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STRENGTHENING THE NATION'S WATER INFRASTRUCTURE: THE ARMY CORPS OF ENGINEERS' PLANNING PRIORITIES

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND RESOURCES

OF THE

COMMITTEE ON
GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED NINTH CONGRESS

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STRENGTHENING THE NATION'S WATER INFRASTRUCTURE: THE ARMY CORPS OF ENGINEERS' PLANNING PRIORITIES

WEDNESDAY, MARCH 15, 2006

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND RESOURCES,
COMMITTEE ON GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 3:02 p.m. in room 2203, Rayburn House Office Building, Hon. Darrell E. Issa (chairman of the subcommittee) presiding.

Present: Representatives Issa and Watson.

Staff present: Larry Brady, staff director; Lori Gavaghan, legislative clerk; Tom Alexander, counsel; Dave Solan, Ph.D., and Ray Robbins, professional staff members; Richard Butcher, minority professional staff member; and Jean Gosa, minority assistant clerk.

Mr. ISSA. A working quorum under our rules being present, this meeting is called to order.

Mr. Lamont, I'll begin by also saying I understand you have someone else from the Corps of Engineers who would like to be able to testify if areas outside of your expertise arise. They can come forward and just be here the whole time. That's fine.

Mr. LAMONT. Is it appropriate now?

Mr. ISSA. It's appropriate right now; that's fine.

Mr. LAMONT. Claudia Tornblom is the Deputy for Management and Budget in our Office of the Assistant Secretary.

Mr. ISSA. Excellent. At these hearings, we try to have the greatest amount of impact by having all of your staff available. I will mention in advance before I get to it in the script that we will swear in all who may testify and all who may assist you answering questions so that either whether they speak directly or they whisper in your ear and you reiterate, it's covered. We do that as a matter of committee policy in order to make it easier on you because the last thing we want to have is you're speaking somebody else's words and then you've been sworn and they haven't. So hopefully it works for all of us.

The Army Corps of Engineers has a long and distinguished history of building and maintaining critical water resources and infrastructure in the United States. As we have witnessed in Hurricane Katrina, the Corps' traditional missions of flood control and navigation are as important as ever. And I would like to take a moment to personally thank the many Corps employees who have volunteered to work in the area devastated by Katrina. As I understand,

a fairly significant, of the total transferrable work force is presently working in the Gulf. Again I'd like to thank the Corps for their service and their efforts.

The Nation's existing infrastructure is the result of priority-setting, decisions and projects constructed in the past. For decades to come, infrastructure priorities that we set today and in the near future will impact commerce, electricity generation, wetlands, and most importantly, the safety of communities that depend on the Corps for flood protection. It is imperative that we have the tools and information to make the right choices.

But the Corps faces a number of significant challenges in carrying out its mission. Funding for the Corps inevitably involves tradeoffs between congressionally authorized projects. And, unfortunately, critical maintenance of existing infrastructure is sometimes deferred because of other competing priorities.

Next, financial management is another area of concern. It has become a common practice for the Corps to shift funds to meet the needs of the moment, which suggests that priority-setting within the Corps is either lacking or not sustainable. And as the rest of the committee comes, I would like to take a moment to set a context for that, for your statements to come.

I had the privilege of spending almost 2 years with the Corps of Engineers on active duty and as an executive officer of an engineering company. On more than a few occasions somebody managed to have enough construction sites that I had to have one bulldozer at two sites at one time. It is a fairly low-level decision. It requires that you put the bulldozer on a truck every day so that it is in both sites at some point during the day. Four hours on both sites, no problem. The problem is the 2-hours it takes to load the bulldozer, get it over there and unload it was lost time.

Now that may be just a microcosm of what you are facing in the Corps of Engineers but it is a perspective that I put on it, that if we are asking you to have a bulldozer in two places at one time, if that requires an inefficiency, it leads to a greater total cost for those two projects and Congress needs to know that and Congress needs to take action.

Third, the shortcomings in a cost/benefit analysis done by the Corps have been well documented by the GAO, the National Academy of Sciences and the Army Inspector General. To its credit, the Corps has moved aggressively to address these flaws and improve its planning processes. The Corps has also taken steps to be more cooperative and reorganize so that stove-piping no longer exists.

In conclusion, I must note that we are not here to revisit the Water Resource Development Act, which passed the House by more than 390 votes. We are not here to criticize the Corps or any part of government for the purpose of making points in the press. We are here today to find out primarily if the relationship between Congress and the Corps has led to mixed messages, excess projects and insufficient funds.

I certainly look forward to hearing from each of the witnesses. I certainly want to hopefully set in motion in your minds the fact that this Congressman recognizes that Congress is clearly part of the problem in the Corps today and in the quantity of backlog, some dating 25 years, that have never been fully funded.

[The prepared statement of Hon. Darrell E. Issa follows:]

COMMITTEE ON GOVERNMENT REFORM
SUBCOMMITTEE ON ENERGY AND RESOURCES

OPENING STATEMENT OF
CHAIRMAN DARRELL ISSA

Oversight Hearing:

"Strengthening the Nation's Water Infrastructure:
The Army Corps of Engineers' Planning Priorities"

March 15, 2006

The Army Corps of Engineers has a long and distinguished history of building and maintaining the critical water resources infrastructure of the United States. As we have witnessed with Hurricane Katrina, the Corps' traditional missions of flood control and navigation are more important than ever. And, I would like to take a moment to personally thank the many Corps employees who have volunteered to work in the devastated areas of the Gulf following Katrina, as well as those who have volunteered to work on projects in Iraq and Afghanistan. Thank you for your service.

The nation's existing water infrastructure is a result of the priority-setting, decisions, and projects constructed in the past. For decades to come, infrastructure priorities that we set today will impact commerce, electricity generation, wetlands—and most importantly—the safety of communities that depend on the Corps for flood protection. It is imperative that we have the tools and information to make the right choices.

But the Corps faces a number of significant challenges in carrying out its mission. Funding for the Corps inevitably involves tradeoffs between congressionally authorized projects. And, unfortunately, crucial maintenance on existing infrastructure is sometimes deferred because of other competing priorities.

Next, financial management is another area of concern. It has become common practice in the Corps to shift funds to meet the needs of the moment, which suggests that priority-setting within the Corps is lacking.

Third, shortcomings in cost/benefit analyses done by the Corps have been well-documented by GAO, the National Academies of Science, and the Army Inspector-General. To its credit, the Corps has moved aggressively to address these flaws and improve its planning processes. The Corps has also taken steps to be more collaborative and reorganize so that "stove-piping" no longer exists.

In conclusion, I must note that we are not here to revisit the Water Resources Development Act, which passed the House by more than 390 votes.

The Subcommittee is meeting here today to examine the steps taken by the Corps to improve its operations. We must ensure that the nation's critical infrastructure needs are fulfilled. Because the level of Corps' funding is a persistent issue, it is all the more important that Corps' operations are efficient and result in the most benefit for every dollar spent.

I look forward to hearing from our esteemed witnesses. Today we have:

- Mr. Douglas Lamont, Deputy Assistant Secretary of the Army for Project Planning;
- Ms. Anu Mittal, Director, Natural Resources and Environment team of the Government Accountability Office;
- Mr. Steve Ellis, Vice President of Taxpayers for Common Sense; and
- Ms. Elizabeth Birnbaum, Vice President and General Counsel, American Rivers.

Mr. ISSA. Again I look forward to hearing from our esteemed guests. Mr. Douglas Lamont, Deputy Assistant Secretary of the Army for Project Planning. I thank you for being here. Thank the Corps for making you available on relatively short notice. I realize there are several people juggling their schedules to make this happen.

Ms. Anu Mittal, Director, Natural Resources and Environmental Team of the Government Accountability Office. Thank you for being here and again thank you for the work that the GAO has already done.

Mr. Steve Ellis, vice president of Taxpayers for Common Sense. Thank you for being here. We live and die by our watchdog organizations here and I do emphasize and die.

And Ms. Elizabeth Birnbaum, vice president and general counsel, American Rivers.

Thank you all for being here. As I mentioned earlier, for all of you and anyone who you are going to have assist you, I would ask that you stand now and be sworn in.

[Witnesses sworn.]

Mr. ISSA. I indicate that all said affirmative and the one gentleman in the back, if you would also give the recorder your name and spelling, that will help. And please have a seat.

The ranking member is on her way back. As you probably know, we have the president of Liberia speaking before a joint session. I ducked out early but for appropriate reasons, some of the Members will be coming in afterwards. So the good news is you miss an opening statement, although she may want to give it when she gets in.

But Mr. Lamont, if you would begin.

Oh, and I will ask and I will clearly get unanimous consent that all of your written testimony be placed in the record, which will allow you to go off of your testimony and add or modify as you see fit. In fairness to so many speakers, try to be about 5 minutes. If it runs over a little bit, we certainly would be understanding. Thank you.

STATEMENTS OF DOUGLAS W. LAMONT, DEPUTY ASSISTANT SECRETARY OF THE ARMY FOR PROJECT PLANNING, ACCOMPANIED BY CLAUDIA TORNBLOM, DEPUTY ASSISTANT SECRETARY FOR MANAGEMENT AND BUDGET, AND THOMAS WATERS, CHIEF, PLANNING AND POLICY; ANU MITTAL, DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT, GOVERNMENT ACCOUNTABILITY OFFICE; STEVE ELLIS, VICE PRESIDENT, TAXPAYERS FOR COMMON SENSE; AND S. ELIZABETH BIRNBAUM, VICE PRESIDENT FOR GOVERNMENT AFFAIRS, AMERICAN RIVERS

STATEMENT OF DOUGLAS W. LAMONT

Mr. LAMONT. Thank you, Mr. Chairman and distinguished members of the subcommittee. Thank you for the opportunity to testify on strengthening the Nation's infrastructure, U.S. Army Corps of Engineers planning priorities.

The Corps of Engineers civil works program provides a framework to develop reasoned environmental and engineering solutions

to support the water resources needs of our Nation. Over the last few years the Corps has implemented several initiatives to improve its planning processes and maintain and strengthen its planning expertise.

Mr. ISSA. Is the green light lit?

Mr. LAMONT. Yes, sir, it is. Shall I move closer?

Mr. ISSA. We may be able to adjust it but if you would move as close as you can, I would appreciate it.

Mr. LAMONT. These initiatives include revisions to the planning guidance, the planning models improvement program, peer review, the establishment of planning centers of expertise, planner capability development, and project priority-setting. I would like to briefly describe each of these initiatives for you.

The Corps water resources planning is guided by the U.S. Water Resources Council's 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. The analyses required for individual project decisions go well beyond the calculation of benefit and cost ratios. Systematic evaluation of projects of different scales and scopes is required so that tradeoffs among different mixes of project purposes and alternative solutions can be identified.

Using the Principles and Guidelines as the basic analytical framework, the Corps has developed its planning guidance in response to evolving national priorities and congressional direction, which include considerations such as greater emphasis on environmental protection and restoration and greater collaboration among project interests.

