UPPER MISSISSIPPI RIVER SYSTEM - POOL 8 ECOSYSTEM PLAN
FACT SHEET
POOL 8 ECOSYSTEM SMALL SCALE DRAWDOWN PROJECT

LOCATION: Project location has not been determined. Initial discussions center around backwater habitat that have variable depth, lack of aquatic vegetation, various soil moisture regimes, and areas that may provide valuable information about the impacts on fish and wildlife due to the drawdown. Pool 8 was the original focus for discussion but any pool in the St. Paul District may be considered for this activity. (A first cut list of potential sites is offered on the back of this fact sheet.)

RESOURCE PROBLEM: Sixty plus years of impounding the Upper Mississippi River has showed up in a deteriorating riverine ecosystem. The natural sediment transport of the river has been slowed and the seasonal water level fluctuation has been minimized by the locks and dams. The loss of these processes has resulted in the backwaters filling in with fine flocculent sediment which in turn reduces the light penetration to the river bottom. The final result is a decrease in the aquatic plants that provide the foundation for river flora and fauna.

PROPOSED PROJECT: The proposed project is to place temporary water control structure at the opening of a backwater complex. This structure will act as a coffer dam and isolate a backwater complex from the river flow. The water within the isolated backwater can then be pumped out to create a drawdown.

PROJECT OUTPUTS: River biologists have speculated about the benefits of drying out backwater areas for consolidation of fine sediments and germination of plant seeds. However, drawdowns have not been conducted on the Upper Mississippi River and many questions remain about the benefits of drawdowns. Temporary water control structures would provide an opportunity to experiment with this tool without impacting huge expanses of the Mississippi River floodplain. River biologists can then monitor the biotic and abiotic changes that occur from drawdown and determine the value of this tool for aquatic restoration projects.

If this project is located in a highly visible area it will also provide an opportunity to educate to the public about the potential benefits of drawdowns.

FINANCIAL DATA: The most costly portion of this project will be the purchase of the temporary water dams. Once they have been purchased we believe the product can be used again and again in different areas on the river. Cost estimates have not been obtained for these devices but should be available in the near future. The Crissafali pump needed for the drawdown should be available through the Corps of Engineers. The labor to complete the project will probably be a cooperative effort between state and federal natural resources agencies. The goal of this project is to create an inexpensive method of testing the drawdown theory. These experiments may lead to doing this activity in this manner in many areas or perhaps trying water level management techniques on a larger scale.