



US Army Corps of Engineers

Upper Mississippi River - Illinois Waterway System Navigation Study

UMR-IWW System Navigation Study Newsletter

March 1998

Vol. 5 No. 2

Public invited to review study alternatives

Workshops scheduled for July

In 1993, the Corps of Engineers initiated the Navigation Study. The goal: Find a way to reduce the backups of commercial barges on the Upper Mississippi River and Illinois Waterway. And make sure the findings are environmentally sound, acceptable to the public, and feasible both in economic and engineering terms.

The data collection is essentially complete, and the economic and environmental findings are being combined with engineering results, models and other information gathered or developed over the past five years through the contributions of hundreds of experts.

Now it's the public's turn.

At a series of seven public workshops scheduled for late July in St. Louis, Quincy, Peoria, Bettendorf, Des Moines, La Crosse, and St. Paul, the general public will be asked to comment on several tentative plans for reducing navigation delays and to see if any one plan stands

clearly above the rest. Those plans will include the *National Economic Development (NED) plan* - the one bringing the greatest net economic benefit consistent with protecting the environment - as well

as alternatives based upon suggestions from the

Governors' Liaison

Committee, state representatives, agencies, the public, or members of the study team.

Also included will be the possi-

bility of making no

changes to the current lock and dam system.



The public's views and related information will help determine which - if any - of the tentative plans will move forward in the process that is scheduled to result in a final recommendation to the Corps of Engineers' Washington D.C. office in December 1999. The public will have another significant chance to participate in the study at a follow-up series of meetings in the summer of 1999 following the release of the Draft Feasibility Report and Draft Environmental Impact Statement.

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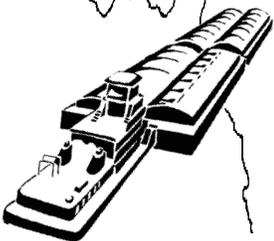
Minnesota

Iowa



Wisconsin
Illinois

Missouri



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"The Corps of Engineers' process is an open process," said Dave Tipple, study manager. "We recognize that the public can bring additional information to the table that we may not have captured in our analysis. Reaching out to the public in the forums will help us have a more thorough and detailed analysis."

People have strong feelings about the Upper Mississippi River, evident both in the passion they've expressed in public forums and in the Congressional support and interest the river has been afforded, he said.

"The river is designated both as a nationally significant commercial navigation system and a nationally significant ecosystem," Tipple said. "This study is being executed with both of those clearly in mind."

Public input making a difference

Many voices, often with competing interests, have been part of the process to date. The study's public outreach began in October and November of 1993 with a series of 14 informational meetings. The main consensus reached at those meetings was the need for additional opportunities for public input. As a result, more than \$1 million was added to the study's public outreach program.

That funding led to an expansion of the newsletter mailing list to its current circulation of 10,000 people, for example, as well as additional public meetings and the design of the Navigation Study web page. Many completed studies, along with recent issues of the newsletter, have been posted on the web site (http://www.mvr.usace.army.mil/pdw/nav_study.htm). Other information will be available on-line in advance of the July workshops.

The next significant opportunity for the public to provide input into the study came in November 1994, when more than 700 people attended a series of eight

public meetings focusing on the problems and opportunities the study could address. Those attending included representatives of environmental advocacy groups, natural resource agencies, recreational and sporting groups, farmers, and barge and terminal operators. Some speakers advocated lock and dam improvements, stressing the national economic importance of low-cost river transportation, while others focused on the need to protect and restore the river's environment.

"Reaching out to the public in the forums will help us have a more thorough and detailed analysis."

- Dave Tipple

As a result of those comments as well as input from the Governors' Liaison Committee and other coordinating committees, the Corps added a \$1.5 million study of the cumulative environmental impacts for the current system and a \$320,000 study of the regional economic benefits of various proposals.

