs Assessment for impounded and isolated backwater habitat.

PROPOSED PROJECT

Proposed project actions in the Bass Ponds area include dredging Minnow Pond to remove silt and increase sediment trap capability, replacing existing water control structures on Big Bass Pond, Little Bass Pond and Minnow Pond, and installing a new water control structure between Big and Little Bass Pond on Minnow Pond Creek. The proposed project features are shown in Figure 1.

Proposed project actions for the Marsh area include rehabilitating the dike at the Continental Grain Marsh with riprap or widening the dike to keep it from breaching, reevaluating and adjusting the spillway elevation to keep water from draining into Eagle Creek and to provide more water management capability, rehabilitating the outlet control structure, and dredging channels in Continental Grain Marsh and Fisher Lake to remove silt and increase drawdown capabilities. The proposed project features are shown in Figures 2 and 3.

Proposed project actions in the Wetland area include surveying the floodplain to determine where wetlands could be restored or created, restoring or creating over 100 wetland areas

ranging in size from 0.1 to 5 acres, and wetland management. The proposed project features are shown in Figure 4.

The authority for this study and potential project construction is provided by Section 1103 of the Water Resources Development Act of 1986 (Public Law 99-662), as amended.

PROJECT OUTPUTS

The proposed project would result in the protection, enhancement, and restoration of almost 700 acres of year-round and temporary wetland habitat. It would also protect the 1,500-acre Long Meadow Lake from the effects of Minnesota River flows. Dredging would remove silt deposits and open watercourses. Replacing and building water control structures would provide for more water level management capabilities. Optimal habitat conditions could be provided for both long- and short-term wildlife residents.

IMPLEMENTATION CONSIDERATIONS

Material from project dredging and wetland excavations could be used for topography enhancements in the Bass Ponds, Continental Grain Marsh, and Wetland areas. Material from project dredging and from navigation channel maintenance activities could be used for the Continental Grain Marsh dike rehabilitation. Rehabilitating the Rice Lake dike should be performed prior to construction in the Marsh area. Surveys of the floodplain would be needed prior to construction of the ephemeral wetlands to determine the appropriate actions.

Constraints include construction restrictions in eagle nesting areas. Also, access to the Continental Grain Marsh outlet control structure is via private land and may require a special agreement to access the structure.

FINANCIAL DATA

The project would be located entirely on lands managed as a national wildlife refuge. Therefore, in accordance with Section 906(e) of the Water Resources Development Act of 1986, the project cost would be 100% Federal. The estimated cost for the planning, design, and construction in the Bass Ponds area is \$500,000; in the Marsh area the estimated cost is \$1,000,000; and in the Wetlands area the estimated cost is \$500,000. Total project cost is estimated to be \$2,000,000.

The project lands are managed by the U.S. Fish and Wildlife Service (USFWS). Therefore, in accordance with Section 107(b) of the Water Resources Development Act of 1992, all costs for operation, maintenance, and rehabilitation of project features would be the responsibility of the USFWS, including periodic dredging of material from the Minnow Pond sediment trap and other areas. These costs are estimated to be about \$1,000 annually for each of the areas.

STATUS OF PROJECT

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

Two other EMP habitat projects have been completed in the project area. The Rice Lake Habitat Rehabilitation and Enhancement Project was completed in 1998 and included excavating a

2,500-foot-long channel into Rice Lake and installing a stoplog water control structure in the channel to provide for water level management of the lake. The project optimizes aquatic vegetation growth in the lake for migratory waterfowl and other wildlife and has a water connection to the Fisher Lake area. The Long Meadow Lake Habitat Rehabilitation and Enhancement Project was completed in 2006 and included replacing and upgrading an outlet structure that controls both inflow to and outflow from the lake. This provides for water level management of the lake and keeps poor water quality water from the Minnesota River from entering the lake. The project allows optimum lake water levels to promote aquatic vegetation growth for migratory waterfowl and other wildlife. The Long Meadow Lake habitat project is located within the Ephemeral Wetlands Focus Area.

Partnering organizations include the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and the Minnesota Department of Natural Resources.

