DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

02 AUG 2001

CECW-PM

MEMORANDUM FOR Commander, Mississippi Valley Division

SUBJECT: Upper Mississippi River and Illinois Waterway System Navigation Study - Project Guidance Memorandum

1. References:

a. Memorandum, CECW-PE, 16 March 2000, subject: Upper Mississippi River Navigation System Study.

b. Memorandum, CECW-PE, 12 May 2000, subject: Upper Mississippi River Navigation System Study.

c. Report, National Research Council (NRC), released 28 February 2001, title: Inland Navigation System Planning, The Upper Mississippi River – Illinois Waterway.

d. Memorandum, Acting Secretary of the Army, 02 March 2001, subject: Program and Policy Reviews of Corps of Engineers Civil Works Studies and Related Processes – Action Memorandum (see Encl 1).

e. Memorandum, CECW-PM, 25 June 2001, subject: Completion of the Upper Mississippi River and Illinois Waterway System Navigation Study (see Encl 2).

2. Purpose. To provide the Mississippi Valley Division (CEMVD) guidance on the resumption of the subject navigation study. The Chief of Engineers has approved restart of the subject study, generally in accordance with the agreement contained in the enclosed Principals Group's Concept Paper and in accordance with guidance contained in this memorandum. The Principals Group consists of Washington-level representatives from the Department of Agriculture (USDA), Environmental Protection Agency (EPA), Fish and Wildlife Service (FWS), Maritime Administration (MARAD), and HQUSACE, formed to consider the NRC recommendations and advise the Chief of Engineers on potential study changes.

3. Objective. The upper Mississippi River system is nationally recognized as a significant navigation and environmental resource. The navigation infrastructure on the Mississippi River and Illinois Waterway System is aged and inefficient. As a result, significant costs to the national economy are occurring due to barge congestion at the locks. The ecosystem on both waterways has been in decline and there is considerable concern that the growing barge traffic may accelerate the decline, perhaps precipitously. In recognition of these conditions and concerns, the refocused study will seek to improve the effectiveness of the navigation system in a manner that will achieve environmental sustainability for the navigation system and the resources that it directly impacts. Further, the study will be comprehensive and holistic as it considers the multiple purpose uses of this system and seeks a robust strategy that will work well under a variety of future scenarios.

4. Products. The subject study will be restructured to include the following:

a. The first product will define navigation system and environmental sustainability goals, and present a conceptual plan for modifying the existing navigation system to relieve lock congestion and achieve environmental sustainability. The first product will address additional authorization that may be needed to investigate navigation, ecosystem, and related needs in a comprehensive, holistic manner. It will also address any procedural, sponsorship, and cost-sharing issues that might arise related to the study and implementation of measures that can not be appropriately allocated to inland navigation. The first product may also present recommendations for measures that would help meet these needs on an interim basis while permanent solutions are evaluated.

b. The second product will provide a detailed, comprehensive implementation plan to serve as a framework for modifying the Federal navigation system to relieve lock congestion and achieve environmental sustainability. This final report will consider all alternatives. For recommended measures that should not be implemented immediately, the plan will present thresholds and the process for re-evaluating such measures in the future. The product will display an assessment of the alternatives under various future scenarios in order to facilitate informed decision making.

5. Schedule. The first product cited above will be completed as an interim report by July 2002. Efforts to develop the second product may be initiated concurrently. Within 30 days, the Division Commander shall provide a proposed schedule for the comprehensive plan for HQUSACE approval.

6. Management. The study will continue to be managed by the Division Commander.

7. Collaborative Process. A new Project Management Plan (PMP) will be prepared in collaboration with the Interagency Regional Work Group and other interested agencies and groups to reflect the content of this memorandum. Further coordination and resolution of the regional issue papers developed by the Interagency Regional Work Group in support of the Principals Group this past spring is highly recommended to help achieve a collaborative PMP. Any future changes to the PMP will also be made through similar collaboration. CECW-P will continue to facilitate Washington-level collaboration with the Principals Group, particularly on issues that can not be resolved at the regional level. The study will continue to be a collaborative effort through its completion.

8. Scope of Study Adjustments. The PMP will reflect the prior guidance presented in references 1.a and 1.b, and incorporate the recommendations of the NRC and Principals Group in references 1.c and 1.e to the extent possible, and except where superseded by the guidance presented herein. Document the actions to be taken to address each recommendation incorporated and the rationale and alternative actions to be taken for any recommendations not incorporated. Other issues identified in the Principals Group meetings should also be addressed in the PMP. These include international competitiveness and the application of risk and uncertainty techniques to navigation analyses.