A third major forum took place in November and December of 1995, when an open house was held in each of the five study states to discuss navigation improvement measures. Some 610 people attended, with 95 percent saying they had a chance to speak to a study team member one-on-one. Written comments submitted at the open houses were given to the study's technical managers for use as part of the overall study process.

Information gathered at the July workshops will be recorded and compiled then used by the Corps' study team as it develops the *recommended plan*, scheduled to be discussed by the GLC on October 7, 1998, in the Twin Cities. That plan will be presented to the Corps' Washington headquarters in November or December. A final draft recommended plan, along with the draft Environmental Impact Statement, will be released for public review in June 1999, and a final series of public meetings will follow. All comments will be consolidated and revisions will be made to the plan, if necessary, before it is forwarded to headquarters in December 1999 following the issuance of the Division Commander's Public Notice signifying the end of the feasibility study. ♦

Study Plans at a Glance

National Economic Development (NED) plan: The plan that reasonably maximizes net national economic benefits (total benefits - total costs = net benefits), consistent with protecting the nation's environment. An "initial" NED plan will be presented at the April 23 meeting of the Governors' Liaison Committee (GLC) in St. Louis. This initial plan will be based on existing information run through economic and environmental models and will be revised when complete plan formulation and system-wide environmental information becomes available.

Alternative plans: Sets of possible measures for evaluation during plan formulation in seeking a recommended plan. They will include the NED plan as well as the possibility of making no changes to the existing system. Other alternatives may be developed to address, for example, the possibility that river traffic could be significantly higher or lower than the projections utilized by the study team. These plans will be presented at the July public workshops.

Recommended plan: The plan determined by the Corps of Engineers – through input from the GLC, state and federal agencies and the public – to best meet the study objective, including considerations that it be complete, effective, efficient, and acceptable to state and local entities and the public. In addition to considering system benefits and costs, it will include environmental, socioeconomic and historical property information that cannot be quantified in monetary terms. It is scheduled for discussion with the GLC in October 1998. After further coordination and public review in 1999, the recommended plan, as documented in the Feasibility Report and Environmental Impact Statement, is forwarded by the Division Commander in December 1999 for Washington-level processing and Congressional action.

Small Group Process Chosen for Workshop Format

The Navigation Study team has tentatively selected the last two weeks in July for workshops designed to give everyone who attends a systematic opportunity to react to and express opinions on a series of alternative plans for reducing delays on the Upper Mississippi River and Illinois Waterway.

Seven public workshops are planned in the following cities within the study area: St. Louis, Quincy, Peoria, Bettendorf, Des Moines, La Crosse and St. Paul.

Each workshop will begin with a slide presentation describing the study findings that have led to the identified alternative plans. After the presentation, the workshop facilitator will field questions from the audience pertaining to the alternatives. Following the question and answer period, the audience will be separated into small groups for further discussion. After the small group discussions, the audience will gather as a whole again, and a facilitator from each of the small groups will present the

