

ENV Report 52 – *Environmental Science Panel Report* by Ken Lubinski et.al.

ABSTRACT

This report summarizes the considerations and recommendations of an Environmental Science Panel that was convened in early 2003 to provide guidance to the U.S. Army Corps of Engineers and Upper Mississippi River (UMR) – Illinois Waterway (IWW) stakeholders regarding the restructured UMR – IWW System Navigation Feasibility Study. Between January and April of 2003, the Corps organized four Panel workshops to review and contribute to Navigation Study progress and to begin work on several specific tasks. Those tasks required considerations of not only procedural steps anticipated during the remainder of the Navigation Study, but also issues related to the future establishment of an adaptive management process on the UMR – IWW. At the conclusion of the workshops, the Panel made the following recommendations:

- Planning for a formal Adaptive Management approach on the UMR – IWW should be accelerated and expanded to include multiple organizations and programs.
- Ecosystem goals and objectives developed so far through stakeholder input should be clarified and integrated. A structured process for evaluation of the unavoidable trade-offs between the ecological and economic values of the system should be established.
- Conceptual and simulation modeling should be established as vital steps in the adaptive management process in order to:
 - 1) Record the current state of the system.
 - 2) Create a holistic “virtual” reference system.
 - 3) Predict system-level outcomes of alternative actions and policies.
- Management actions available for implementation on the UMR – IWW should focus on attaining goals and objectives at the system level—with appropriate attention to risk and uncertainty.
- A UMR – IWW report card system and appropriate monitoring system should be developed to evaluate system condition and attainment of objectives.
- Selected future management actions should be considered as experimental manipulations, which will achieve stated objectives, enhance ecosystem health, and provide knowledge in a predictable and structured way.