9. Navigation Improvements.

a. In accordance with Paragraph 2.6.3(a) of the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (P&G), the without-project condition will include reasonably expected nonstructural measures.

b. A variety of potential alternatives will be evaluated to relieve lock congestion and otherwise improve the effectiveness of the navigation system, including modifications of the existing projects and their operation and maintenance procedures. The study should consider alternatives that can be implemented within existing authorities as well as those that will require additional authority from Congress. Small measures, such as mooring cells, and nonstructural measures, such as congestion management, that could potentially provide some level of immediate relief to the lock congestion should be given full and serious consideration from the outset of this study. Any measures that warrant immediate implementation may be recommended in the first product.

c. Congestion management alternatives will be addressed fully in the interim and final products.

d. Alternatives that may be implemented by others, such as vessel operation changes, should be addressed in the study.

e. Any recommended alternatives that would shift barge traffic to alternative modes, such as truck or railroad, must include thorough evaluations of the capacity, environmental, and social impacts on the alternative modes, including their related resources and any necessary mitigation.

10. Environmental and Ecosystem Considerations.

a. Alternatives identified through regional or other collaboration that would modify the navigation system to restore or improve the environment will be evaluated in the study. All recommended plans will be formulated to improve the ecosystem, to the extent reasonable opportunities are present. The study may identify additional opportunities to restore the ecosystem and we may recommend that any such opportunities be planned and implemented independently under the normal budget and study processes. The report should address the advisability of modifying the Upper Mississippi River Environmental Management Program, authorized by Section 1103(e) of the Water Resources Development Act of 1986, as amended, to plan and implement ecosystem restoration measures that might be identified in this study.

b. All recommended plans, regardless of outputs, will seek to achieve environmental sustainability. The historical and projected conditions of the system's ecology, including the cumulative effects from all sources, will be evaluated to identify trends in the state and health of the ecosystem, and to identify opportunities to improve the ecosystem.

c. Modifications to operations and maintenance procedures to improve the environment will be identified and considered.

11. Floodplain Management Considerations. Given the complex relationships between floodplains, the navigation system, and their shared ecosystem, the study will consider the impacts of improvements on floodplain management considerations. The study may identify opportunities to improve floodplain conditions; i.e., reduce flood damages and restore the ecosystem; and recommend that planning and implementing related projects be pursued independently from the navigation study under the normal budget and study processes.

12. Economic Analysis Considerations.

a. The presentation of economic benefits and costs for plan selection will be accompanied by displays of the beneficial and adverse impacts on the ecosystem, and a display summarizing the resulting environmental sustainability of each plan.

b. A specific set of projections of future commodity and barge traffic levels for fifty years is unlikely to be acceptable under the highly complex conditions affecting the Mississippi and Illinois Waterway System. In lieu of such forecasts, various scenarios for future conditions will be developed collaboratively with the Regional Working Group and the Principals Group. Each scenario will include an assessment of the likelihood that the scenario could occur and the likely time necessary for the scenario to evolve, if it were to occur. The final report will present results of the evaluations using these scenarios in a manner that will allow the decision-makers to consider the relative impacts and risks of selecting a particular plan for implementation.

c. Further development of the ESSENCE and spatial equilibrium models should continue as an independent effort until the models have been appropriately corrected, independently validated, and accepted as defensible tools. That effort should be addressed in the report. Until these models are accepted, economic models that have been previously used and accepted should be adapted and applied in this study.

d. The application and results of the economic analyses will be compatible with the application and results of environmental/ecosystem evaluation procedures.

13. Review and Approval.

a. An in-progress review (IPR) will be scheduled with CECW prior to completion of the PMP. The read-ahead material for HQUSACE will include a memorandum that lists the various instructions and recommendations contained in each of the references, except reference 1.d, and identifies the corresponding implementing task(s) in the PMP. For any instructions and recommendations that are not incorporated into the PMP, the document will present the supporting rationale.

b. An AFB will be scheduled for the interim product.