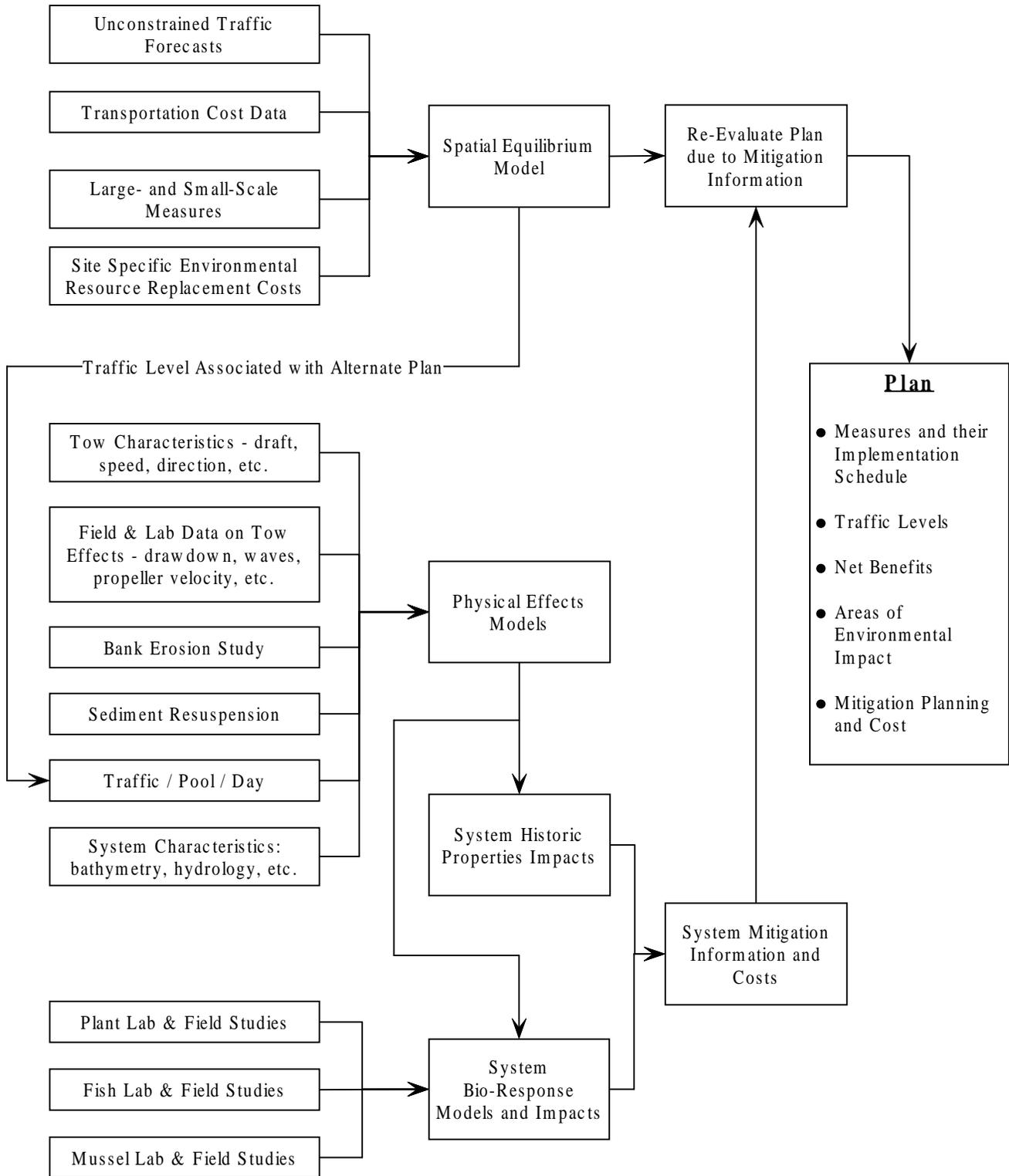
information discussed in his/her group.

"By using an outside facilitation firm to conduct the small group process, we feel we can get an open and objective forum that will help bring out all the issues," said Kevin Blum, technical manager of the Public Involvement work group. "The facilitators will keep the small groups focused and allow everybody an opportunity to be heard."

Further details about the workshop process will be provided in the June 1998 newsletter. A special mailing in late April or early May will announce the final workshop dates, times and locations. The mailing also will include a reservation card for preregistration for the workshops. You will be asked to return the reservation card in advance to help the Corps ensure that sufficient facilities and staff are available to best allow all public input to be shared and recorded. All public comments will be consolidated, and a report summarizing the meetings will be available to the public.

Formulation and Evaluation of an Alternative Plan

*Model Integration Process**



* In addition to the information coming out of the modeling process, public input, socioeconomic impacts and environmental effects that can't be quantified in monetary terms will be considered in the development of the recommended plan.

