



**US Army Corps
of Engineers**
St. Paul District

Information Paper

Reservoir Operating Plan Evaluation (ROPE), Mississippi Headwaters



View of Pine River Dam

Contact

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Location/Description

The Mississippi River Headwaters reservoirs consist of six primary reservoirs located in central northern Minnesota.

The reservoirs were created by a series of dams and control structures, initially designed to augment the Mississippi River flows for navigation. The dams creating the six reservoirs were built between 1884 and 1912. Since then, the Corps of Engineers has developed campsites around each of the dam sites.

Status

The U.S. Army Corps of Engineers and the U.S. Forest Service are embarking on a jointly sponsored, long-range reservoir operating plan study for the Mississippi River Headwaters reservoirs. The study began in December 2001 and is expected to continue for the next 4 years. The primary purpose of the study is to evaluate alternative plans for each of the existing reservoirs and try to improve systemwide operations of the Mississippi Headwaters reservoirs and to improve stewardship of this important resource.

The emphasis of the study is to meet current and future needs for navigation; tribal trust resources; flood damage reduction; fish and wildlife habitat enhancement, restoration, and preservation; recreation and tourism; water quality and water supply; erosion and sedimentation; hydropower; and sustaining hydrologic function on the lakes and rivers.

Some possible outcomes could be lake level changes, winter drawdown changes, restoration of some sections of river systems, a more natural flow release for downstream river reaches and, in some lake areas, changes in flood control concerns for differing sections of the total system and possibly even the purchase of some land for maximizing efficient operation. The Minnesota Department of Natural Resources, Ottertail Power, and Minnesota Power are collaborating headwaters dam operators included in this planning effort. They are helping to evaluate and recommend a systemwide operational plan for the headwaters reservoirs. The Mississippi Headwaters Board and the Leech Lake Band of Ojibwe also play important roles in this study by helping to coordinate and evaluate alternative plans from the regional perspective.

The study is using two primary models – the Prescriptive Reservoir Model (PRM) and the Structural Thinking Experimental Learning Laboratory with Animation (STELLA) model – to help evaluate and formulate alternative operating plans. Input for these models is being collected, and preliminary runs are expected to take place in February 2004.

Input has been gathered from the various task forces, each created to address specific issues. The task forces are: Flood Control/Erosion Control; Recreation; Tribal Committee; Public Involvement and Education; Cultural and Historic; and Environmental. The input from these task forces, along with data from other sources, will be used in the development of the PRM and STELLA models.

More information can be found at:

http://www.mvp.usace.army.mil/fl_damage_reduct/default.asp?pageid=143