Recently the Corps has issued guidance to broaden the planning considerations through collaborative watershed-based planning and to more fully document alternative plans' beneficial and adverse effects in the areas of national economic development, environmental quality, regional economic development, and other social effects. This approach would provide a basis for more comprehensive solutions to complex water resource challenges.

The use of technical models is part of the science and engineering that form the foundation of our investment decision documents. To ensure the quality and credibility of the Corps' models, the Corps has implemented a Planning Models Improvement Program. This program enhances the planning capability of the Corps by requiring the use of certified and defensible technical models in the development of its decision documents. The use of the certified models will improve the Corps' ability to provide theoretically and technically sound data for decisionmaking. The guidance and emphasis of this program should also, in the long term, result in significant efficiencies in conducting planning studies.

Early last year the Corps adopted a peer review process as called for in the Information Quality Act. Our peer review process closely follows the Final Information Quality Bulletin for Peer Review issued by the Office of Management and Budget in 2004. The purpose of peer review is to ensure that the technical quality of Corps documents is evaluated by a group of independent reviewers not involved with the report production. Potential projects that are controversial, precedent-setting or have significant national effects will

also require external peer review by experts outside the Corps of Engineers.

In addition, external peer review is added in most cases where the risk and magnitude of a proposed project are such that a critical examination by a qualified person or a team outside the Corps is necessary.

Further, the Corps has established a Civil Works Review Board composed of Corps Senior Executive Service personnel and a deputy commanding general for the Corps of Engineers to determine if the planning recommendations of the Corps districts are ready for formal State and agency review and circulation of a proposed Report of the Chief of Engineers.

In August 2003 the Director of Civil Works designated six national Planning Centers of Expertise to enhance the Corps' planning capability for inland navigation, deep draft navigation, ecosystem restoration, hurricane storm damage reduction, flood damage reduction, and water management and reallocation. The centers have key roles in maintaining and strengthening planner core competencies within the Corps, providing technical assistance, providing independent review, transferring the latest technology, and sharing lessons learned and best practices throughout the Corps' Planning Community of Practice.

With the increasing maturity and development of these centers, the Corps can more widely leverage its resources regionally and nationally. Fully functioning centers will provide leadership for the Corps planning process nationwide, support the regional technical specialists, provide for independent technical reviews, ensure certified models are used in decisionmaking documents, share lessons learned, develop core training modules and oversee the implementation of new guidance.

The ability of an organization to work with not only the scientific and engineering aspects of water resources but also the economic and environmental components depends upon a multi-talented, experienced work force. One way the Corps is addressing the need for experienced planners is through the Planning Associates Program that is an advanced training opportunity for Corps water resource planners at the journeyman level. The goals of this program are to broaden the planners' competencies in solving complex water resources problems, to strengthen their leadership skills, and to retain critical planner capability within the Corps of Engineers.

The Corps has also established an Advanced Degree Program in Integrated Water Resources Planning and Management that has been created in close partnership between the Universities Council on Water Resources and the Corps of Engineers. It is designed to provide the next generation of Corps water resources professionals with a requisite skill set to address multi-objective planning and management. Planners completing the program earn a masters degree or doctorate from one of the participating accredited universities.

The Corps has played and continues to play a large role in the development and management of the Nation's water and related land resources. The administration's 2007 budget incorporates objective, performance-based metrics for the construction program, funds the continued operation of commercial navigation and other

water resource infrastructure, and supports the restoration of nationally and regionally significant aquatic ecosystems, with emphasis on the Florida Everglades, the Upper Mississippi River, and the coastal wetlands of Louisiana.

Mr. Chairman, the Corps of Engineers is committed to staying on the leading edge of service to the Nation. I am confident that the planning process improvements and performance-based budgeting recently undertaken by the Corps have strengthened our ability to be responsive to the Nation's complex water resources needs. I will be happy to answer any questions, sir.

[The prepared statement of Mr. Lamont follows:]

COMPLETE STATEMENT

OF

MR. DOUGLAS LAMONT
DEPUTY ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)
FOR PROJECT PLANNING AND REVIEW
BEFORE

THE SUBCOMMITTEE ON ENERGY AND RESOURCES
COMMITTEE ON GOVERNMENT REFORM
UNITED STATES HOUSE OF REPRESENTATIVES

ON

"STRENGTHENING THE NATION'S WATER INFRASTRUCTURE:
THE ARMY CORPS OF ENGINEERS' PLANNING PRIORITIES"

MARCH 15, 2006

MR. CHAIRMAN AND DISTINGUISHED MEMBERS OF THE SUBCOMMITTTEE:

I am honored to be testifying before you on "Strengthening the Nation's Water Infrastructure: The U.S. Army Corps of Engineers Planning Priorities." The Corps of Engineers civil works program provides a framework to develop reasoned environmental and engineering solutions to support the water resources needs of our Nation.

Over the last few years the Corps has implemented several initiatives to improve its planning processes and maintain and strengthen its planning expertise. These initiatives include revisions to the planning guidance, the planning models improvement program, peer review, the establishment of planning centers of expertise, planner capability development, as well as project priority setting and financial management. I would like to briefly describe each of these initiatives for you.

PLANNING GUIDANCE

The Corps water resources planning process is guided by the U. S. Water Resources Council's 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies. The analyses required for individual project decisions go well beyond the calculation of benefit/cost ratios. Systematic evaluation of projects of different scales, approaches, and scopes is required so that trade-offs among different mixes of project purposes and alternative solutions can be identified. Decision-makers, including Congress, can then evaluate the relative merits of different plans in light of prevailing economic and environmental values. This structured planning

process is equally applicable to project planning regardless of whether project benefits are economic or environmental.

Using the Principles and Guidelines as the basic analytical framework, the Corps has developed its planning guidance in response to evolving national priorities and Congressional direction, which include considerations such as greater emphasis on environmental protection and restoration and greater collaboration among project interests. The Corps has also been a pioneer in applying its techniques of cost effectiveness and incremental analysis to ecosystem restoration plans and multipurpose plans that provide a mix of economic and ecological outputs. Recently, the Corps issued guidance to broaden planning considerations through collaborative watershed planning, and to more fully document alternative plans' beneficial and adverse effects in the areas of national economic development, environmental quality, regional economic development and other social effects. This approach will provide a basis for more comprehensive solutions to complex water resource challenges.

While the planning process identified in the Principles and Guidelines dates from 1983, Congress identified the environmental mission for the Corps in the Water Resources Development Act of 1990. Since this legislation, the Corps has developed additional engineering and environmental expertise in the engineering, design, and construction of ecosystem restoration projects. The Corps' Environmental Operating Principles communicates its commitment to meeting water resources needs in an environmentally sustainable manner.

PLANNING MODELS IMPROVEMENT PROGRAM

The use of technical models is part of the science and engineering that form the foundation of our investment decision documents. To ensure the quality and credibility of the Corps' models, the Corps implemented a Planning Models Improvement Program (PMIP). The PMIP enhances the planning capability of the Corps by requiring the use of certified and defensible technical models in the development of its decision documents. Recent planning guidance issued in May 2005 prescribes the corporate business process and policy for the development, certification through expert peer review, training, and on-going support of planning models. With the continued emphasis on the PMIP by our six Planning Centers of Expertise, which I will discuss further below, Corps planners will have a toolbox of certified planning models. The use of the certified models will improve our ability to provide theoretically and technically sound data for decision-making. The guidance and emphasis of the PMIP should also, in the long term, result in significant efficiencies in conducting planning studies.

PEER REVIEW

Early last year the Corps adopted a peer review process as called for in the Information Quality Act. Our peer review process closely follows the Final Information Quality Bulletin for Peer Review issued by the Office of Management and Budget in 2004. The purpose of peer review is to ensure that the technical quality of Corps reports is evaluated by a group of independent reviewers not involved with the report production. Most planning reports will have an independent technical review by the appropriate Planning Centers of Expertise, outside of the district producing the report. Potential projects that are controversial, precedent setting, or that have significant national effects will also require an external peer review by experts from outside the Corps. This new peer review process applies to the review of "scientific information," "influential scientific information," "scientific assessment," and "highly influential scientific assessment" as defined in the Office of Management and Budget's Final Information Quality Bulletin for Peer Review. This includes factual inputs, data, the use of models, analyses, assumptions, and other scientific and engineering matters that inform decision-making. Within the Corps, this typically includes but is not limited to: economic and environmental assumptions and projections, evaluation data, economic analyses, environmental analyses, engineering analyses (including hydrology and hydraulics, geotechnical, structural, etc.), methods for integrating risk and uncertainty and for conducting trade-offs, and the use of models in the evaluation of engineering, economic and environmental effects. In addition, external peer review is added in those special cases where the risk and magnitude of a proposed project are such that a critical examination by a qualified person or team outside of the Corps is necessary.

Corps guidance emphasizes integrating peer review (including external peer review) during the planning process where possible, rather than waiting until the end of the study. As an example, the Chief of Engineers is having the American Society of Civil Engineers (ASCE) provide external peer review of the Corps' Interagency Performance Evaluation Task Force evaluation of the levee breaches in New Orleans. In addition, the Assistant Secretary of the Army for Civil Works is having the National Academies of Science provide independent review of both the Corps and ASCE reports.

The peer review process also has significant built-in accountability and public involvement. The Corps requires that all significant planning studies provide for the posting of peer review plans to a central web site where the public and interested parties may review and comment on the proposed reviews. In addition, the Governor of a State or the head of a natural resources agency may request a mandatory external peer review of scientific information used to inform project decisions affecting them. These features improve our ability to identify areas of significant controversy or risk that warrant external review of a project study, and also provide the opportunity for stakeholders to influence peer review decisions. Additionally, the Corps recently established an internal review process headed by the Civil Works Review Board (CWRB). All significant proposed Civil Works water resources projects will be presented to the CWRB, which is composed of Corps Senior Executive Service personnel and the Deputy Commanding General. The purpose of the CWRB is to determine if the planning recommendations from the Corps district are ready for formal State and Agency review of a proposed Report of the Chief of Engineers.

PLANNING CENTERS OF EXPERTISE

In August 2003, the Director of Civil Works designated six national Planning Centers of Expertise (PCX) to enhance the Corps' planning capability for inland navigation, deep draft navigation, ecosystem restoration, storm damage reduction, flood damage reduction, and water management and reallocation. The Centers have key roles in maintaining and strengthening planner core competencies, providing technical assistance, providing independent review, transferring the latest technology, and sharing lessons learned and best practices throughout the Corps' Planning Community of Practice. Efforts to more fully develop the Centers are consistent with the Section 936 (WRDA 1986) directive to implement measures to improve planning capabilities, the Section 216 (WRDA 2000) suggestions for focusing and increasing centralization of planning expertise, and the various Corps reform initiatives for increasing product quality and corporate accountability. With the increasing maturity and development of the Centers, the Corps can more widely leverage its resources regionally and nationally. Fully functioning Centers will provide leadership for the Corps planning process nationwide, support the regional technical specialists, provide for independent technical reviews, ensure certified models are used in decision making documents, share lessons learned, develop core training modules, and oversee the implementation of new guidance. The Planning Centers of Expertise are part of the Corps' commitment to improve the quality and effectiveness of water resources planning as outlined in its national initiative known as the Planning Excellence Program.