CONNECTING THE PIECES

Economic and environmental models brought together to identify plan

Until now, the Navigation Study has been a series of efforts taking place around the country - from the trawls of fishing boats on the Mississippi to the offices of traffic forecasters in Maryland to the laboratories of researchers in Vicksburg, Mississippi.

Now, thousands of pages of engineering, economic and environmental data are coming together to provide answers many have spent years working toward:

- Is the construction of additional locks on the Upper Mississippi River or Illinois Waterway economically and environmentally justified?
- Are small-scale measures (those not involving new lock construction) sufficient to reduce the current and projected delays to commercial tows at the river's busiest locks?
- Is the most economical solution to do nothing or to provide some combination of improvements?

The first public sharing of the initial answer to those questions is expected at the April 23 meeting of the Governors' Liaison Committee in St. Louis. By that time, the study team will have been able to analyze all available study information through a series of economic and environmental models. This process will identify an initial National Economic Development (NED) Plan, a plan that maximizes economic benefits, taking into account future river traffic demands, environmental consequences of any changes to the lock system, and the cost of potential improvements themselves - all compared to the cost of doing nothing. If improvements are economically feasible, the models also will identify the best time to put them into place.

Study Mission

The Corps of Engineers has been charged with finding a plan that is in the nation's best economic interest, consistent with protecting the Nation's envi-

ronment. The cost of making an improvement at a congested lock, for example, may be less costly to the nation as a whole than paying more to ship grain down a congested river. However, the cost of protecting the environment - of avoiding, minimizing or mitigating the environmental consequences - also is considered as part of the evaluation.

The accompanying chart describes in general how the models work together to formulate and evaluate an alternative plan. The actual plan recommended by the study, however, also will factor in intangibles that include public acceptability and environmental impacts that can't be quantified into dollars such as the socioeconomic effects of relocating homes or potential harm to endangered species.

How the Models Work

Formulation of alternative plans is being done through a number of models that take into account many variables. In an attempt to more accurately determine system impacts, this ambitious study is using state-of-the-art tools, including a geographic information system and physical and numerical models specifically designed for the Navigation Study.

"The methods being developed to integrate the effects of barge traffic on the environment are new and innovative," said Ken Barr, technical manager of the environmental work group. "Many are pushing the envelope on technology."

The process starts with the Spatial Equilibrium Model. Inputs into this model include the combination of factors outlined in the accompanying chart. One key piece of information is the "unconstrained traffic forecasts," which have shown a projected 63 percent increase in navigation traffic on the Upper Mississippi River between now and the year 2050. Projections show about a 2 percent annual increase for the remainder of the 1990s, tapering off to about 1 percent a year from 2005 to 2050. The traffic numbers provide the demand element, important in determining the need for and timing of any improvements.

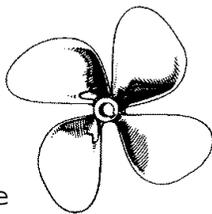
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Also factored into this economic model is engineering data on the cost and potential time savings of various improvement measures, the site-specific cost of replacing habitats lost or damaged by a given improvement, and the comparative cost of shipping the goods by alternate modes of transportation, like rail.

Using what is called an "iterative" process, team members start by systematically applying the potential improvement measures at the most severely congested sites. Once benefits are maximized at the first site, the next critical congestion point is identified and measures are applied. Experts move the alternative plan development through the system to the point where further measures are no longer justified. In addition to determining the NED, evaluation of separate packages of only small-scale (no lock construction) and only large-scale (new lock construction) measures are planned for comparison.

Environmental Models

The plan selected through the economic model will have a certain traffic level associated with it. Reducing congestion by speeding up the lockage process would allow more goods to move on the rivers and result in more trips by commercial tows through the locks and pools. Those traffic levels, examined in five-year increments for the first 10 years and 10-year increments for the remainder of the study period, are used as inputs into the "Physical Effects" environmental models. These models will determine how much additional sediment would be stirred up, for example, by the additional tows, as well as how much water would be pulled through propellers and with how much force.