FOR THE COMMANDER

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ROBERT H. GRIFFIN
Brigadier General, USA
Director of Civil Works

DEPARTMENT OF THE ARMY
WASHINGTON DC 20310

Mr. Johnson
CECW-PM
PM RL 3/3

March 2, 2001

MEMORANDUM FOR THE ACTING ASSISTANT SECRETARY OF THE ARMY
(FINANCIAL MANAGEMENT AND
COMPTROLLER)
ACTING GENERAL COUNSEL
CHIEF OF ENGINEERS
THE AUDITOR GENERAL
OFFICE OF THE DEPUTY ASSISTANT
SECRETARY OF THE ARMY
(MANAGEMENT AND BUDGET)
(CIVIL WORKS)

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SUBJECT: Program and Policy Reviews of Corps of Engineers Civil Works Studies and Related Processes – ACTION MEMORANDUM

Throughout my tenure as the Under Secretary and Acting Secretary of the Army, I have remained impressed with the professionalism and dedication of the employees and leaders of the U.S. Army Corps of Engineers. For 225 years, the Corps has honorably served the Army and our Nation in peace and in war. There is little doubt that the Corps will continue to excel as the preeminent public engineering organization well into the 21st Century.

An important part of the Corps' ability to maintain its well-earned bond of trust with the American people is to periodically review its policies, processes, and procedures to ensure that they properly and fully consider modern needs and concerns. Potential projects such as improving the Upper Mississippi River navigation system have highly complex and interdependent economic, social, and environmental effects that are far-reaching and difficult to forecast and assess in quantitative terms. The Corps will be continually challenged to develop, improve, and employ state-of-the-art methods and techniques to analyze these complex and sensitive civil works projects. This will require increasing levels of collaboration with experts from other parts of the Army, other Federal agencies, academia, and other interested parties.

As part of the on-going process to improve the Corps' project planning process, the former Secretary of the Army directed specific reviews and reports by selected Army offices (see memoranda dated November 29, 2000 and December 21, 2000) of the Army Inspector General Report related to the Corps' Upper Mississippi River and Illinois Waterway navigation study and the findings and recommendations of the National Research Council report, *Inland Navigation*

System Planning: The Upper Mississippi River-Illinois Waterway. This memorandum addresses how the Army will proceed with these matters.

With the release of the National Research Council report later than anticipated and with the change in Administrations, I have determined that it is necessary to adjust the Army's evaluation timelines to ensure that relevant analyses can be fully considered by the new Army leadership. There are two separate but related actions that need to take place as we move forward.

First, I have approved a prior request by the Chief of Engineers to temporarily pause the feasibility study for the Upper Mississippi River-Illinois Waterway in order to invite a wide array of Federal agencies that have jurisdictional interest in this matter to participate more actively in the study. The Corps should consult with these agencies over proposed adjustments to the feasibility study in the March/April timeframe with the goal of implementing any necessary adjustments and restarting the study in a timely manner. I support the Chief of Engineers assessment that by leveraging the experience and perspectives of these agencies on matters within their area of expertise, the Army can complete the study in a more integrated and collaborative manner. In addition, the pause will be used to evaluate and incorporate the findings and suggestions from the National Research Council report into plans for completing the Upper Mississippi River-Illinois Waterway feasibility study. The Chief of Engineers is to report, through the Assistant Secretary of the Army (Civil Works), to the Secretary of the Army on April 30, 2001, the results of this collaborative process and provide an estimated schedule for completion of the study.

Second, the Chief of Engineers, the Office of the Assistant Secretary of the Army (Financial Management & Comptroller), the Office of General Counsel, and the Army Audit Agency are to continue their reviews directed by the former Secretary of the Army on November 29 and December 21, 2000. These reviews and reports, which are to be provided to the Assistant Secretary of the Army for Civil Works, will assess a broad range of program and policy options to improve the conduct of the Corps of Engineers project planning process. I have withdrawn the previous 60-day requirement for interim reports on these efforts. However, each reviewing office is directed to complete this work promptly with the goal to brief the new Secretary of the Army upon taking office. Final reports will be submitted in accordance with the 180-day suspense originally directed in the memoranda, dated November 29 and December 21, 2000.

The water resources infrastructure provided through the Corps' civil works program has improved the quality of our citizens' lives and provided a foundation for economic growth and development of this country. The actions that I have directed will provide the opportunity to make appropriate assessments of proposals to improve the Upper Mississippi River–Illinois Waterway navigation

study and the Corps' overall planning processes, identify potential adjustments, and implement them as appropriate in consultation with Army leadership, other Federal agencies, and the Congress. This will allow the Corps of Engineers to continue to move forward, maintaining its superb reputation as a quality, responsive, public organization, and continue to provide its important contributions to the Army and the American people.