PLANNER CAPABILITY DEVELOPMENT

The ability of an organization to work with not only the scientific / engineering aspects of water resources but also the economic and environmental components depends upon a multi-talented, experienced workforce. One way the Corps is addressing the need for experienced planners is through the Planning Associates (PA) Program that is an advanced training opportunity for Corps' water resource planners at the journeyman level. The goals of the PA program are to broaden the planner's competencies in solving complex water resources problems, to strengthen their leadership skills, and to retain critical planner capability within the Corps. The Corps has also established an Advanced Degree Program in Integrated Water Resources Planning & Management that has been created in close partnership between the Universities Council on Water Resources and USACE. It is designed to provide the next generation of Corps water resources professionals with a requisite skill set to address multi-objective planning and management. Planners completing the program earn a Masters Degree or Doctorate from one of the participating accredited universities.

PROJECT PRIORITY SETTING AND FINANCIAL MANAGEMENT

The Corps has played, and continues to play, a large role in the development and management of the nation's water and related land resources. The Administration's FY07 budget for the Corps incorporates objective performance-based metrics for the construction program, funds the continued operation of commercial navigation and other water resource infrastructure, and supports restoration of nationally and regionally significant aquatic ecosystems, with emphasis on the Florida Everglades, the Upper Mississippi River, and the coastal wetlands of Louisiana.

The budget proposes that the Administration and Congress use objective performance criteria to establish priorities among projects including potential new starts, and through a change in Corps contracting practices to increase control over future contract obligations. The criteria proposed include the ratio of remaining benefits to remaining costs for projects with economic outputs; the extent to which the project cost-effectively contributes to the restoration of a nationally or regionally significant aquatic ecosystem that has become degraded as a result of a Civil Works project or to an aquatic ecosystem restoration effort for which the Corps is otherwise uniquely well-suited; and giving priority to dam safety assurance, seepage control, static instability correction, and projects that address significant risk to human safety. With the exception of up to 10 percent of the available funds that could be allocated to any project under construction regardless of performance, resources are allocated based on Cops estimates to achieve the highest net economic and environmental returns and address significant risk to human safety. Over time, this performance-based approach to developing the Corps construction budget would significantly improve the benefits to the Nation from the Civil Works construction program.

We believe that focusing our effort to fund and complete a smaller, more beneficial set of projects will improve overall program performance and bring higher net benefits per dollar to the Nation sooner. That is why the budget proposes only one new, high priority construction start and accelerates completion of the highest-return projects.

The budget also supports performance-based budgeting for the operation and maintenance program by funding ongoing efforts to develop better risk-based facility condition indices and asset management systems. These analytical tools will improve our ability in the future to develop long-term asset management strategies and establish priorities for the operation, maintenance and management of Civil Works assets. Our goal is to begin using these improved analytical tools within two years.

The focus on Civil Works performance has a number of foundations. First, the Civil Works Strategic Plan, which was updated in 2004, provides goals, objectives, and performance measures that are specific to program areas as well as some that are crosscutting. Second, program areas are assessed using the Program Assessment Rating Tool (PART). A PART review helps identify a program's strengths and weaknesses to inform funding and management decisions aimed at making the program more effective. The PART therefore looks at all factors that affect and reflect program performance including program purpose and design; performance measurement, evaluations, and strategic planning; program management; and program results. Because the PART

includes a consistent series of analytical questions, it allows programs to show improvements over time, and allows comparisons between similar programs. Both the Civil Works Strategic Plan and the PART-based program evaluations are works-in-progress and will continue to be updated.

Budget decisions link to performance in two ways. First, we evaluate alternative funding levels in terms of their outputs and outcomes, as measured by the program area metrics. Second, we use these metrics to rank work within each account and within each program area and to decide how to allocate resources among the accounts and program areas.

CONCLUSION

Mr. Chairman, the Corps of Engineers is committed to staying at the leading edge of service to the Nation. The Corps is using its planning capability to work collaboratively with other Federal and State agencies to develop water resource solutions. I am confident that the planning process improvements and performance based budgeting recently undertaken by the Corps of Engineers have strengthened our ability to be responsive to the Nation's complex water resources needs using an open, collaborative, integrated approach.

The Office of the Assistant Secretary of the Army (Civil Works) is also committed through our oversight responsibilities for the Corps of Engineers Civil Works Program to improving the water resources planning process and the overall performance of the Civil Works program.

My office, Project Planning and Review, works independently of, but in close coordination with, the Corps of Engineers. We review the reports of the Chief of Engineers and coordinate with the Office of Management and Budget to determine the Administration's position on support for authorization and budgeting.

Thank you again for the opportunity to testify today. I will be happy to answer any questions.

Mr. ISSA. Thank you. Ms. Mittal.

STATEMENT OF ANU MITTAL

Ms. MITTAL. Mr. Chairman, we are pleased to be here today to discuss the Corps of Engineers' civil works planning and project management processes. My testimony today is based on five reports issued by GAO over the last 4 years and focuses on two specific aspects of the civil works program. First I will cover shortcomings that we have identified and the economic analyses used by the Corps to support its planning decisions on specific civil works projects. And second, I will cover the Corps' lack of an effective financial planning and priority-setting process for managing its civil works appropriations.

As you know, before undertaking a civil works project, the Corps generally completes a two-phased planning study. This two-phased process helps inform congressional decisionmakers about whether or not to authorize a civil works project and helps determine if Federal investment is warranted. As part of this process, the Corps analyzes and documents whether the costs of constructing the project are outweighed by the benefits provided by the project.

Consequently, the accuracy and reliability of the Corps' cost/benefit analysis is critical to ensuring that only the most beneficial projects are proposed to decisionmakers. However, our reviews of individual civil works projects and activities have found that the results of the Corps' analysis are often questionable and are inadequate to support this kind of strategic decisionmaking.

Specifically, when we reviewed the Corps' cost/benefit analyses for four different projects and activities, we found that they were fraught with errors, mistakes and miscalculations. These analyses often used invalid assumptions and outdated data to arrive at their conclusions. In each of our reviews we found that the Corps' analyses typically understated the cost of a project and overstated its benefits. For example, when we have tried to recalculate the benefits of some of these projects we have only been able to find credible support for about a fraction of the benefits claimed by the Corps.

More troubling is the fact that these analyses went through a three-tiered Corps internal review process but none of these reviews detected any of the problems that we uncovered. This raises serious questions in our minds about the adequacy of the Corps' internal reviews.

In response to our report, usually at the direction of the Congress, the Corps has addressed or is in the process of addressing the specific issues identified relating to these individual projects. However, we remain concerned about the extent to which these problems are systemic in nature and therefore may be prevalent throughout the rest of the Corps' civil works portfolio. Effectively addressing these issues may require a more global and comprehensive revamping of the Corps' project planning processes rather than a piecemeal approach.

We also undertook a review last year on how the Corps manages its appropriations for the civil works program. We found that the Corps did not have an effective financial planning and management system for these accounts. As a result, the Corps could not identify the highest priority projects across hundreds of authorized

projects and allocate appropriated funds to them in an efficient manner. To manage its appropriated funds, we found that the Corps relied on a just-in-time reprogramming approach and moved funds among projects as needed.

The benefit of this just-in-time approach was that it provided funds rapidly to projects that had unexpected needs. However, this approach also resulted in many unnecessary and uncoordinated movements of funds among projects. We found that over a 2-year period the Corps moved over $2.1 billion by conducting over 7,000 reprogramming actions and many of these actions were conducted for reasons that were inconsistent with the Corps' own guidance.

In response to the findings in our report, the Congress has directed the Corps to revise its procedures for managing its civil works appropriations starting in fiscal year 2006. The Corps has been directed to reduce its reliance on reprogramming actions and institute a more rational financial discipline for the civil works appropriations accounts.

In closing, Mr. Chairman, the recurring themes in our reviews of individual Corps projects indicate that the Corps' track record for providing reliable information to assess the merits of undertaking certain civil works projects and managing its appropriations for this program is spotty, at best. This is of particular concern in a time when decisionmakers have to determine how to best provide increasingly scarce Federal resources to hundreds of competing civil works needs across the country.

This concludes my prepared statement. I would be happy to answer any questions.

[The prepared statement of Ms. Mittal follows:]

United States Government Accountability Office

GAO

Testimony

Before the Subcommittee on Energy and Resources, Committee on Government Reform, House of Representatives

For Release on Delivery
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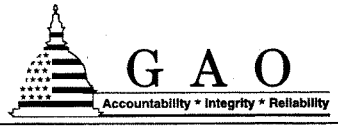
CORPS OF ENGINEERS

Observations on Planning and Project Management Processes for the Civil Works Program

Statement of Anu Mittal, Director
Natural Resources and Environment



GAO-06-529T

March 15, 2006

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Highlights

Highlights of GAO-06-529T, a testimony before the Subcommittee on Energy and Resources, Committee on Government Reform, House of Representatives

CORPS OF ENGINEERS

Observations on Planning and Project Management Processes for the Civil Works Program

Why GAO Did This Study

Through the Civil Works Program, the Corps of Engineers (Corps) constructs, operates, and maintains thousands of civil works projects across the United States. The Corps uses a two-phase study process to help inform congressional decision makers about civil works projects and determine if they warrant federal investment. As part of the process for deciding to proceed with a project, the Corps analyzes and documents that the costs of constructing a project are outweighed by the benefits. To conduct activities within its civil works portfolio, the Corps received over $5 billion annually for fiscal years 2005 and 2006.

During the last 4 years, GAO has issued five reports relating to the Corps' Civil Works Program. Four of these reports focused on the planning studies for specific Corps' projects or actions, which included a review of the cost and benefit analyses used to support the project decisions. The fifth report focused on the Corps management of its civil works appropriation accounts. For this statement, GAO was asked to summarize the key themes from these five studies.

GAO made recommendations in the five reports cited in this testimony. The Corps generally agreed with and has taken or is taking corrective action to respond to these recommendations. GAO is not making new recommendations in this testimony.

www.gao.gov/cgi-bin/getrpt?GAO-06-529T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Anu Mittal at (202) 512-3841or mittala@gao.gov.

What GAO Found

GAO's recent reviews of four Corps civil works projects and actions found that the planning studies conducted by the Corps to support these activities were fraught with errors, mistakes, and miscalculations, and used invalid assumptions and outdated data. Generally, GAO found that the Corps' studies understated costs and overstated benefits, and therefore did not provide a reasonable basis for decision-making. For example:

- For the Delaware Deepening Project, GAO found credible support for only about $13.3 million a year in project benefits compared with the $40.1 million a year claimed in the Corps' analysis.
- For the Oregon Inlet Jetty Project, GAO's analysis determined that if the Corps had incorporated more current data into its analysis, benefits would have been reduced by about 90 percent.
- Similarly, for the Sacramento Flood Control Project, GAO determined that the Corps overstated the number of properties protected by about 20 percent and used an inappropriate methodology to calculate the value of these protected properties.

