Frequently Asked Questions: National Research Council Report
Restructured Upper Mississippi River - Illinois Waterway Feasibility Report

Q: The National Research Council (NRC) found fault with the Corps river traffic scenarios, saying that economic justification for expanding locks on the rivers has not yet been demonstrated. Do this comment pose a serious challenge to the outcome of the study?

A: Not really. While we appreciate the viewpoint of the NRC, we note that the NRC also concluded the review by saying that the recommended plan, if carried out as described, provides for a program of incremental implementation and, as such, offers "an excellent framework for comprehensive adaptive management."

Q. The NRC report indicates, "the study contains flaws serious enough to limit its credibility and value within the policymaking process". What is the Corps response to this finding?

A. The NRC believes that the future traffic scenarios used in the report inadequately treat non-grain shipment because a single forecast was used and that the grain traffic scenarios appear to be biased in the direction of future growth. The NRC further believes that the Tow Cost Model (TCM) produces an approximate Upper Bound of benefits but no credible lower bound of benefits is presented in the study. The NRC concludes that based on these shortcomings economic justification of proposed 1200- foot locks has not been established. The Corps does not agree with this conclusion. We believe that the scenarios represent a plausible range of future traffic conditions. The scenarios were prepared by a well-respected company with extensive experience in economic projections in the agricultural products sector. The scenarios indicating growth in grain traffic were endorsed by the U.S. Department of Agriculture as being consistent with their forecasts. The non-grain traffic projections are based on a single traffic projection but the Corps believes this is a reasonable approach given the lower degree of uncertainty associated with commodities such as coal, petroleum products, and construction materials (sand and gravel). We recognize that there are limitations of both the TCM and ESSENCE models and have given high priority to research efforts aimed at improving our economic models. However, we believe that the existing models, coupled with the traffic scenarios, provide an adequate basis to bracket the plausible range of economic outcomes of navigation improvements. The analysis presented in the MVD Division Commander's feasibility report indicates that 1200- foot locks at the most heavily used locks in the system are economically justified under a range of scenarios and economic model conditions and provide the basis for going forward with adaptive implementation. The Corps recognizes there is a high degree of uncertainty in projecting traffic conditions over a 50-year period but we also recognize that there is a long implementation period for 1200-foot locks. This long implementation period allows us to test the effectiveness of small-scale and

nonstructural measures, continue to monitor traffic conditions and domestic and world market conditions, and re-evaluate the construction of 1200 foot locks based on any new approved and tested economic models. The results of this monitoring and evaluation would be used to adjust the plan.

Q: The NRC finds fault with the Corps traffic scenarios, especially noting that non-grain movements constitute 50 percent of the traffic and that the future is biased toward increases in grain exports. Is this appropriate?

A: Again, we appreciate the viewpoint of the NRC, yet we received expert opinion from USDA and our consultants that show projections for exports being consistent with the scenarios used in the feasibility study. We believe the information and macro-economic analysis presented to the NRC supports the plausibility of growth in grain exports, particularly corn, and attendant growth in river traffic on the Upper Miss. We will continue to monitor traffic patterns and delays as well as the domestic and global grain and non-grain market conditions and, in coordination with the Administration and the Congress, adapt the navigation plan in response to these future conditions.

Q: The NRC is critical of the effort given to analyzing nonstructural measures for managing waterway traffic and declares that it is not clear how you can estimate the benefits of lock extensions without doing so. What is your response?

A: The Corps hired the Volpe Center to evaluate a number of nonstructural measures to evaluate a number of nonstructural measures, and a draft report was published in September 2003. Our recommended plan includes the immediate implementation of non-structural and small-scale structural measures, together with monitoring and reporting of traffic and economic conditions. Other measures such as congestion fees are not practical, have adverse regional impacts, are opposed by transportation and agricultural interests and/or are prohibited by current law. We agree with the NRC that an appointment scheduling and tow sequencing system has promise and we are committed to develop such a system.

