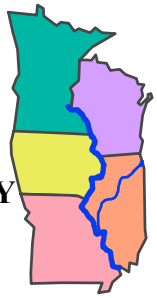

MONTHLY STATUS REPORT
MARCH 2003
UPPER MISSISSIPPI RIVER – ILLINOIS WATERWAY
SYSTEM NAVIGATION STUDY

PURPOSE: These monthly status reports are intended to provide team members, partners, stakeholders, and other interested parties with a brief overview of significant events and activities occurring within the major components of the UMR-IWW System Navigation Feasibility Study. We welcome your comments and input on the status reports to ensure they provide timely and useful information. If you identify monthly events that we have overlooked, please let us know and we will correct it on the website. POCs: Denny Lundberg ph.: (309) 794-5632. or email address Denny.A.Lundberg@usace.army.mil or Scott Whitney ph.: (309) 794-5386. or email address Scott.D.Whitney@usace.army.mil

PROJECT MANAGEMENT (Lundberg and Whitney)

- ***National Research Council (NRC) Review*** – Members of the NRC's Division on Earth and Life Studies Transportation Research Board are scheduled to begin their review of the UMR-IWW System Restructured Navigation Study in late June 2003. The committee will meet approximately six times over the next year and members are likely to attend other study events such as public meetings, in their attempt to fully evaluate the scope, structure and conclusions of this complex study. A Final appraisal summarizing the committee's evaluation will be submitted to USACE in late summer 2004.
- ***Decision Model Documentation*** – The study team is continuing development and refinement of a "decision model" that will be used to formulate and evaluate alternative plans for navigation efficiency and ecological integrity. A status of this activity will be shared at upcoming meetings with the GLC, NECC, and ECC.
- ***Pathways Group*** – Work continues on the development of a Pathways Group that will define "pathways to a solution" or "how do we get this done together" for each of the defined objectives identified during the November workshops. This group will be composed of Federal and State agencies, and non-governmental organizations.

ENVIRONMENTAL (Barr)

Environmental Sustainability Component

- ***Expert Panel Meeting*** (March 19-20) La Crosse, WI. Panel members met for a third time March 19 and 20, 2003 in La Crosse, Wisconsin. The panel conducted a final review of UMR-IWW environmental objectives (established in the November workshops) and finalized a condensed version of the objectives, (a list of 84). They reviewed progress of conceptual modeling, emphasizing lists of ecosystem drivers and stressors that can be manipulated through appropriate management actions to achieve desired ecological endpoints, or outcomes. The group decided to evaluate lists of ecosystem drivers and stressors and the general linkages from stressors to Essential Ecosystem Characteristics (EECs), but they did not recommend completing all the linkages between stressors and the very large array of possible endpoints. Rather, the group recommended developing several specific examples to demonstrate how these tools could be applied in practical planning situations. Dr. Steve Bartell demonstrated how conceptual models could be broken into smaller, more focused process models that can be developed to predict outcomes. Over time, through an adaptive management and assessment process, quantitative

models could be constructed and validated through environmental restoration project response monitoring and focused ecological research. A comprehensive list of approximately 500 management actions was presented. A subgroup of the Panel is associating these management actions with the condensed objectives in a relational database that can be used to sequence implementation of the actions. Project managers presented an overview of the environmental alternative and plan formulation process for the group discuss. The panel recommended that management actions be evaluated independently, and that only viable and robust management actions be included in the various alternative that may arise during plan formulation. To ensure that the reporting process remains a priority, the group reviewed a glossary of terms, a report outline with writing assignments, and a schedule to have a draft report completed in May for Panel review.

- ***Operation and Maintenance Related Alternatives:***
  Fish Passage - Recent accomplishments include preparation of a table of mussel species distribution by navigation pool and a table of aquatic habitat type areas and tributary river miles by navigation pool. A preparation meeting was held in Rock Island, IL on April 2-3 to identify the potential locations for fishways at UMRS navigation dams. Preliminary engineering design, quantities, and cost estimates for fishways will be prepared. A workshop with most members of the Fish Passage Team will be held on May 7 and 8 in Onalaska WI to present and discuss sections of the draft report. A list of team members and more definitive description of this component can be found in the December and January status reports.
  Water Level Management - On March 4 and 5, the Water Level Management (WLM) Workgroup met in Moline, IL to:
  - ✓ Review the identified ecological goals and objectives associated with WLM actions.
  - ✓ Define the range (timing, magnitude, and duration) of WLM actions to be considered in the Restructured Navigation Study.
  - ✓ Review/define linkages between WLM actions and ecological goals and objectives.
  - ✓ Define a methodology to conduct prioritization of WLM actions on the system
  - ✓ Define methods of establishing benefits and costs associated with WLM actions for inclusion in Environmental Alternatives formulated as part of the Restructured Navigation Study
  - ✓ Discuss modeling tools available to predict the biological response(s) to WLM actions
  - ✓ Establish direction for completion of the Workgroup's efforts.

  Team members in each of the Corps Districts are currently working to conduct prioritization of the WLM actions within their individual District. This prioritization, using procedures defined during the workshop, is designed to help identify those combinations of pools and management actions that will provide the greatest ecological benefits minimizing implementation costs and impacts to other users.

Environmental Impact Assessment Studies:

- ***Adult Fish Entrainment*** – The spring sampling period in Pool 26 and lower Illinois River will occur the week of 5 May. The towboat, *Cooperative Venture* and three barges, owned by Archer-Daniels-Midland Corp, will be leased to conduct the 4-5 day study of propeller entrainment. This is the same towboat that has been used on all previous sampling periods. In addition to day trawling, crepuscular and night trawling samples will again be collected during the May sampling period. After completion of the spring sampling, we will have all four seasons of data on fish species composition and densities in the navigation channel, entrainment potential, and mortality estimates. The final report will be completed shortly after the spring sampling period.