In addition, the Corps' three-tiered internal review process did not detect the problems GAO uncovered during its reviews of these analyses, raising concerns about the adequacy of the Corps' internal reviews. The agency agreed with GAO's findings in each of the four reviews. For three projects the Corps has completed a reanalysis to correct errors or is in the process of doing so; it decided not to proceed with the fourth project.

GAO's review of how the Corps manages its appropriations for the civil works program found that instead of an effective and fiscally prudent financial planning, management, and priority-setting system, the Corps relies on reprogramming funds as needed. While this just-in-time reprogramming approach can provide funds rapidly to projects that have unexpected needs, it has also resulted in many unnecessary and uncoordinated movements of funds, sometimes for reasons that were inconsistent with the Corps' own guidance. Because reprogramming has become the normal way of doing business at the Corps, it has increased the Corps' administrative burden for processing and tracking such a large number of fund movements. For example, in fiscal years 2003 through 2004 the Corps moved over $2.1 billion through over 7,000 reprogramming actions. In response to GAO's findings, the Congress directed the Corps to revise its procedures for managing its civil works appropriations, starting in fiscal year 2006, to reduce the number of reprogramming actions and institute more rational financial discipline for the program.

Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss the U.S. Army Corps of Engineers' (Corps) civil works planning and project management processes. My testimony is based on five reports issued by GAO over the last 4 years;[1] it focuses on the economic, or cost benefit, analyses used to support decisions on specific civil works projects and actions and the Corps lack of effective planning and project management processes for its civil works appropriations. As you know, the Corps is the federal agency responsible for designing, constructing, operating, and maintaining thousands of civil works projects across the United States. These projects historically involved navigation and flood control activities but have more recently been expanded to include ecosystem restoration efforts. The Corps follows a two-phase study process to help inform congressional decision makers about civil works projects and determine if they warrant federal investment. As part of the process of deciding to proceed with a project, the Corps analyzes and documents that the costs of constructing a project are outweighed by the benefits provided by the project. Although there has been an overall decline in federal funding for water resource development projects during the last three decades, over $5 billion was appropriated for the Corps' civil works program in both fiscal years 2005 and 2006.

In summary we found that

- the cost and benefit analyses performed by the Corps to support decisions on Civil Works projects or actions were generally inadequate to provide a reasonable basis for deciding whether to proceed with the project or action, and
- the Corps' practice of conducting thousands of reprogrammings resulted in movements of project funds that were not necessary and that reflected

[1]GAO, *Delaware River Deepening Project: Comprehensive Reanalysis Needed,* GAO-02-604 (Washington, D.C.: June 7, 2002); GAO, *Oregon Inlet Jetty Project: Environmental and Economic Concerns Still Need to Be Resolved,* GAO-02-803 (Washington, D.C.: Sept. 30, 2002);, GAO, *Corps of Engineers: Improved Analysis of Costs and Benefits Needed for Sacramento Flood Protection Project,* GAO-04-30 (Washington, D.C.: Oct. 27, 2003); GAO, *Corps of Engineers: Effects of Restrictions on Corps' Hopper Dredges Should Be Comprehensively Analyzed,* GAO-03-382 (Washington, D.C.: Mar. 31, 2003); and GAO *Army Corps of Engineers: Improved Planning and Financial Management Should Replace Reliance on Reprogramming Actions to Manage Funds,* GAO-05-946 (Washington, D.C.: Sept. 16, 2005)

poor planning and an absence of Corps-wide priorities for its Civil Works portfolio.

Background

The Corps' Civil Works program is responsible for investigating, developing, and maintaining the nation's water and related environmental resources. In addition, the Civil Works program provides disaster response as well as engineering and technical services. The Corps' headquarters is located in Washington, D.C., with eight regional divisions and 38 districts that carry out its domestic civil works responsibilities.

Each year, the Corps' Civil Works program receives funding through the Energy and Water Development Appropriations Act. The act normally specifies a total sum for several different appropriation accounts, including investigations, construction, and operation and maintenance, to fund projects related to the nation's water resources. The funds appropriated to the Corps are "no year" funds, which means that they remain available to the Corps until spent. The conference report accompanying the Energy and Water Development Appropriations Act specifically lists individual investigations, construction, and operation and maintenance projects and the amount of funds designated for each project. In effect, the conference report provides the Corps with its priorities for accomplishing its water resource projects.

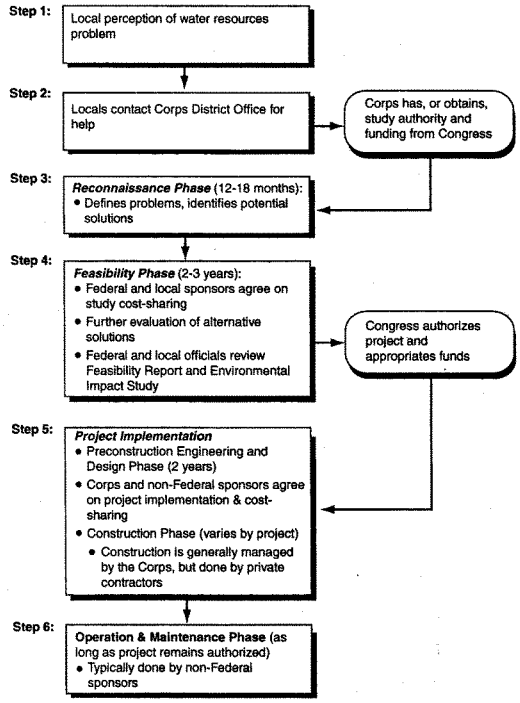
Corps' Process for Developing Water Resource Projects

In general, the Corps becomes involved in water resource projects when a local community perceives a need and contacts the Corps for assistance. If the Corps does not have the statutory authority required for the project, the Congress must provide authorization. After receiving authorization, generally through a committee resolution or legislation and an appropriation, a Corps district office conducts a preliminary study on how the problem could be addressed and whether further study is warranted.

When further study is warranted, the Corps typically seeks agreement from the local sponsor to share costs for a feasibility study. The Congress may appropriate funds for the feasibility study, which includes an economic analysis that examines the costs and benefits of the project or action. The local Corps district office conducts the feasibility study that is subject to review by the Corps' division and headquarters offices. The feasibility study makes recommendations on whether the project is worth pursuing and how the problem should be addressed. The Corps also conducts needed environmental studies and obtains public comment on them. After those are considered, the Chief of Engineers transmits the

final feasibility and environmental studies to the Congress through the Assistant Secretary of the Army for Civil Works and the Office of Management and Budget. The Congress may authorize the project's construction in a Water Resources Development Act or other legislation. Once the project has been authorized and after the Congress appropriates funds, construction can begin. Figure 1 shows the major steps in developing a civil works project.

Figure 1: Major Steps in Developing a Civil Works Project



Source: GAO presentation of Corps data.

Reprogramming Authority

Reprogramming is the shifting of funds from one project or program to another within an appropriation or fund account for purposes other than

those contemplated at the time of appropriation. A reprogramming transaction changes the amount of funds provided to at least two projects–the donor project and the recipient project. However, more than two projects are often involved in a single reprogramming action. For example, in an effort to make effective use of available funding, the Corps may move funds from a construction project that has slipped due to inclement weather and reprogram the funds to one or more construction projects that are ahead of schedule or experiencing cost overruns.

The authority to reprogram funds is implicit in an agency's responsibility to manage its funds; no specific additional statutory authority is necessary. While there are no government-wide reprogramming guidelines, the Congress exercises control over an agency's spending flexibility by providing guidelines, or non-statutory instructions, on reprogramming in a variety of ways. For example, some reprogramming and reporting guidelines have evolved from informal agreements between various agencies and their congressional oversight committees.

The Corps' Cost and Benefit Analyses Were Inadequate to Support Decision-Making

Our review of four Civil Works projects or actions found that the cost and benefit analyses the Corps used to support these actions were fraught with errors, mistakes, and miscalculations, and used invalid assumptions and outdated data. The Corps' analyses often understated costs and overstated benefits. As such, we concluded that they did not provide a reasonable basis for decision-making. In two instances, we also found that the Corps' three-tiered review process, consisting of district, division, and headquarter reviews, did not detect the problems we uncovered. These instances raised concerns about the adequacy of the Corps' internal reviews.

Delaware River Deepening Project

Our review of the Corps' cost and benefit analysis of the Delaware River channel-deepening project found that it contained a number of material errors. For example, the Corps misapplied commodity rate projections, miscalculated trade route distances, and included benefits for some import and export traffic that had seriously declined over the last decade. As a result, the Corps' estimate of project benefits was substantially overstated. We found that project benefits for which there was credible support were about $13.3 million a year compared with the $40.1 million a year claimed by the Corps' 1998 report. Specifically, we found that the Corps significantly overestimated the growth in oil import traffic for 1992 through 2005 because it used an incorrect commodity growth rate for part of the period. Use of this rate resulted in the Corps overestimating benefits

by about $4.4 million. Additionally, the Corps' estimate contained a computer error that overestimated this same benefit by another $4.7 million. Finally, the Corps' project benefits attributed to the import and export of commodities such as scrap metal, iron ore, and coal were overstated by about $2.7 million.

Conversely, the Corps' cost estimate for the project contained a number of positive and negative errors that in aggregate would have reduced project costs slightly but not enough to make up for the significant decrease in project benefits.

We found that the Corps' three-tiered quality control process of the Corps, consisting of district, division, and headquarters offices, was ineffective in detecting or correcting the significant miscalculations, invalid assumptions, and outdated information in the cost and benefit analysis that our review revealed.

In response to our report, the Corps conducted a reanalysis of the project with updated, more complete information. This reanalysis asserted that the project could be built for $56 million less than the Corps had previously estimated. As we recommended, the Corps also had its reanalysis reviewed by an external party.

Oregon Inlet Jetty Project

Our review of the Oregon Inlet Jetty project found that the Corps' most recent cost benefit analysis of the project, issued in 2001, had several limitations, and as a result did not provide a reliable basis for deciding whether to proceed with the project. The Corps' analysis did not consider all alternatives to the project, used outdated data to estimate benefits to fishing trawlers, did not account for the effects on smaller fishing vessels, and used some incorrect and outdated data to estimate damage and losses to fishing vessels. For example, the Corps did not evaluate alternatives to the jetty project and 20-foot deep channel that it proposed, although many vessels that currently use the inlet could have benefited from a shallower and less costly channel-deepening project. Further, the Corps used outdated data to estimate benefits of the project to larger (75-foot long) fishing trawlers that resulted in a significant overestimate of benefits.

