

Statement of
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Chief of Engineers

Before
The Subcommittee on Transportation and Infrastructure
Committee on Environment and Public Works
United States Senate

On
The Army Corps of Engineers

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Thank you Mr. Chairman, I am Lieutenant General Robert B. Flowers, Commander of the U.S. Army Corps of Engineers and Chief of Engineers. I am pleased to appear before you today to discuss the service of the Army Corps of Engineers to this Nation.

Introduction

The state of the Army Corps of Engineers is sound. We are prepared for the challenge of public service. Since 1775 the Army Corps of Engineers has honorably served the Army and the Nation. During the 20th Century the Army Corps of Engineers experienced both resounding success and dramatic controversy. Today, at the dawn of the 21st Century, we are called to respond to the scrutiny of the public we serve. I welcome this challenge.

The Civil Works Program

The Army Corps of Engineers traces its origins to the construction of fortifications at Bunker Hill in 1775. For more than 225 years, the Corps has responded to the needs of the Army and the Nation.

Throughout this period, the mission of the Corps has evolved from "Builder" to encompass "Developer/Manager" and "Protector" of water resources. What began as a military engineering mission for nation building in the 18th century expanded into a major peacetime mission in the 19th century. The Corps helped a young nation map the frontier and expand westward by surveying roads and canals. The Corps promoted economic development through a vast water resources infrastructure, initiated development of the first national parks, and tied an inland navigation system together to move commerce across states and keep ports and harbors open, a role critical for national defense. In the 20th century, Congress provided the Corps with additional water resources development and management authorities, including flood control, hydropower, water supply, and recreation. More recently shore protection, disaster relief, and environmental protection and restoration authorities were added. As society's needs and values have changed, the Civil Works program has reflected changing national priorities for good water management. The Corps abilities to facilitate, advise, develop, operate, manage, and evaluate on a broad range of water resource issues furnish a robust capability set for the Nation's benefit.

Mr. Chairman, within your oversight, the Corps Civil Works Program is primarily responsible for the development, management, protection, restoration and enhancement of our nation's water and related land resources for commercial navigation, flood damage reduction, and the environment. The program provides stewardship of America's water resources infrastructure and associated natural resources, and also provides emergency services for disaster relief. It is my job, in concert with the Assistant Secretary of the Army (Civil Works), to provide advice to the Executive Branch and Congress on these matters. The goal of our study process is to produce the best economic and scientific analysis available.

Water Resources Planning and the National Interest

We are proud of our disciplined water resources planning and our planning professionals who face the daunting challenges of solving real problems, balancing competing interests and forging consensus around solutions. They serve the public well and very often in the midst of controversy and intense scrutiny. Their difficulties make the discipline of the process of paramount importance. Today, we continue to apply the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies supplemented by Corps guidance that strives for inclusion of all interests in the management and investment in our water resources. When applied diligently, the Principles and Guidelines force all - the Corps and its stakeholders - to recognize the tradeoffs and balance competing interests.

Our vision of planning is to meet national needs within the framework of current law and policy. Our planners have operated responsibly over the last two decades as priorities and concerns have shifted. The Water Resources Development Act of 1986 emphasized the National expectation that project partners be more involved in the formulation and financing of solutions to water resources problems. Nearly everyone believed that we could develop better projects more efficiently and effectively by recognizing that projects must both meet national needs and work viably at the local level. We responded with vigor and enthusiasm. The attached map illustrates where cost shared feasibility studies have been conducted with non-Federal partners since 1986.

Four years ago, the Army commissioned a National Academy of Sciences study to determine whether Corps planning should be further streamlined. That study concluded that the process was about right in terms of length and resources. During the last decade, interagency policy discussions increasingly have emphasized broader scale studies of entire watersheds with interagency collaboration and comprehensive, systemic solutions. An unintended effect of cost sharing has been the narrowing of focus of studies, as cost sharing partners are reluctant to finance studies that are broader than their immediate concern. As a result, our planners are often caught between the forces seeking comprehensive planning at one end of the spectrum and those who voice concerns for addressing needs on an expedited basis and early screening of alternatives that have little chance of being implemented. We are pledged to this service.

The Upper Mississippi and Illinois Navigation Study

Turning now to the Upper Mississippi and Illinois Navigation Study. This is a feasibility study of lock capacity and reliability. The study area extends from St. Louis to Minneapolis-St. Paul on the Mississippi River and from the mouth to Chicago on the Illinois River, a total of 1202 river miles encompassing 37 existing locks and dams. This reach, 10 percent of the inland waterway system, provides the origin or destination of 48 percent of the ton-miles of

the total system. This study was started in Fiscal Year 1993 to address limited lock capacity and reliability. Limited lock capacity leads to commercial tow delays, while reduced reliability of aging locks contributes to outages and higher maintenance costs. Both delays and outages can add millions of dollars to the costs of transporting grain and other commodities carried on the system. These costs in turn reduce the real incomes of farmers, other producers and consumers. While the Upper Mississippi River system is a vital transportation corridor it is also a nationally significant environmental resource. It contains a system of Federal and state wildlife refuges and parks that provide habitat for migrating waterfowl and support fish and wildlife resources. Navigation development has had an adverse impact on these resources which must be carefully addressed and balanced in any study of improvements. This is a truly comprehensive study of an entire navigation system. The estimated study cost is currently approximately \$60 million. Our current schedule provides for release of a draft report for public review in September of this year. In July 2002, I expect to make my final report to the Secretary of the Army.