- ***Lock 25 Fish Mortality Study -*** The study to evaluate locking mortality at Lock 25 continues with the final spring sampling period beginning on April 14th. To date, locking mortality has been monitored after 60 lockings (June 11; August 10; October 13; December 18). As part of this study, we are also conducting a monthly hydroacoustic study of the lock to determine the number of fish in the lock. We were unable to conduct the hydroacoustic survey during January because of low water and ice. There were very few fish in the lock during the February survey. Dr. Steve Maynord from the Waterways Experiment Station will visit Lock 25 during our April sampling period to calculate the amount of water in the lock that is actually passing through the propellers at various river stages. It appears that locking is responsible for some fish mortality but the numbers, to date, have been small and appear to be limited mainly to gizzard shad and freshwater drum.
- ***Fish Towboat Avoidance Study -*** A hydroacoustic beam is being transmitted across the river channel at River Mile 0.9 on the Illinois River to "watch" the behavior of fish as a towboats approach. This study is being conducted to determine how fish respond to passing tows and to quantify densities of pelagic fish in the main channel during both the day and night on a seasonal basis. The river was sampled for 24 hrs a day for five days during August, November, and January. Very few fish were seen using the main channel during our winter sampling period. Our final spring sampling period will be during 5th - 9th of May.
- ***Aquatic Plants*** - Field and laboratory experiments were conducted last summer to better calibrate and validate the models being used in the Navigation Study to assess the effects of navigation traffic on aquatic plants in the main channel borders. Dr. Elly Best of the Corps ERDC, Kevin Kenow of the USGS UMESC, Jim Fischer of the Wisconsin DNR, and Beth Rycysyn of Winona State University conducted experiments to determine the effects of current velocity and shading by epiphytes on aquatic plants. Dr. Best has updated the aquatic plant model source code. Dr. Yao Yin and others with the USGS UMESC surveyed aquatic plants in Mississippi River Pools 14 through 19 last summer, and have developed a GIS coverage on aquatic plant distribution in the main channel borders of those pools. This new plant distribution information has been incorporated into the risk assessment model of the effects of navigation traffic on aquatic plants. The risk assessment model is being programmed to enable running simulations on standard personal computers. Initial simulations of without-project effects of navigation traffic is being conducted.

ENGINEERING (Hughey)

- ***Economic Modeling Support -*** The costs and performances of navigation efficiency measures have been finalized by the Engineering Work Group for incorporation into the economic modeling effort. Quantification of navigation efficiency measures has required close coordination with the economic modelers to meet model input accuracy and comprehensiveness requirements.
- ***Rewrite of Engineering Appendix -*** The EWG has started to revise the Engineering Appendix to the Restructured Feasibility Study. The majority of the effort will focus on the cost and performance of navigation efficiency measures. The development of the measures (lock conceptual designs and small-scale measure concepts, like moorings) themselves as well as some other sections mostly remain as documented in the July 2000 draft version of the Engineering Appendix and will require minimal rework. The draft Appendix will be edited to include incorporation of comments from the Independent Technical Review that was performed, July 2000, on this document.

ECONOMICS (Manguno)

- ***Independent Technical Review (ITR) of Sparks Scenario Report*** **-** ITR process has been completed. Scenarios have been accepted for use in the study. Documentation is now posted on study web site.
- ***TOW COST Model (TCM) Development*** - With-project model runs were initiated in early March. Evaluation of structural alternatives without mitigation will be completed by mid-April.
- ***Transportation Rate Analysis Review*** - This work, being conducted by TVA, is intended to provide information regarding changes in bulk commodity transportation rates since the original TVA study in 1994. Work was initiated in February.
- **Non-Structural Alternative Assessment** - Volpe Center, US DOT, staff continue to investigate potential measures and appropriate analysis framework to evaluate measures. Volpe will seek input from tow operators, lockmasters, shippers, and transportation system experts by means of focus group meetings planned for mid April.

PUBLIC INVOLVEMENT (Bluhm)

- ***Newsletter*** - A total of 9,800 copies of the newsletter were mailed to distribution list on March 10. Preparation of the second newsletter is scheduled to begin in July with a distribution date of mid to late August.
- ***Public Meeting Format*** - The PI Workgroup has developed a list of options for the locations and structure of the upcoming October 2003 round of public meetings. This preliminary information has been refined by the study team and will be shared and discussed with the NECC/ECC members during their April meeting.

SIGNIFICANT EVENTS

- ***ASCE Presentation*** (27 March) Lake Geneva, WI. Denny Lundberg provided a briefing on the UMR-IWW Navigation Study to a Wisconsin Regional Conference of the American Society of Civil Engineers
- ***Inland Waterways Conference*** (11-13 March) Cincinnati, OH. Denny Lundberg provided a status report on the UMR-IWW Navigation Study at the Inland Waterways Conference. This is a joint industry/Corps/Coast Guard conference that reviews regulations, safety issues, home security issues, and status of projects.

UPCOMING MEETINGS OR SIGNIFICANT EVENTS

- *Regional Federal Task Force Conference Call* (April 15)
- *Federal Principals Task Force Meeting* (April 23) Washington, DC
- *NECC/ECC Meeting* (April 22) Davenport, IA
- *Expert Panel Meeting* (April 22-23) Davenport, IA
- *RRCT Meeting* (May 7) Davenport, IA
- *GLC Meeting* (May 13) St. Louis, MO
- *UMRBA Meeting* (May 14) St. Louis, MO
- *EMPCC Meeting* (May 15) St. Louis, MO
- *Moline Conservation Club Presentation* (May 20) Moline, IL