We determined that if the Corps had incorporated more current data on the actual number of trawlers that used the inlet in its analysis, benefits would have been reduced by about 90 percent, from over $2 million annually to less than $300,000. Conversely, the Corps did not estimate the benefit to the smaller fishing vessels that use the inlet. However, since

these vessels could have a shallower draft than the large vessels they might not have benefited from the deeper channel and jetty that was proposed to benefit larger vessels. Additionally, the Corps miscalculated benefits due to a reduction in the damages that would occur to trawlers because of accidents that occur due to the conditions in the inlet. The Corps overestimated these benefits because it assumed, based on anecdotal evidence, that all of the 56 commercial fishing vessels regularly using the inlet would be damaged during the year and would incur about $7,000 each in damages. Our review of Coast Guard data showed that only about 10 commercial fishing vessels actually reported damages during the time frame the Corps considered, these damages averaged about $1,700 per year. Because of the concerns raised by our report, the Corps, the Council on Environmental Quality, and the Departments of Interior and Commerce mutually agreed not to proceed with this project.

Sacramento Flood Protection Project

Our review of the Corps' Common Features project, which is intended to provide flood protection to the Sacramento area, found that the Corps did not fully analyze likely cost increases or report them to the Congress in a timely manner. The Corps also incorrectly calculated project benefits because it overstated the number of properties protected by about 20 percent and used an inappropriate methodology to calculate the value of protected properties.

After a 1997 storm demonstrated vulnerabilities in the project, the Corps substantially changed the design of the project but did not analyze likely cost increases. Some of the design changes led to substantial cost increases. For example, in some areas the Corps tripled the depth from almost 20 to almost 60 feet of cutoff walls designed to prevent seepage beneath the levees. The Corps also decided to close gaps in the cutoff walls in areas where bridges or other factors caused gaps. These changes added $24 million and $52 million, respectively, to a project that was originally, in 1996, estimated to cost $44 million. By the time the Corps reported these cost increases to the Congress in 2002, it had already spent or planned to spend more than double its original estimated cost of the project.

The Corps also made mistakes in estimating the benefits from this project because in 1996 it incorrectly counted the number of properties protected by the project by almost 20 percent and incorrectly valued these protected properties. Although the Corps updated its benefit estimate in 2002 to reflect new levee improvements authorized in 1999, we found that even this reanalysis contained mistakes in estimating the number of properties

that would be protected and therefore continued to estimate higher benefits from the project than would be warranted.

As with the Delaware River Deepening study, we found that all three organizational review levels within the Corps reviewed and approved the benefit analyses for this project, but these reviews did not identify the mistakes that we found.

The Corps concurred with our report's recommendations and is working on a General Reevaluation Report for the uncompleted portions of the project that is due in the spring of 2007.

Restrictions on the Corps' Hopper Dredges

In a 2000 report to the Congress, the Corps recommended that one of its dredges remain in a reserve status and that another be added to that status. However, we found that the Corps could not provide support for these conclusions and that its cost and benefit analyses supporting these conclusions had analytical shortcomings.

We also found that the Corps did not perform a comprehensive analysis of the ready reserve program and in fact could not provide any documentation of what analysis, if any, it had done. In addition, the Corps' recommendation that the reserve program be continued because it was beneficial was contradicted by evidence in the report showing that the price the government paid for dredging was higher after a Corps dredge was placed in reserve than before. We also questioned whether it was prudent to add another dredge to the reserve fleet without a comprehensive analysis in light of the fact that the dredge needed significant repairs to remain in service, even in reserve.

We also determined that the Corps had used outdated data and used an expired policy that could raise the government's cost estimate for hopper dredging work. This cost estimate is pivotal in determining the reasonableness of private contractor bids. If all bids exceed the government estimate by more than 25 percent, the Corps may elect to perform the work itself. Moreover, in making its estimate, the Corps had not obtained comprehensive industry data since 1988 although it had obtained some updated data for some cost items. In addition, the Corps used a policy on estimating transit costs that had expired in 1994. Use of this policy could significantly raise the estimate of transit costs for dredging contracts. For example, in one case, using the Corps' policy resulted in a transit cost estimate of about $480,000 as opposed to about $100,000 if the expired policy was not used.

As a result of our review, a conference committee report directed the Corps to report to the Appropriations Committees a detailed plan of how it intended to rectify the issues raised in our report. On June 3, 2005, the Corps issued a revised report to the Congress on its plans for the hopper dredge fleet.

The Corps' Reprogramming Activities Resulted in Inefficient Management of Civil Works Program Funds

The Corps' reprogramming guidance states that only funds surplus to current year requirements should be a source for reprogramming and that temporary borrowing or loaning is inconsistent with sound project management practices and increases the Corps' administrative burden. However, we recently reported that, over a two year period (fiscal years 2003 through 2004), the Corps moved over $2.1 billion through over 7,000 reprogramming actions. This movement of funds occurred because during these two years the Corps managed its civil works project funds using a "just-in-time" reprogramming strategy. The purpose of this strategy was to allow for the movement of funds from projects that did not have urgent funding needs to projects that need funds immediately. While the just-in-time approach may have moved funds rapidly, its implementation sometimes resulted in uncoordinated and unnecessary movements of funds from project to project.

In our review of projects from fiscal years 2003 and 2004, we found that funds were moved into projects, only to be subsequently revoked because they were excess to the project's funding needs. For example, in fiscal year 2004, 7 percent of the funds (totaling almost $154.6 million) from every non-earmarked construction project were revoked in order to provide funding to projects designated as "national requirements" by the Corps. The national requirements projects were a group of projects for which Corps headquarters management had promised to restore funding that had been revoked in previous years. However, after the Corps moved funds into the national requirements projects, the Corps revoked over a quarter of the funds, $38.8 million, from these projects because they actually did not need the funds. For example, one national requirements construction project, New York and New Jersey Harbor, received $24.9 million. All of these funds, plus an additional $10.3 million, were excess to the needs of the project at the time and were subsequently reprogrammed to other projects. Corps officials in the New York District told us that, prior to receiving the national requirements funds they had informed Corps headquarters that they could not use these funds.

We also found that the use of the just-in-time strategy resulted in funds being removed from projects without considering their near-term funding

requirements, such as projects with impending studies. For example, on August 1, 2003, the Corps revoked $85,000 from the Saw Mill River and Tributaries investigation project in New York because the funds were excess to the project's needs in the current year. Six weeks later, however, on September 15, 2003, $60,000 of funding was reprogrammed into the project because they were needed to initiate a feasibility study. Corps documents explaining the revocation of funds from the Saw Mill River and Tributaries project indicate that the Corps was aware of the project's impending needs, and knew that the project would need funds again in September 2003 to execute a feasibility study.

Further, under the just-in-time reprogramming strategy, funds were moved into and out of the same project on the same day as well as numerous times within a fiscal year. Overall, 3 percent of investigations and construction projects in fiscal year 2003 and 2 percent of investigations and construction projects in fiscal year 2004 moved funds into and out of the same project on the same day. For example, in fiscal year 2003, the Corps used 18 separate actions to reprogram approximately $25 million into, and about $10.5 million out of, the Central and Southern Florida construction project, including three separate occasions when funds were both moved into and out of the project on the same day.

The just-in-time reprogramming strategy also moved money into and out of projects without regard to the relative priorities of the projects. During the period of our study, the Corps lacked a set of formal, Corps-wide priorities for use when deciding to reprogram funds from one project to another. Instead, according to the Chief of the Civil Works Programs' Integration Division, during fiscal years 2003 and 2004, reprogramming decisions were left up to the intuition of program and project managers at the district level. While this decentralized system might have allowed for prioritized decision-making at the district level, when reprogramming actions occurred across districts or across divisions, the Corps lacked any formal system of evaluation as to whether funds were moving into or out of high-priority projects. The lack of a Corps-wide priority system limits the Corps ability to effectively manage its appropriations, especially in an era of scarce funding resources when choices have to be made between competing needs of donor and recipient projects.

Finally, the Corps' practice of allocating all funds to projects as soon as the funds are allotted to the Corps, coupled with the reprogramming flexibility provided to the districts, may result in an elevated number of reprogramming actions. Typically, once the Corps receives appropriated funds from the Congress, the Corps disperses all of these funds directly

into project accounts at the district level. Allocating funding in this manner could result in some projects receiving more money than they are able to spend. In some cases that we reviewed, the Corps dispersed an entire fiscal year's worth of funding to a project even though they knew that the project manager could not spend all of the funding. The flexibility provided to district managers once they receive their funding may also increase the number of reprogramming transactions. According to some Corps program managers, the relative ease of conducting reprogramming actions at the district level, without the need to obtain division or headquarters approval, creates incentives for project managers to transfer funds among projects within the district even if it creates a greater number of reprogramming actions. For example, when project managers have an immediate need for funds, they may be more likely to reprogram funds between projects within their own district, even if the donor project has a need for funds in a few weeks or months, because Corps guidance allows them to do so.

The Corps' reprogramming practices place a large demand on the administrative resources of the agency. In fiscal year 2003, after receiving their appropriated funds from the Congress, the Corps conducted at least one reprogramming action every business day of the fiscal year except for 4 days; after receiving its funds in fiscal year 2004, the Corps conducted at least one reprogramming action on every business day of the fiscal year except for 14 days. Each reprogramming action conducted requires the Corps to expend time and personnel resources to locate donor projects, file necessary paperwork, and in some cases obtain the approval of appropriate Corps staff and, possibly, the Congress. In particular, locating sources of donor funding is often a time-consuming process, as the project manager seeking funding must wait for other project managers to acknowledge excess funds and offer them for use on other projects.

In response to the findings in our report, the Congress directed the Corps to revise its procedures for reprogramming of funds starting in fiscal year 2006 to reduce the amount of reprogramming actions that occur and would institute a more rationale financial discipline for the Corps Civil Works appropriations accounts.

Corps' Response to GAO's Findings and Recommendations

In all five of the reports discussed here, the Army or the Department of Defense essentially agreed with our findings and conclusions and agreed to take actions to address our recommendations. In some cases, the Corps has completed the actions and in others they are underway or planned. Of note, in 2005, the Corps amended its policy on external review of its Civil

Works decision-making documents, including cost and benefit analyses to allow for outside review in certain cases. Specifically, according to the Corps' revised policy, external peer review of such documents will take place where the "risk and magnitude of the proposed project are such that a critical examination by a qualified person or team outside of the Corps and not involved in the day-to-day production of a technical product is necessary." In addition, the Corps has reported that it has undertaken a number of other improvements, including (1) updating and clarifying its project study planning guidance, (2) establishing communities of practice to foster technical competence and share knowledge among individuals who have a common functional skill, and (3) reorganizing to foster integrated teamwork and streamline the project review and approval process.

In closing, Mr. Chairman, we have found that the Corps' track record for providing reliable information that can be used by decision makers to assess the merits of specific Civil Works projects and for managing its appropriations for approved projects is spotty, at best. The recurring themes throughout the five studies that are highlighted in our testimony clearly indicate that the Corps' planning and project management processes cannot ensure that national priorities are appropriately established across the hundreds of civil works projects that are competing for scarce federal resources. While we are encouraged that the Corps and/or the Congress have addressed or are in the process of addressing many of the issues we have identified relating to these individual projects, we remain concerned about the extent to which these problems are systemic in nature and therefore prevalent throughout the Corps' Civil Works portfolio. Effectively addressing these issues may therefore require a more global and comprehensive revamping of the Corps' planning and project management processes rather than a piecemeal approach.