The results of the physical effects model are used in the Biological Response Models to determine the resulting impact on plants, fish and mussels. This is where the results of many separate laboratory studies and field investigations that looked at the impacts of force or sediment on river life are applied to the process. For example, the plant biological response modeling effort will identify how many acres of river habitat

would be made unsuitable for plant life due to such physical effects as sediment re-suspension and wave-induced breakage or uprooting. The Bio-

logical Response Models also will indicate how many adult fish or mussel beds would be affected if a change in traffic were to occur on the navigation system due to the alternative plan being considered.



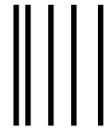
Once the environmental and historic properties impacts of a plan are documented, the cost of the efforts needed to avoid, minimize or mitigate those impacts is identified. The mitigation impacts then are included with the initial costs and benefits for further evaluation. If the alternative plan has considerable mitigation costs, a reevaluation of the plan may be necessary. The goal of the reevaluation would be to reduce impacts and thereby lower mitigation costs in an effort to maximize net economic benefits to the nation while protecting its environment.

The models and analysis will provide the study team with a set of alternative plans, each including a given set of measures (improvements), an implementation schedule, resulting traffic levels, net benefits, areas of environmental impact and mitigation considerations and cost. A comparison of the various alternatives will lead to the NED plan. The NED and alternative plans will be presented, evaluated and compared at the public workshops and at meetings with the GLC and other state and federal agencies. The Corps will select a recommended plan using the public and agency input as well as all available economic, engineering, and environmental information. ♦

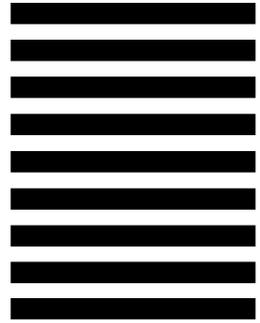
Coming in our June issue

- Details of an initial NED plan
- Final information about the July public workshops
- Directions to workshop locations, including area maps

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US Army Corps
of Engineers

March 1998

UPPER MISSISSIPPI RIVER - ILLINOIS WATERWAY SYSTEM NAVIGATION STUDY
COMMENT SHEET

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| <input type="checkbox"/> Other Business/Industry | <input type="checkbox"/> Federal Government (All Other) | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Environmental Group | <input type="checkbox"/> State Government | <input type="checkbox"/> No Particular Affiliations; |
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Privacy Act Statement:

In accordance with the Privacy Act of 1974 (Authority: Chapter 5, ER 1105-2-100), routine uses of the information obtained from this form include compiling official mailing lists for future informational publications and recording additional views and public participation in studies.

AVAILABLE NAVIGATION STUDY DOCUMENTS

Following is a list of documents that have been prepared as part of the Navigation Study. The documents marked with a star also are available via the Internet at: http://www.mvr.usace.army.mil/pdw/nav_study.htm.

- | | |
|--|---------|
| <input type="checkbox"/> Content Analysis Report from the November 1994 Public Meetings | \$12.00 |
| <input type="checkbox"/> Responses to Issues Raised at the Public and NEPA Scoping Meetings of November 1994* | \$12.00 |
| <input type="checkbox"/> General Assessment of Small Scale Measures (June 1995) | \$13.00 |
| <input type="checkbox"/> Open House Meetings Held November and December 1995 | \$12.00 |
| <input type="checkbox"/> Large Scale Measures for Reducing Traffic Congestion: Conceptual Lock Designs (July 1996) | \$20.00 |
| <input type="checkbox"/> Project Study Plan for the UMR-IWW Navigation Study (June 1997) | \$7.50 |
| <input type="checkbox"/> Transportation Rate Analysis: UMR Navigation Feasibility Study, Vol. 1 (July 1996)* | \$12.00 |

