

10 March 1988

FACT SHEET

POLANDER LAKE PRESERVATION AND ENHANCEMENT
POOL 5A, UPPER MISSISSIPPI RIVER, MINNESOTA

LOCATION: Polander Lake is a 1,000-acre backwater lake located on the Minnesota side of the main channel of the Mississippi River in pool 5A near Winona. The site lies within the Upper Mississippi River Wildlife and Fish Refuge.

RESOURCE PROBLEM: When the Polander Lake area was established as a closed area of the Upper Mississippi River Wildlife and Fish Refuge in 1958, it had an abundance of aquatic plants and provided a good staging area for migrating waterfowl. Presently, the aquatic vegetation is limited to near the edges of the lake, and much of the open water is without vegetation. The reasons and causal factors for its decline and its inability to recover are largely unknown. Part of the reason may be that the area has poor water clarity. There are several potential causal factors. The area receives excessive flows and suspended sediment input directly from the main channel and two large side channels. Adding to the water clarity problem is wind-induced wave resuspension of the fine material. In addition, waves from boat traffic may be adding to the input and resuspension of fine material.

PROPOSED PROJECT: The conceptional nature of the project makes it difficult to determine what the project would entail. Therefore, the General Design would be conducted in two phases. The first phase would involve the analysis and collection of information to determine the specific reasons for the resource problem and what, if any, economically and engineeringly feasible alternatives are available. The results of this study would be documented in a problem appraisal report. The second phase would involve the general design and preparation of a definite project report. The project could involve the creation and restoration of a barrier island complex and construction of partial closing structures between the navigation channel and Polander Lake to reduce flow and the impacts of boat-generated waves on sedimentation patterns in Polander Lake. In addition, modification of flow and sediment input from the major side channels would be considered. A portion of the project may also include the construction of islands in Polander Lake at strategic locations to dampen wind-generated waves.

PROJECT OUTPUTS: Reducing suspended sediment input and resuspension would improve water clarity. This would reestablish the aquatic plant community and, subsequently, improve this 1,000-acre lake for waterfowl staging and improve the fisheries value and also preserve this area for a longer period of time. Specific project benefits would be identified and quantified during the preparation of the definite project report.

FINANCIAL DATA: Phases 1 and 2 of the General Design are estimated to cost \$40,000 each and construction costs are estimated at \$2,000,000. Funding would be 100-percent Federal because the project is located on the Upper Mississippi River Wildlife and Fish Refuge.