Gregory R. Dahlberg
Acting Secretary of the Army

cc:
Chief of Staff, Army
The Inspector General

CECW-PM 25 June 2001

SUBJECT: Completion of the Upper Mississippi River and Illinois Waterway System Navigation Study

1. This paper documents the recommendations of Washington-level representatives from the Department of Agriculture, Environmental Protection Agency, Fish and Wildlife Service, Maritime Administration, and Army Corps of Engineers regarding re-scoping of the Upper Mississippi River and Illinois Waterway System Navigation Study to address the recent National Research Council (NRC) review. The NRC identified several key issues, including economic analyses, traffic projections, cumulative impact analysis, and mitigation. The Federal agencies' recommendations to address these findings are presented in the following paragraphs.

2. In light of the Congressional declaration that the upper Mississippi River is both a nationally significant ecosystem and navigation resource, environmental and navigation concerns shall be fully addressed in the study, and all recommended measures should be environmentally sustainable. An evaluation of cumulative environmental effects of navigation, as well as the environmental restoration needs that can be addressed through mitigation of unavoidable effects, should be carried out as an integral part of the study. The cumulative effects analysis should be used as a basis for developing an environmentally sustainable navigation system.

3. Completion of a rigorous, model-based systems analysis is not achievable with the available tools. The study should be recast as a framework analysis that presents a more general analysis of the system and its critical elements, incorporating the suggestions below. The study should examine phased implementation of structural and nonstructural measures in a manner that is responsive to the changing conditions. Evaluations of nonstructural navigation improvements should proceed immediately, inasmuch as nonstructural measures could potentially postpone or eliminate the need for some structural measures. The study should also present findings and recommendations on those measures that warrant consideration for potential immediate implementation. For other measures, the study should define procedures for future phase(s) of analysis and decisions, including suggested thresholds for initiating or terminating the efforts.

4. The ESSENCE model is unlikely to be successfully refined to fully respond to the NRC recommendations within the desired time frame. Similarly, development of an adequate, defensible spatial equilibrium model is unlikely to be achieved in the desired time frame. Efforts to develop a spatial equilibrium model should occur separately from the navigation study and should not be applied to any study until the model has been independently validated and accepted as a reasonable tool.

5. Defensible 50-year forecasts of commodity and barge traffic levels are unlikely to be achieved within a time consistent with Congressional expectations for addressing

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system navigation needs. In lieu of such forecasts, the Corps is encouraged to develop an approach that would utilize scenarios that cover the range of reasonable future barge traffic conditions. These scenarios, including threshold conditions (traffic) and the likelihood of their occurrence, should be defined collaboratively by the Principals Group with appropriate input from the Regional Working Group. Alternative projections within those scenarios should also be developed. The resulting report would present evaluations of the various alternatives within each scenario together with assessments of the likelihood of the scenarios occurring in order to inform decision-makers of the relative advisability of implementing each alternative. This approach should consider the lead-time necessary for reevaluation of trends and alternatives to confirm whether to proceed with project implementation. Under this approach, the Corps would collect and analyze environmental, economic, and barge traffic data on an on-going basis.

6. Alternative operation and maintenance procedures shall be formulated and evaluated to ensure or improve the efficiency of navigation, minimize the adverse effects of the navigation system on the environment, and promote an environmentally sustainable system. Any proposed modifications to the operation and maintenance plan should incorporate compensatory mitigation measures needed to offset unavoidable impacts of these alternatives.

7. A report is proposed to present recommendations to the Congress for consideration in the Water Resources Development Act of 2002. It may constitute an interim report if follow-on reports are deemed necessary. This report may include a proposal for such special additional authorities as are necessary to implement an environmentally sustainable navigation system. The report should address nonstructural measures such as congestion management and/or other measures with sufficient supporting analyses. The report should also describe the anticipated major activities regarding potential project recommendations expected after 2002.

8. A comprehensive mitigation plan should be developed to address the effects of the operation and maintenance of the navigation system on the environment, as identified and quantified in the cumulative effects analysis. That plan should be developed in coordination with the Principals Group with input from the Regional Working Group.

9. Upon resuming the study, the Corps of Engineers will work collaboratively with the Principals Group, the Regional Working Group, interested agencies and other parties to revise the project management plan that will be used to achieve these recommendations. This plan should address such items as products, key actions, roles, coordination, and schedules. The plan should also describe the purpose of each included action.