Waterway Traffic Forecasts for the Upper Mississippi River Basin

- | | |
|--|---------|
| <input type="checkbox"/> Volume 1: Summary (April 7, 1997)* | \$6.00 |
| <input type="checkbox"/> Volume II: Grain (April 18, 1997) | \$20.00 |
| <input type="checkbox"/> Volumes I and II | \$22.00 |
| <input type="checkbox"/> Volume III: Agricultural Chemicals (April 4, 1997) | \$5.00 |
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| <input type="checkbox"/> Volume V: Coal (April 4, 1997) | \$5.00 |
| <input type="checkbox"/> Volume VI: Industrial Chemicals (April 4, 1997) | \$5.00 |
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| <input type="checkbox"/> Volume IX: Steel and Steel Sector Raw Materials (April 4, 1997) | \$5.00 |
| <input type="checkbox"/> Volumes I-IX | \$35.00 |

If you are interested in purchasing one or more of the documents listed above, please indicate so by checking the appropriate box(es) and sending this page (or a copy of this page) and a check for the total amount payable to FAO, USAED, Rock Island to the following address:

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*Visit the Navigation Study web site to view other documents and additional study information.

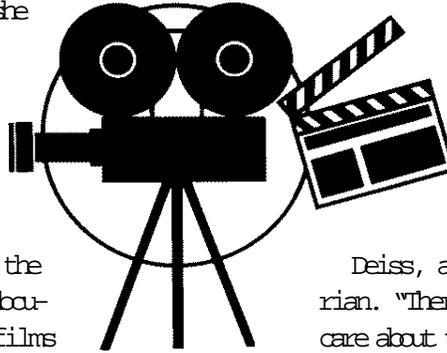
HISTORIC FILMS ATTRACT ATTENTION

When a Dubuque woman heard the Corps of Engineers had 197 reels of film footage documenting the original construction of the locks and dams, she wanted to see them for herself.

Her husband had worked on the project in the 1930s, and she felt sure she would find him. And she did.

The woman was one of several people who responded with interest to a story in the December issue of the Navigation Study newsletter which featured the restoration of the silent films, originally designed to document construction techniques. The films have been a valuable tool in the Navigation Study because they provide insight into original engineering methods as well as how the area surrounding the locks and dams initially was affected by construction.

Since the article was published, the films have



been featured in a 15-minute public television special and in an article in the *Quad City Times*. Several people with an interest in river history also have contacted the Corps, wondering how they can view the films.

"A lot of people have been calling, saying 'I've never had an interest in history, but in reading the papers and the newsletter, I've gotten interested,'" said Ron

Deiss, a Corps archeologist and historian. "There's been a swell of people who care about the river and have an interest in its history."

While Deiss can't grant a private showing to everyone who'd like to view the tapes, the Corps is considering the possibility of creating a documentary of the river's history that would use the silent film footage. ♦

Committees key in coordinating regional river interests

The effort to integrate the concerns of all people with a stake in the future of the Upper Mississippi River and Illinois Waterway goes beyond the numerous public outreach efforts built into the Navigation Study. Also key in the coordination effort is the input, information exchange and discussion role played by five coordinating committees. The committees, primarily made up of representatives of the five study states of Illinois, Iowa, Minnesota, Missouri and Wisconsin as well as federal agencies, have been meeting regularly in meetings open to the general public to discuss and provide input on study methods and progress. Following is a brief description of each committee and its role:

The **Governors' Liaison Committee** (GLC) consists of designated representatives of the governors of the five states. This key committee was formed to build

consensus among the study area states and to provide the Corps with the position of the governor of each state on Navigation Study matters. It will play a key role in providing input on alternative plans during the spring and summer months.

The **Navigation Environmental Coordination Committee** (NECC) also plays a major role in the study as it brings together representatives of the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, U.S. Geological Survey, and study area state resource agencies to ensure study compliance with the National Environmental Policy Act (NEPA), Fish and Wildlife Coordination Act, Endangered Species Act, and other environmental statutes requiring interagency coordination. Members also provide comments on environmental studies conducted as part of the overall study.