POINTS OF CONTACT

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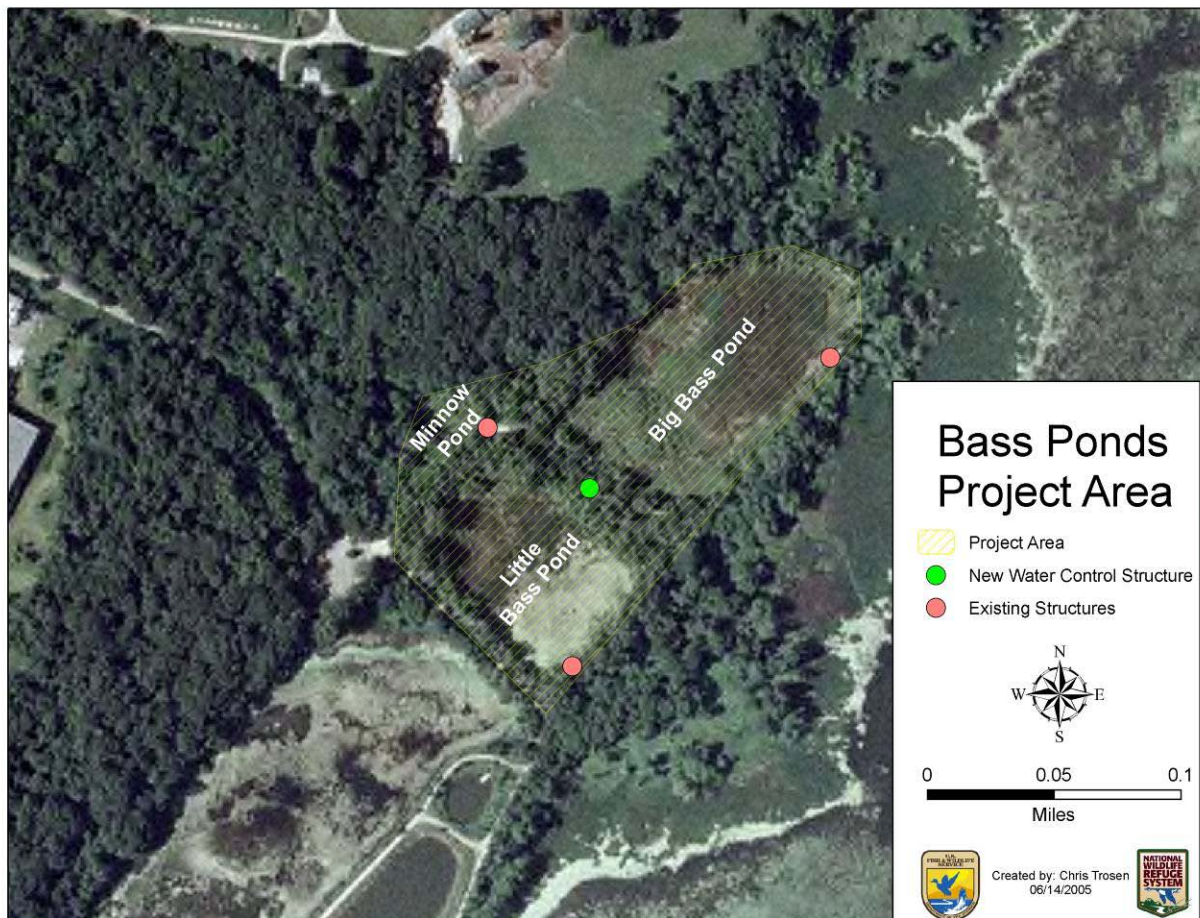


Figure 1 – Bass Ponds Project Area



Figure 2 – Continental Grain Project Area



Figure 3 – Fisher Lake Project Area

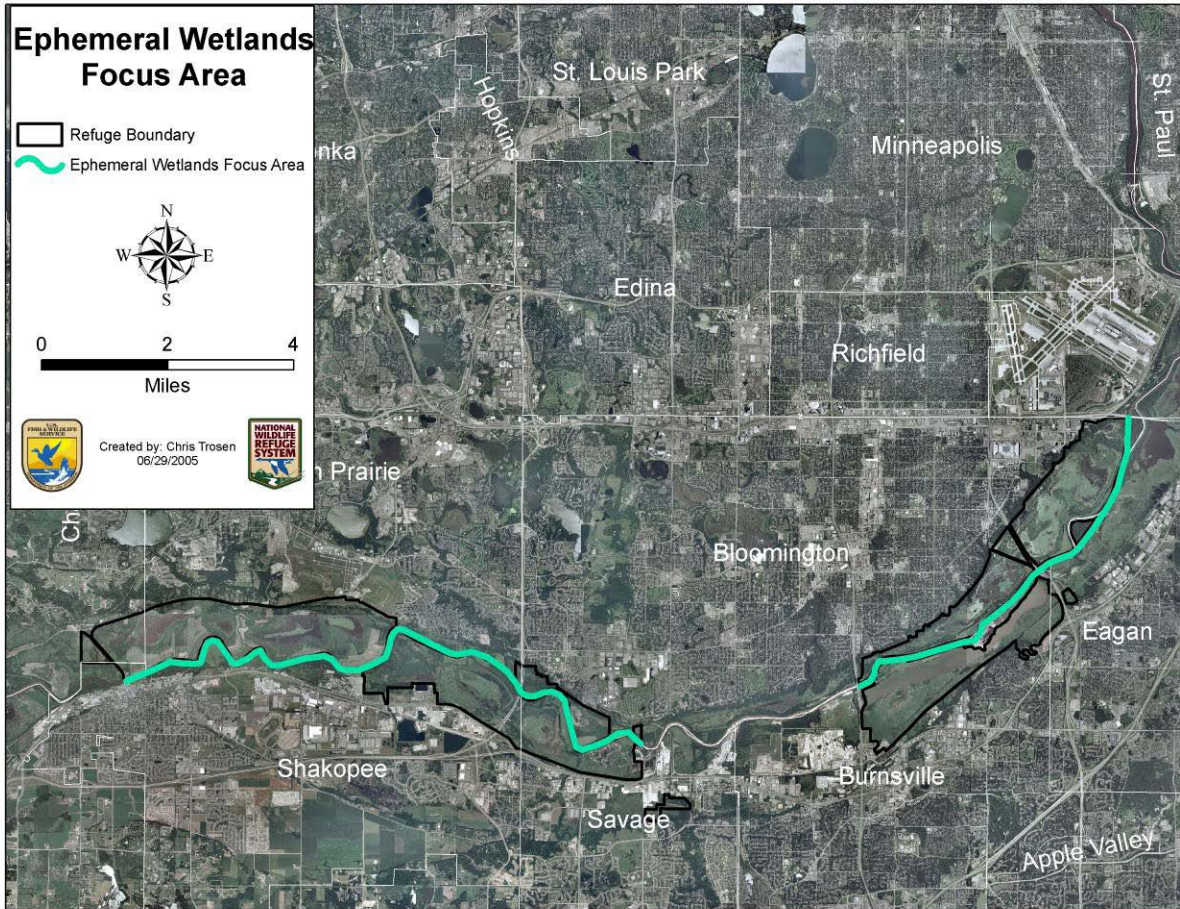


Figure 4 – Ephemeral Wetlands Focus Area