This concludes my prepared statement, Mr. Chairman. I would be happy to respond to any question that you or Members of the Subcommittee may have.

GAO Contact and Staff Acknowledgements

For further information on this testimony, please contact Anu Mittal at (202) 512-3841 or mittala@gao.gov. Individuals making contributions to this testimony included Ed Zadjura, Assistant Director.

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Mr. ISSA. Thank you. And I want to thank you for your testimony and the other testimonies arriving in a timely fashion.

Mr. Lamont, I want to thank the Corps for getting theirs in to OMB on time. I will mention that as we are trying to put together questions, OMB held it up until 6 p.m. last night. So hopefully we will be thorough in our questions and the minority counsel when they arrive I am sure are going to somewhat have the same story of feeling that you did not blind-side them but they did not have a lot of notice.

Mr. LAMONT. Thank you for your understanding.

Mr. ISSA. We certainly understand the Corps was timely in its delivery to the administration.

Mr. Ellis.

STATEMENT OF STEVE ELLIS

Mr. ELLIS. Thank you. Good afternoon, Mr. Chairman. I am Steve Ellis, vice president of programs at Taxpayers for Common Sense, a national nonpartisan budget watchdog. Thank you for holding this hearing on the U.S. Army Corps of Engineers' planning process and project priorities.

I want to be clear from the outset that I have a great deal of respect for the Corps and for Congress. However, we have been significantly concerned about the well-documented waste of taxpayer dollars on our Nation's water resources program.

Over the last several years there have been numerous studies into the Corps' shortcomings, some of which were just mentioned. In a more direct way, Katrina exposed many of these same weaknesses. It appears Congress's response has been to do nothing because the lack of strong rules, easily manipulated economics, and a priority-free environment lends itself to pork barrel spending and political machinations.

Congress and the Corps have become, wittingly or unwittingly, partners in wasting the U.S. taxpayers' money. The agency's roughly $5 billion budget is almost entirely made up of earmarks for projects. By courting Members of Congress, the Corps helps ensure that their budget level is maintained. The Corps takes care of Congress and Congress takes care of the Corps.

The Army Inspector General pointed out that for the Corps, "the budget process was deemed a first-half irrelevancy. The measure of effectiveness of the divisions and districts was the amount of funds actually appropriated by Congress."

Then chairman of the Energy and Water Appropriations Committee, Sonny Callahan, indicated his interest in getting the Dog River in Mobile, AL dredged because it had silted in too much for even recreational traffic. Recreational dredging is not a Corps mission, so the project was redefined as environmental restoration because as noted in an internal Corps memo, "The project is Congressman Callahan's personal initiative. The yellow dot on the photo below shows Mr. Callahan's Mobile residence in relation to the Dog River." I can tell you that it was right next door. The Dog River was his back yard.

The Corps is incapable of correcting itself. For example, dredging projects on the Delaware and the Columbia Rivers were found by independent experts to not be economically justified, returning pen-

nies for every dollar invested. In response, the Corps created review panels but then ignored serious economic shortcomings in the projects, declared victory, and moved ahead with them.

Part of the blame lays with the rules that govern project selection, the Principles and Guidelines. More than 20 years old, these rules need to be revised to consider new factors in the benefit/cost analysis, updates to the economic methodology and reorienting the civil works program toward fewer and less structural projects.

For example, the Corps' current method of calculating benefits has encouraged high-risk development by creating a false sense of confidence in flood damage reduction projects. To be sure, flood insurance and disaster relief payments have also contributed but now a levee that is built to protect soybeans can end up growing subdivisions.

Since the 1920's the Federal Government has spent more than $123 billion on flood damage reduction projects. During that same period, average annual flood damages have nearly trebled to $6 billion.

As projects churn through the flawed development process, they end up in a heap called a backlog. The Corps has a $58 billion backlog of authorized projects that have yet not been constructed. There is no prioritization system for projects, so the $2 billion in annual construction funding is spread thinly across many projects.

Corps appropriations include irrigation systems, wastewater treatment, and water supply facilities, none of which are primary Corps missions. The Corp is involved in building schools. Building and renovating schools is a laudable job but should not be a priority of the Nation's premier water resources agency.

The lack of priorities and the symbiotic Corps-Congress relationship have significant costs. President Bush has frequently criticized the pre-9/11 mindset. Well, those making the much-ado-about-nothing argument on the Corps are suffering from a pre-Katrina mindset. With more than 1,000 lives lost and a total cost likely exceeding $100 billion, we need to fundamentally alter our country's approach to water resources if we are to avoid this devastation in the future.

After Katrina hit and the levees failed in New Orleans, many said we did not spend enough money. No, we did not spend enough money wisely. Louisiana took home $1.9 billion in Corps funding in the 5 fiscal years preceding Katrina. That was more than any other State. California came in a distant second at less than $1.4 billion. We had the money. It went to the wrong things, like a new lock on the Industrial Canal in New Orleans. Levees on the very same Industrial Canal failed, inundating the lower Ninth Ward. In retrospect, lock or levees? I hope our priorities would be different today.

In closing, to reign in this culture of waste, strong new measures must be enacted. This includes earmark and lobby reform. It also means modernizing the Corps by establishing independent review, developing a prioritization system, and updating the Principles and Guidelines. The earmarked project-by-project budgeting must be ended. It is up to Congress to reign in the Corps and the excesses of their fellow lawmakers.

Thank you for holding this hearing and we hope that we can work together to bring the Corps of Engineers into the 21st century and to meet our country's pressing water resources needs in a fiscally responsible manner. Thank you.

[The prepared statement of Mr. Ellis follows:]

Strengthening the Nation's Water Infrastructure: The Army Corps of Engineers' Planning Priorities

Testimony of Steve Ellis
Vice President of Programs, Taxpayers for Common Sense
Before
Subcommittee on Energy and Resources
House Committee on Government Reform

March 15, 2006

Good Afternoon, Chairman Issa and members of the Subcommittee. I am Steve Ellis, Vice President of Programs at Taxpayers for Common Sense (TCS), a national, non-partisan budget watchdog. Thank you for holding this hearing on the U.S. Army Corps of Engineers planning process and project priorities – or in our view, the lack thereof.

Over the last several years, there have been numerous studies of the shortcomings in Corps planning processes, project design, and economic analysis. In a much more direct way, Katrina exposed many of these same weaknesses of the Corps' civil works program. However, what has been most staggering is that Congress's response has been to do nothing. With all this evidence and no action, one can only conclude that Congress likes the Corps the way it is. And why not? The lack of strong rules, easily manipulated economics, and the priority-less environment lends itself to pork barrel spending and political machinations.

You could say that Congress and the Corps grew up together. In fact, the Corps claims to be older than the Republic, tracing its origins back to the fortifications at Bunker Hill in 1775. In the 1820s, the Corps was given the mission of making the nation's waterways navigable. That was the beginning of a match made in hog heaven. In 1836, the Ways and Means Committee had already found 25 wasteful Corps projects. In 1900, Theodore Burton, a Republican Congressman from Ohio decried the pork barrel politics of the Corps civil works program and established the Board of Engineers for Rivers and Harbors to review and ensure projects were meritorious; the board was disbanded in the early 1990s to accelerate the project delivery.

As you can see, the Corps's symbiotic relationship with Congress is not a new dynamic, and it often left the President on the outside looking in. When signing the Rivers and Harbors Act[1] of 1950, President Truman said, "certain projects authorized in this act … do not justify the expenditure of Federal funds."[2] Harold Ickes, Interior Secretary for both Truman and FDR, went further stating, "It is to be doubted whether a federal agency in the history of this country has so wantonly wasted money on worthless projects as has the Corps of Engineers.... No more lawless or irresponsible federal group than the Corps of

[1] The Rivers and Harbors Acts were the precursor to today's Water Resources Development Act – an omnibus bill of many Corps project authorizations.
[2] President's Special Message to the Congress Following the Signing of the Rivers and harbors Bill. May 22, 1950.

Engineers has ever attempted to operate in the United States."[3] When he vetoed the Rivers and Harbors Act of 1958, President Eisenhower wrote "I cannot overstate my opposition to this kind of waste of public funds," on projects that "have no economic justification."[4] Presidents Carter and Reagan effectively tag-teamed Congress and the Corps, denying any new water project bills for more than a decade.

Simply put, Congress and the Corps have become partners in wasting U.S. taxpayer's money. How is this possible, how has this Executive Branch agency become more like an adjunct of the Legislative Branch? Well, the Corps knows who butters their bread. The agency's roughly $5 billion budget is almost entirely made up of earmarks for projects. By courting members of Congress, the Corps help ensure that their budget level is maintained. For example, in the President's FY2007 budget proposal, 523 projects that were funded by Congress in FY2006 were zeroed out.[5] The Corps takes care of Congress, and Congress takes care of the Corps. As Rep. Jack Kingston (R-GA) put it, "The way I see it, the Corps is an agency that likes projects...Give them a dollar and they will push it anyway you want."[6]

One recent example of a member of Congress telling the Corps where to push the funding was former Rep. Sonny Callahan (R-AL), then-Chairman of the Energy and Water Appropriations Committee. Rep. Callahan indicated his interest in getting the Dog River in Mobile, Alabama dredged because it had silted in too much for even recreational traffic. Recreational dredging is not a Corps mission, but the project was redefined as environmental restoration to move it through. Why? Well here's the commentary from an internal Corps memo, "The project is Congressman Callahan's personal initiative. The yellow dot on the photo below shows Mr. Callahan's Mobile residence in relation to the Dog River."[7] Well where is that yellow dot? Right next to the Dog River.

As I mentioned, the Corps budget is project driven. Generally, these projects are devised at the District level. Each District needs to generate projects to ensure that staff and operations are adequately funded. Further, the cost-sharing provisions – where the local sponsor pays half of the feasibility study costs and a share of the construction costs – have created what the Army Inspector General (IG) called the "customer service model" whereby the Corps sees the project sponsor as the sole customer in a project.[8] In reality, the taxpayer is the majority investor in most Corps projects, but the Corps treats the taxpayer as a silent partner, and in a bizarre way, the local sponsor controls whether the project gets built. If the feasibility study doesn't recommend the project the local sponsor wants, then the project won't get built. So, Corps feasibility studies generally side with the local sponsor over what is in the best economic interest for the nation.