Q: The NRC, as it did previously, commented that your current models, the Tow Cost Model and the ESSENCE Model, were not particularly useful. The NRC singled out the ESSENCE model, saying that any set of benefit calculations from this model were suspect. Why, given this criticism, did your continue their use?

A: We recognize the limitations of both models, yet these are the only models available for our use. In restructuring the study, we concluded, together with the Federal Principals group, that it would be appropriate to put the development of a spatial model in and research and development setting. We have done so. We also believe that the use of the two economic models and five traffic scenarios is sufficient for capturing the range of plausible economic outcomes. Further, we believe that if the results are used in a process that identifies solutions that are

justified over a range of economic conditions and in a process of adaptive implementation that allows for review before making major investments, we can move forward. That is the course we are recommending. I might also note that the NRC commended us for our research program aimed at developing a new suite of economic models.

Q. Much has been made of the age of the UMR-IWW system but the NRC points out that the system will be continue to be rehabilitated and continue to function with or without 1200-foot locks. Can you comment?

A. We generally agree with the NRC assessment. The existing system is aging and experiencing an increasing rate of scheduled and unscheduled outages and increasing operation and maintenance requirements. However, the existing system will be rehabilitated and continue to function without major improvements. The addition of new 1200-foot locks or the extension of the existing of the 600-foot locks to 1200-feet would have some benefits to system reliability by providing a new more reliable lock or rehabilitating a 600-foot lock in the process of extending it. However, these benefits alone would not justify 1200-foot locks.

Q: The first suggestion of the NRC is that the Corps should seek a broader planning and operation authority for the Upper Miss to permit the Corps to address flood management, navigation and ecosystem restoration issues concurrently. This theme is repeated throughout the report. What are your thoughts?

A: This is a good recommendation; however, it is imperative that we complete the current feasibility study. We did expand its scope to combine ecological restoration with commercial navigation and came to the conclusion that a phased implementation, together with an adaptive management approach, was appropriate. Our thinking in that regard is similar to that of the NRC reviewers. Second, the NRC appears to be advocating a watershed approach to planning efforts. We agree, and you will find a detailed elaboration of that approach in recently published NRC studies about the Corps' planning process. Third, let us return to our first point: it remains imperative that we honor our commitments to the Congress and conclude this study and submit it to the Administration and Congress for their consideration. We are just not in a position to revisit the basis for the study. There is an ongoing Comprehensive Study for the Upper Mississippi River Basin, which is examining the feasibility of comprehensive flood protection. This flood damage reduction study is being coordinated with the navigation study.

Q: The NRC states that the ecosystem restoration and commercial navigation tracks of the study have proceeded on separate tracks and suggests that the ecological portion of the study contains, among other things, a limited degree of integrating restoration alternatives with other system uses. Do you believe, as the NRC seems to, that this limits the study's usefulness as a decision-making

guide?

A: Not at all. The NRC also comments that the effort of "restoring" ecological structure, functions and habitat in an ecosystem as large as the Upper Miss is unprecedented and there is no blueprint that can be used to guide restoration efforts there. We expect to collaborate with our federal, state and other partners in adopting an adaptive management approach, and we will gain from scientific knowledge and theory as well as monitoring our progress in the Upper Miss. We already have a solid background for doing so with the lessons learned in the Environmental Management Plan for the Upper Miss. We believe that we can integrate navigation and ecosystem restoration in a compatible way that maintains an environmentally sustainable navigation system.

Q: What happens next?

A: The Chief of Engineers will carefully consider the NRC review along with the results of states and Federal agencies review of the Mississippi Valley Division (MVD) Commander's final report and the review of the final Environmental Impact Statement in preparing the Chief of Engineers report. We expect to complete that report and forward it to the Assistant Secretary of the Army (Civil Works) for his review and submission to Congress later this year. We welcome the NRC comments. We believe our study team, together with our federal, state and local partners, has done a great job of preparing the MVD Commander's report, and the NRC contribution will help make the final product better.