The Upper Mississippi and Illinois Study is very complex, involving engineering, economic and environmental analyses of impacts and consequences of a wide variety of possible future conditions on these rivers. A sound investment plan for the navigation system must be based on reasonable projections of future volumes, types and destinations of commodities that will move on the waterway. Therefore, a key component of the study is a 50-year forecast of demand for water borne transportation on the Mississippi and Illinois system including the response of barge operators and shippers to congestion. The commodity movements on this system are largely agricultural. Volumes and destinations of these products are driven by world market conditions and therefore, fluctuate with world economic conditions. Another key component is forecasting the schedules for major rehabilitation activities. In view of these facts, projections are subject to significant uncertainty.

As part of the Study a group of Corps team members made economic projections and built an economic model to provide a basis for study conclusions. This proved to be a very difficult task. As you might expect, there were disagreements between the many stakeholders, as well as team members, over the model and its projections. These disagreements ultimately led the Department of the Army to request a review of the navigation study analyses by the National Academy of Sciences' National Research Council. The Council released its final report on February 28, 2001. The Council's recommendations focused on four areas: economics; water resources planning; environment; and engineering. Concerning our economic analysis, the Council found that the Corps made a major improvement in our modeling by adopting a model that considers alternative modes of transportation and destinations for goods shipped on the inland waterway. However, the Council found that improvements are needed in the application of the model to make the analysis more consistent with the underlying economic theory regarding the equilibrium of supply, demand, and the movement of commodities. Due to these modeling problems and flawed assumptions and data, the Council recommended that our forecasts of barge traffic and waterway congestion should not be used in the feasibility study. The Council also recommended that we obtain more data for use in the model and that we more fully explore inexpensive, nonstructural alternatives, such as traffic management. Concerning inland waterway and water resources planning, the National Research Council recommended that we:

- Conduct a more comprehensive assessment of the impacts of navigation options on the environment;

- Clarify the use of environmental studies in the decision process;
- Obtain a review of the final feasibility report by an independent group of interdisciplinary experts; and
- Examine environmental improvements.

Concerning our environmental analyses, the Council recommended as follows:

- We should research the cumulative environmental impacts of the existing navigation system and both recent and proposed improvements (including the resultant increased towboat usage);
- Congress should improve and enhance existing ecosystem research efforts with more emphasis on measures to address cumulative impacts, and broadened to include studies of the impacts of barge traffic on river ecology; and
- We should conduct studies and make our mitigation strategy consistent with adaptive management principles.

The Council found that our project rehabilitation and maintenance analyses were reasonable, but recommended that we reassess the contingencies that we assign to our construction cost estimates.

What We Are Doing

First and foremost I take the issues surrounding the Army Corps of Engineers and the Upper Mississippi and Illinois Study seriously. I must ensure the integrity of the Corps of Engineers and its study process. In this regard there are several actions underway:

- While the National Academy of Sciences has completed a general review of the Corps studies process and found it to be a sound process, I am evaluating our review process for feasibility studies to determine whether improvements, including its recommendation for independent review, are needed.
- I fully support the National Academy of Science study directed by the Congress in the Water Resources Development Act of 2000 of the practicality and efficiency of independent peer review of feasibility studies and methods for project analysis.
- I am restructuring the management of the Upper Mississippi and Illinois Navigation Study.
- I am placing renewed emphasis on my Environmental Advisory Board to insure that I receive independent environmental advice.
- The Assistant Secretary of the Army for Civil Works and I, on November 28, 2000, submitted a joint memorandum to the Secretary of the Army on Civil Works Management and Communication Clarifications. In this memorandum, Dr. Westphal and I agreed upon the responsibilities of both parties and committed to sharing information, communicating effectively, and cooperating fully on all Civil Works matters. The Secretary of the Army provided copies of this memorandum to the Chairman and Ranking Member of this Committee in his final update regarding enhancement of the management procedures of the Civil Works program.
- I am rewriting the vision statement of the U.S. Army Corps of Engineers to focus on service to the Army and the Nation.
- I have conducted extensive outreach sessions with a broad variety of interests, including meeting with a substantial number of Members of the House and Senate.

Other Observations

There are many interested parties and many points of view in the Upper Mississippi and Illinois study area. The Corps team members have worked diligently to give all an equal opportunity to be heard.

At any one time we have many feasibility studies underway. The attached map illustrates where cost shared feasibility studies have been or are being conducted with non-Federal partners since 1986. In any study, our challenge is to balance competing values and interests, develop alternative solutions that solve recognized problems and establish a broad consensus for the best solution. I'm proud of our record on the many studies depicted on this map. We are especially proud that many of these studies are resulting in projects that go beyond simply avoiding or mitigating environmental impacts and make positive contributions to restoring the Nation's environmental resources. We strongly believe our leadership, engineering and water resources skills and disciplined planning are central to solving real problems and serving the American people. We've served the Nation well and will continue to do so.

Conclusion

Throughout my career I have been privileged to work with the outstanding men and women who make up the Army Corps of Engineers. They fostered in me a desire to be a consensus builder, someone who does not necessarily compromise but who seeks alternatives which uniquely combine individuals' input into a solution which is genuinely better than the sum of the parts. I view our current situation as an opportunity. This is an opportunity for us to see ourselves anew and rededicate ourselves to our principles.

I take the issues surrounding the Army Corps of Engineers seriously, and I am making the changes necessary to insure the continued integrity of the Civil Works planning process, so that the Corps of Engineers can continue to fulfill its role in addressing the many water resource needs of this great country. Mr. Chairman, this completes my statement. I am prepared to answer your questions as well as those of other members of the Committee.