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[3] Bill Lambrecht. *Washington Monthly*. "The new water wars: on the Missouri and rivers further east, dying industries control the flow and leave emerging businesses high and dry." May 2005.
[4] President's Message to Congress Vetoing Authorizing Appropriations for Rivers, Harbors, and Flood Control Projects. April 15, 1958.
[5] Summary of the "FY 2006 Appropriations Not in the President's FY 2007 Budget" table in the Fiscal Year 2007 Civil Works Budget for the U.S. Army Corps of Engineers. p 105-121.
[6] Michael Grunwald. *Washington Post*. "In Everglades, A Chance For Redemption." September 14, 2000. p A1.
[7] Mobile District, U.S. Army Corps of Engineers. Dog River Pilot Project, Alabama Issue Paper. April 12, 2001.
[8] Executive Summary of the U.S. Army Inspector General Agency Report of Investigation (Case 00-019)

After reviewing the Upper Mississippi River navigation project, the Army IG concluded that for the Corps, the "[t]he budget process was deemed a first half irrelevancy. The measure of effectiveness of the Divisions and Districts was the amount of funds actually appropriated by Congress."[9] Further, the IG found that there were "strong indications that institutional bias might extend throughout the Corps. Advocacy, growth, the customer service model, and the Corps' reliance on external funding combined to create an atmosphere where objectivity in its analyses was place in jeopardy. These influences created a tension with the honest broker role inherent in reconnaissance and feasibility studies."[10]

The Corps and navigation boosters in Congress have spent more than a decade trying to get a multi-billion dollar lock construction project on the Upper Mississippi River across the starting line. Economics, reality, and the criticism of the scientific and government watchdogs at the National Academy of Sciences, the Army Inspector General, and the Congressional Research Service have served as only minor impediments. In 2000, the former senior economist for the study blew the whistle on the Corps for cooking the economic books. The IG agreed.[11] But the Corps' forced reanalysis only delayed the pre-ordained conclusion. Last year the Corps recommended seven new navigation locks for the Upper Mississippi River System.[12] The House and the Senate Environment and Public Works Committee responded by passing an authorization for a $1.6 billion project to build the new locks in the Water Resources Development Act last year.[13] The fact that Assistant Secretary of the Army (Civil Works) and independent entities point out that the Corps economic grounding for the project is specious has not stopped the Congressional boosters or the Corps from pushing the project.[14]

The Upper Mississippi Navigation project is a classic example of problems with the Corps. But it is by far not the only lens to observe Corps shortcomings. Dredging projects on the Delaware and Columbia Rivers provide good examples of the Corps' inability to police itself. Both of these projects were independently examined and found not to be economically justified by a wide margin.[15]

The Government Accountability Office review of Delaware Deepening project found "miscalculations, invalid assumptions, and the use of significantly outdated information" estimating that the projects annualized benefits were $13.3 million and the annualized costs $40.1 million – roughly 33 cents return for each taxpayer dollar invested.[16] After the scathing GAO report, the Corps hired a contractor that had close dealings with the Corps to conduct the review. The reviewer and the Corps missed or ignored some of the

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[9] *Ibid.* p 7.
[10] *Ibid.* p 6.
[11] *Ibid.*
[12] Chief of Engineers Report, Upper Mississippi-Illinois Waterway System. 15 December 2005.
[13] H.R. 2864 and S. 728,109th Congress.
[14] John P. Woodley, Assistant Secretary of the Army (Civil Works) January 17, 2006 letter to Joshua Bolten, Director, Office of Management and Budget. Also, several National Academy of Sciences reviews of the project.
[15] The Government Accountability Office (GAO) reviewed the Delaware Deepening project (GAO-02-604). The Oregonian newspaper did its own analysis of the project.
[16] General Accounting Office (now Government Accountability Office), "Delaware Deepening Project" Rep. No. GAO-02-604. June 2002.

project's failures. To get over the economic bar, the Corps inflated benefits and shaved costs – the Corps now estimates the project will return $1.13 for every tax dollar invested.[17] Even with the inflated benefit-cost ratio, it is still a terrible investment.

The *Oregonian* newspaper found that the Columbia River Deepening project would return no more than 88 cents for each dollar invested. The Corps-created review panel for the Columbia found serious shortcomings in the Corps analysis – such as lack of a multi-port analysis, inappropriate inclusion of traffic diverted from other ports, and improper method of inflating benefits. One outrageous example pointed out by the review panel, and ignored by the Corps, dealt with vessel draft. In all cases the Corps determined that by deepening the channel by three feet, vessels would automatically come in with a 3 foot deeper draft. While that might be justified for those that were coming in near maximum channel depth before the deepening, the Corps included vessels that were coming in no where near the maximum draft. It is not realistic that simply because the channel was deeper that shippers would take advantage of it when they could have already sailed in deeper before and didn't.

In both of these cases, the Corps ignored serious economic shortcomings in the projects, declared victory, and moved ahead with them. The important message here is that the Corps is utterly incapable of reviewing itself.

What is happening in our planning and design process that is enabling the Corps and Congress to develop projects that fail to meet true national needs? Part of the blame lays with the rules that govern project selection, the Principles and Guidelines (P&G). More than 20 years ago these rules were a significant advance in the concept of analyzing project benefit and costs, developing projects with national benefits, and establishing some objectivity in an inherently political process. But times have changed, and the rules have not. In their 2004 report, the National Academy of Sciences remarked, "it has been over 20 years since the P&G has been updated and revised. The P&G planning process is part of a federal water resources decision making environment in which the product has become adherence to process, rather than sound projects and operations plans that serve contemporary needs."[18]

As projects churn through the flawed development process they end up in heap called the backlog. The Corps has a $58 billion backlog of authorized projects that have not yet been constructed. The 109th Congress is poised to add at least another $12 billion to that pile with the proposed Water Resources Development Act. Remember, the Corps gets roughly $2 billion in construction funding annually. It would take 35 years at current funding levels to pay for all of these projects. To make matters worse, the list is not prioritized. There's nothing to say that a navigation project for Los Angeles Harbor is higher priority than a navigation boondoggle, there's nothing to say that providing adequate flood protection for Sacramento outweighs pumping sand on a beach in front of a millionaires house. The huge backlog and lack of priority setting enables politics to control.

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[17] Dr. Robert Stearns. "Strike Three … The Corps Fails Again to Justify Delaware River Deepening." July 14, 2003.

[18] National Academy of Science, Panel on Methods and Techniques of Project Analysis. "Analytical Methods and Approaches for Water Resources Project Planning." 2004. p. 108

As though the Corps did not have enough work, in 2000, senior Corps leadership developed the Program Growth Initiative. This ambitious plan, developed without the involvement of the administration, outlines: growth targets (50% over the next five years); major projects to help get them there (including the Upper Mississippi River locks); impediments to growth (Principles and Guidelines, Cost-sharing); and risks of the strategy (not supporting the administration budget). This business plan to grow the Corps undercut Executive branch authority, made direct and bold assertions about the need to close congressional relationships, and turned the idea that the military works for the civilian leadership right on its head.[19]

With all this concentration on new construction, operation and maintenance of the nation's current infrastructure is daunting - 926 harbors; navigation locks and dams at 230 locations; 383 major lakes and reservoirs; and 75 hydropower facilities fall by the wayside.[20] Let's face it, nobody cuts a ribbon for maintenance. Although in recent years O&M funding has exceeded the Corps' construction funding, the critical maintenance backlog is enormous. In addition to the normal O&M funding, the Corps estimates the critical maintenance backlog is nearly a billion dollars with additional maintenance needs weighing in at another billion.[21] A key business principle to maintain what you have before expanding into new venues, but pressure from members of Congress desiring to cut a ribbon for a project in their district and the simple engineer's desire to build overwhelm fiscal prudence.

The Corps' can-do attitude – their motto is *Essayons*, French for "let us try" – and their empire building instincts has enabled Congress to lead them into areas beyond their primary missions of navigation, flood damage reduction, and environmental restoration. The Corps is building an irrigation system in Arkansas. The agency is providing funding to build wastewater treatment and water supply facilities throughout the country with the Environmental Infratstructure program. Since its creation in 1992, it has not received a dime in either President Clinton or President Bush's budget, yet it has grabbed more than $100 million in appropriations.[22] But a prime example of mission creep is that the Corps is involved in building schools, some right here in Washington, DC. In fact, the Corps helped cut the ribbon on the Thomson Elementary School in Northwest DC this year. Building and renovating schools is a laudable job, but should not be a priority of the nation's premier water resources agency.[23]

Where does this symbiotic Corps-Congress relationship, lack of priorities, project driven mindset leave us. Well, as much as some want to dismiss this an irrelevant discussion about a $5 billion agency when the country is facing annual budget deficits exceeding $300 billion, there is a significant cost here. President Bush has frequently criticized the pre-9/11 mindset – well those making the "much ado about nothing" argument are suffering from a pre-Katrina mindset. Clearly the greatest natural disaster this country has

[19] Program Growth Initiative. Slides available at Taxpayers for Common Sense.
[20] President's FY2004 Civil Works Budget for the U.S. Army Corps of Engineers.
[21] See http://www.usace.army.mil/civilworks/hot_topics/aging_infrastructure.htm
[22] National Wildlife Federation and Taxpayers for Common Sense. "Crossroads: Congress, the Corps of Engineers and the Future of America's Water Resources." March 2004. p. 65.
[23] Information on U.S. Army Corps of Engineers work on D.C. Public Schools is available at http://www.nab.usace.army.mil/projects/WashingtonDC/DCPS/dcps.htm

faced in recent memory, with more than a 1,000 lives lost and the total cost exceeding $100 billion, Katrina should help to fundamentally alter our country's approach to water resources if we are to avoid this devastation in the future.

Katrina exposed many flaws in national water resources policy. First, the lack of prioritization of precious federal funding dollars has allowed resources to be diverted to wasteful Corps projects. After Katrina hit and the levees failed in New Orleans, many said we did not spend enough money – no we did not spend enough money wisely. Louisiana took home $1.9 billion in Corps funding in the five fiscal years preceding Katrina. That was more than any other state; California came in a distant second at less than $1.4 billion.[24] We had the money; it went to the wrong things – like the J. Bennett Johnston Waterway, formerly known as the Red River, but since renamed after it's political patron, Sen. Johnston from Louisiana. Another beneficiary of the largesse was a new lock on the Industrial Canal in New Orleans. TCS named this $750 million project the 5th most wasteful Corps project in the country, but the Louisiana delegation was able to steer millions to it in recent years.[25] Levees on the very same Industrial canal failed, inundating the Lower Ninth Ward. In retrospect, lock or levees, I hope our priorities would be different today.

I mentioned the levees failing. The Corps, the National Academy of Sciences, and the American Society of Civil Engineers are all conducting studies on why the levees and floodwalls failed. None of the studies are completed yet, but the preliminary results are terrifying. It appears there were design and construction issues that led to the failures – this from the Corps, which was once regarded the premier engineering "firm" in the country. I can think of no better reason for independent review of costly, controversial, or critical projects. The stakes are too high, we must be sure.

Finally, our policies and programs have encouraged high-risk development. FEMA's flood insurance and disaster relief programs have certainly been a factor, but the Corps flood damage reduction projects have also created a false sense of confidence and driven development in higher risk areas. A levee built to protect soybeans can end up growing subdivisions. Since the 1920s, the federal government has spent more than $123 billion on flood damage reduction projects. During that same period, average annual flood damages have trebled to $6 billion (not even including Katrina-related costs).[26] In short, we are able to stop the smaller and medium events, but large events overwhelm our system and inundate those that have moved in behind our levees and floodwalls. The nation's flood damage reduction program must be reoriented so that as much as possible, we move people and critical infrastructure out of harms way. For densely populated areas in the floodplain or critical infrastructure that cannot be moved, we must provide the highest level of protection.

