

ADVISORY INFORMATION

Date Prepared: October 15, 2008

Subject: Authorization to Negotiate and Execute an Amendment to the Cooperative Agreement with the U.S. Army Corps of Engineers for Development of the Lower Minnesota River Quality Model

Proposed Action:

That the Metropolitan Council authorizes the Regional Administrator to negotiate and execute an amendment to the cooperative agreement with the U.S. Army Corps of Engineers for the development of the Lower Minnesota River Water Quality Model, increasing the total contract from \$563,000 to \$693,000.

Summary of Committee Discussion / Questions:

The Committee asked questions about the temperature fluctuation of the water downstream of the Xcel Energy Black Dog power plant, and the impact it and dissolved oxygen have on aquatic life. Staff explained that the river temperature below the Xcel Energy outfall increases 5-6 degrees during discharge periods but the temperature changes can increase as much as 12 degrees for short periods of time and short distances. Xcel Energy is examining methods to decrease the thermal impact on the river. With regard to the effect of the higher river temperatures below the Xcel Energy discharges on the organisms living in the river, a study for Xcel Energy showed that at higher river temperatures there was a lower concentration of zooplankton below the outfalls. Smaller numbers of fish are also found near the power plant outfalls than upstream from the outfalls.

Parenthetically, Xcel Energy is required to monitor its discharges and meet discharge permit conditions, including carrying out studies, imposed by the Minnesota Pollution Control Agency.

E Environment Committee

Meeting date: October 14, 2008

For the Metropolitan Council Meeting of October 22, 2008

ADVISORY INFORMATION

Date: Oct. 8, 2008

Subject: Authorization to Negotiate and Execute an Amendment to the Cooperative Agreement with U.S. Army Corps of Engineers for Development of the Lower Minnesota River Quality Model

District(s), Member(s): #3, Mary Hill Smith; #4, Craig Peterson; #5, Polly Bowles; #13, Richard Aguilar; #15, Daniel Wolter

Policy/Legal Reference: Council Policy 3-3 Expenditures

Staff Prepared/Presented: Marcel R. Jouseau 651-602-1145

Division/Department: MCES c/o William G. Moore 651-602-1162

Proposed Action

That the Metropolitan Council authorizes the Regional Administrator to negotiate and execute an amendment to the cooperative agreement with the U.S. Army Corps of Engineers for the development of the Lower Minnesota River Water Quality Model, increasing the total contract from \$563,000 to \$693,000.

Background

The Minnesota Pollution Control Agency (MPCA) lists the Lower Minnesota River as impaired for turbidity among other pollutants. The Council owns and operates two wastewater treatment plants that discharge to that river and may, in the future, need to expand the discharges from these two plants and add a third plant. The Minnesota River is also greatly affected by the withdrawal of water for cooling by the Xcel Energy power plant at Black Dog and the return of this water at a higher temperature.

In February 2005 the Council signed an agreement with the Corps for assistance with the development of a water quality model of the Lower Minnesota River (Jordan to Fort Snelling). The purpose of the model is to assess the effect of the treatment plants and nonpoint source pollution (urban and agricultural runoff) on the river and understand the assimilative capacity of the river. The model then will allow staff to run scenarios with various discharge levels and locations and determine what effect those discharges will have on the river water quality and our ability to meet water quality standards.

The Council also undertook a multitude of studies providing input to the model such as oxygen dynamics in the river, phosphorus release from river bottom sediments, survey of sediment types, effects of groundwater on river flow and intensive 8-week low flow monitoring program. These additional efforts were funded through contributions from the U.S. Geological Survey, MPCA, Metropolitan Airport Commission, the Lower Minnesota River Watershed District, the Corps, and the Council.

Rationale

- Service contract amendments exceeding \$100,000 require Council authorization.
- The complexity of the river system and the withdrawal of water for cooling, the complexity of the model and the critical nature of discharges during period of low flow in the river require a higher degree of model calibration for low flow periods, thus increasing modeling time and costs.

Funding

The Council's share would be funded by the grant monies from the Twin City Water Quality Initiative. The cost increase is to be borne approximately equally by the Corps and the Council, with the Council's share being \$65,000.

Known Support / Opposition

The modeling efforts and related studies are carried out with the "oversight" of an advisory group made up of various state and federal agencies, the Lower Minnesota River Watershed District, Metropolitan Airport Commission, Xcel Energy, representatives of environmental organizations and faculty members of various departments of the University of Minnesota.

There is no known opposition.