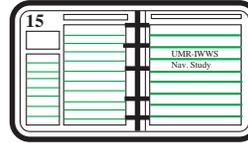
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The **Economics Coordinating Committee** (ECC) provides the Study Team with the state perspectives on important economic matters related to the Navigation Study. In addition, this committee includes representatives from the U.S. Department of Agriculture, Maritime Administration and Midwest Area River Coalition 2000.

The **Engineering Coordinating Committee** (ENCC) is made up of representatives of the five study states as well as other parties interested in the engineering and design aspects of the Navigation Study and focuses on technical engineering aspects of the study.

The **Public Involvement Coordinating Committee** (PICC) is comprised of natural resource and policy experts from the five study states. It works to create a shared set of goals and expectations regarding public involvement matters among all committee participants, the navigation industry and the public. ♦



Upcoming Meetings

Economics Coordinating Committee

May 11, 1998 1:00 p.m. - 5:00 p.m.
 May 12, 1998 8:00 a.m. - Noon
 Radisson Hotel St. Paul, St. Paul, Mn.

Governors' Liaison Committee*

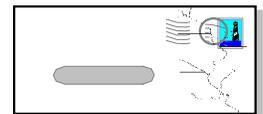
April 23, 1998 9:00 a.m. - 5:00 p.m.
 Henry VIII Hotel and Conference Center, St. Louis, Mo.
 May 12, 1998 1:00 p.m. - 6:30 p.m.
 Radisson Hotel St. Paul, St. Paul, Mn.
 June 24, 1998 10:00 a.m. - 6:00 p.m.
 June 25, 1998 8:00 a.m. - 3:00 p.m.
 Henry VIII Hotel and Conference Center, St. Louis, Mo.

Navigation Environmental Coordination Committee

June 17, 1998 8:00 a.m. - 4:00 p.m.
 June 18, 1998 8:00 a.m. - Noon
 Plaza One Hotel, Rock Island, Il.

* GLC meeting times may vary slightly; actual times will be finalized closer to meeting dates

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If we do not receive a response, we will continue sending you a newsletter at the current address on our database. ♦

In Brief

On February 26, navigation industry representatives met with Corps study team members to provide and discuss consolidated navigation industry comments based on their review of the proposed small-scale improvement measures. A major focus of the comments was safety concerns with the regular use of helper boats, switchboats and industry self-help. The study team now is working to address the comments through consideration of increasing towboat horsepower and modifying the operations associated with some measures.

Despite a mild Midwestern winter, the first passage of tows through the river's upper locks this year was about average, partly because some locks were closed for repairs. Though Lock 11 was clear of ice on February 18, the first tow of the spring passed through the lock just north of Dubuque, Iowa, on March 4. That compares to the earliest recorded lockage there of February 7 in 1964 and the latest post-winter passage of April 2 in 1978. The Rock Island District tracks air and water temperature, ice conditions and traffic at locks 11, 13, 16, 19 and 22. The only ice remaining on the Upper Mississippi River system in early March was in Lake Pepin. ♦

Questions?

For general study information, call Mark Gmitro project manager, at 309/794-5279 or write to the address below, ATTN: CEMVR-PP-M or visit our home page at: http://www.mvr.usace.army.mil/pdw/nav_study.htm

For information on Public Involvement meetings, call the toll-free telephone number, 800/USA(872)-8822. Meeting announcements will be in the Public Involvement menu. Or call Kevin Blum, public involvement coordinator, at 612/290-5247, or write to the address below, ATTN: CEMVR-PD-C.

To be added to the mailing list for future newsletters, study updates, and meeting announcements, write to the address below, ATTN: CEMVR-PD-C, or call the toll-free telephone number and leave your information in the Public Involvement menu.

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