In closing, to rein in this culture of waste in both the Corps and the Congress, strong new measures must being enacted. This includes earmark & lobbying transparency and reform

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[24] Summary of the Energy and Water Corps of Engineers appropriations for Louisiana and California between FY01 and FY05. The funding in the GI, CG, O&M and MR&T accounts were the ones tallied.
[25] National Wildlife Federation and Taxpayers for Common Sense. "Crossroads: Congress, the Corps of Engineers and the Future of America's Water Resources." March 2004. p. 56.
[26] *Ibid.* p. 20.

legislation currently be considered. It also means modernizing the Corps by establishing independent review, developing a prioritization system, and updating the Principles & Guidelines to adopt modern economic methods and a more inclusive and robust model for determining project recommendations. The earmark method of developing the Corps budget project by project must be ended. The administration took a step in the right direction by aggregating O&M funding on a watershed basis in their most recent budget.

TCS agrees with the National Academy of Sciences, which pointed out, "[t]he Principles and Guidelines should be revised to better reflect contemporary management paradigms, analytical methods, legislative directives, and social, economic, and political realities. The new planning guidance should apply to water resources implementation studies and similar evaluations carried out by all federal agencies. A revised version of the P&G document should be periodically and formally reviewed and updated."[27] Clearly, the P&Gs need to be revised to consider new factors in the benefit-cost analysis, economic methodology should be updated and the civil works program should be reoriented toward fewer and less structural projects.

The Corps is a savvy agency, when they have been buffeted by criticism they are quick to come up with new plans. The latest is the 2012 plan. Marketed as a decentralized planning initiative, this program will effectively remove any last vestiges of national oversight for the civil works program. So after all the criticism of the District and Division drive for more projects to justify the budget, the 2012 plan will put them in the driver's seat.[28] Centers of excellence and some decentralization has merit, but the 2012 plan doesn't sound like reform to me. It will do nothing to establish priorities, it will not break the iron triangle of pork barrel water projects.

We are caught in a cycle of waste. It is up to Congress to own up to its responsibility as our elected representatives to rein the Corps and the excesses of their fellow lawmakers. Taxpayers for Common Sense stands ready to help you accomplish this. There is abundant justification to take action now and there are a lot of legislative ideas out there. We thank you for holding this hearing and hope that we can work together to bring the Corps of Engineers into the 21st century and meet our countries pressing water resource needs in a fiscally responsible manner.

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[27] National Academy of Science, Panel on Methods and Techniques of Project Analysis. "Analytical Methods and Approaches for Water Resources Project Planning." 2004. p. 108 and Report Recommendation 3.
[28] *USACE 2012*

Mr. ISSA. Thank you. That was not only almost exactly on the 5-minutes but you alternated very well between the failures of the Corps and the failures of the Congress. I thought that was pretty fair.

Ms. Birnbaum.

STATEMENT OF S. ELIZABETH BIRNBAUM

Ms. BIRNBAUM. Good afternoon, Mr. Chairman. Thank you for the opportunity to appear today. My name is Liz Birnbaum and, as you mentioned, I am the vice president for government affairs at American Rivers, the Nation's leading river conservation organization, with over 40,000 members and working with thousands of local watershed and river groups across the country. We also co-chair the Corps Reform Network, a growing coalition of more than 135 organizations from across the country.

To protect lives, communities, the economy, and the environment, Congress must modernize Corps of Engineers project planning. No stronger evidence is needed than the horrifying flooding of New Orleans, which highlighted many critical problems with the Corps' project planning and construction.

First, Corps projects repeatedly suffer from flawed project planning and design. Hurricane Katrina was a Category 3 storm when it reached New Orleans, a storm the flood walls were supposed to protect against. The floodwall design did not meet the Corps' own guidelines, and the Corps failed to act on additional concerns about unstable soils and levee heights. A panel of the American Society of Civil Engineers has concluded that the system's failure demonstrates that "fundamental flaws were part of how the system was conceived and developed."

Second, New Orleans exemplifies how many Corps projects destroy natural systems that provide the first line of defense against floods. Since the 1930's, Louisiana has lost about 1,900 square miles of coastal wetlands, which protect against storm surges. The Corps contributed to these wetlands losses with upstream projects that blocked the sediment necessary to nourish coastal wetlands and downstream levees that pushed the remaining sediment load out into the Gulf.

Another Corps project, the Mississippi River Gulf Outlet, or Mr. GO, also damaged 20,000 acres of coastal wetlands. But more than that, community leaders, activists and scientists had warned for years that Mr. GO would funnel storm surges directly to the city, yet the Corps did not act. The initial flooding that devastated St. Bernard Parish and the lower Ninth Ward came from Mr. GO.

Third, the Corps does projects that encourage development in high-risk areas, placing people in harm's way. After Hurricane Betsy hit New Orleans in 1965, killing 75 people, instead of reinforcing levees located at the city's edge, the Corps planned a new system stretching miles into uninhabited wetlands. The Corps then claimed the increased property values of the newly drained wetlands as an economic benefit. Tragically, many of these wetlands became the impoverished eastern Orleans Parish neighborhoods that suffered the brunt of Katrina's flooding.

Fourth, Corps projects and project funding do not prioritize national needs. While Louisiana receives far more money for Corps

projects than any other State, as Steve mentioned, the funding has not been directed to priority flood protection projects. Over the past 5 years Congress sent $1.9 billion, again as Mr. Ellis mentioned, none of which went to upgrade New Orleans' defenses. New Orleans' repeated requests for increased flood protection garnered only a small appropriation to study the problem.

The flooding of New Orleans is by no means the only evidence of the need to modernize Corps projects. The flood of studies listed in the attachment to my testimony, from the National Academy of Sciences, the Government Accountability Office, the Army Inspector General, and independent experts, shows that the Corps' problems are pervasive, affecting projects nationwide.

Although the problems are large, the solutions are manageable. A bill recently introduced in the Senate, S. 2288, would make necessary changes.

First, input from independent experts must be integrated into Corps project planning. A transparent process should allow independent outside experts to examine whether projects will meet needs while minimizing costs and environmental harm. S. 2288 would subject all projects costing more than $25 million or projects deemed controversial to review by an outside panel of experts. This input would then receive weight in the Corps' planning process.

Second, Congress should require the Corps to protect natural systems. In addition to avoiding harm to rivers and wetlands whenever possible, the Corps must mitigate any impacts that cannot be avoided. S. 2288 would require the Corps to meet the same mitigation requirements as everyone else does. Wetlands mitigation offers a host of benefits, including natural flood protection. One wetland acre, saturated one foot deep, retains 330,000 gallons of water, enough to flood 13 average homes thigh deep.

Third, the Corps' planning guidelines must be modernized. The Corps is operating under 20-year-old planning guidelines that promote the destruction of the healthy natural ecosystems that defend against storm surges and flooding but allow the Corps to recommend projects in high-risk areas, luring people into harm's way and that do not adequately address loss of life. Indeed, under the current rules, the Corps can count draining wetlands as an economic benefit of a project. S. 2288 would reinstate the Water Resources Council to address these and other failings of the Corps' planning guidelines, in consultation with the National Academy of Sciences.

And here I am going to accept the offer to step off my written testimony and mention the Corps cannot do this itself. The Water Resources Council established these guidelines in 1983 and then disbanded. It has not met since then. The Corps cannot fix this problem itself.

Finally, Congress should ensure that the Corps gives Congress necessary information to prioritize projects that will provide vital flood protection for urban areas and critical infrastructure, and avoid damage to natural flood protection systems. S. 2288 would ask the Water Resources Council to analyze how Corps projects can reflect national priorities for flood damage reduction, navigation, and ecosystem restoration. It would require the Corps to plan

projects that avoid the unwise use of floodplains and that restore and maintain natural systems that defend against flooding.

We urge Congress to address these lessons so tragically highlighted by Hurricane Katrina and we urge Congress not to pass another Water Resources Development Act unless needed reforms are included. We would be happy to work with the committee to make these changes a reality.

[The prepared statement of Ms. Birnbaum follows:]

Statement

of

American Rivers

before the

Energy and Resources Subcommittee
Government Reform Committee
U.S. House of Representatives

March 15, 2006

Presented by

S. Elizabeth Birnbaum
Vice President for Government Affairs

STATEMENT OF S. ELIZABETH BIRNBAUM
VICE PRESIDENT FOR GOVERNMENT AFFAIRS
AMERICAN RIVERS
BEFORE THE ENERGY AND RESOURCES SUBCOMMITTEE
OF THE GOVERNMENT REFORM COMMITTEE

March 15, 2006

Mr. Chairman, Congresswoman Watson, and members of the Subcommittee, thank you for the opportunity to present testimony on Strengthening the Nation's Water Infrastructure and U.S. Army Corps of Engineers Planning Priorities. My name is Liz Birnbaum, and I am the Vice President for Government Affairs at American Rivers, the nation's leading river conservation organization. American Rivers has more than 40,000 members, and works in partnership with thousands of local river and watershed organizations. American Rivers also co-chairs the Corps Reform Network, a growing coalition of more than 135 grassroots, regional, and national organizations from across the country working to modernize the way the Corps of Engineers (Corps) plans and constructs water projects.

To protect lives, communities, the economy, and the environment, Congress must change the nation's approach to water resource planning and modernize Corps project planning. There can be no stronger evidence of this need than the horrifying flooding of New Orleans after Hurricane Katrina. That unnatural disaster can be traced directly to misplaced priorities for water resource projects, flawed project planning and design, and construction of projects that destroyed the natural storm protection provided by Louisiana's coastal wetlands.

Unfortunately, these problems go far beyond New Orleans. Corps projects that destroy natural flood protection and essential habitat, Corps projects based on flawed analyses, Corps projects that are not needed and that do not address national priorities, Corps projects that wreak havoc on recreation, tourism, and other businesses that rely on healthy rivers, and Corps projects that squander agency resources and scarce tax dollars can be found all across the country.

American Rivers opposes the passage of another Water Resources Development Act until the rules and policies governing Corps project planning are modernized to ensure that future Corps projects are sound, address national priorities, and safeguard healthy ecosystems that protect and sustain communities.

The Post-Katrina Flooding of New Orleans Tragically Highlights the Urgent Need to Modernize Corps of Engineers Project Planning

Corps project planning clearly contributed to the post-Katrina devastation of New Orleans. Poor design by the Corps appears to have caused the floodwall failures that led to the flooding of most of New Orleans. Corps projects destroyed coastal wetlands that were thus not available to buffer the hurricane storm surge, funneled and intensified that surge into New Orleans, and encouraged the development of highly floodprone areas. Regrettably, all evidence to date supports the New

Orleans Times Picayune's description of the Corps as the "agency whose mistakes led to the deaths of more than 1,000 residents of this metro area."[1]

The New Orleans disaster highlights a number of critical problems with the Corps' planning process that must be addressed.

First, Corps projects repeatedly fail to provide their promised benefits because of flawed project planning and design. The catastrophic structural failure of the floodwalls and levees in New Orleans has been described as "the greatest engineering failure in American history, measured by lives lost, people displaced and property destroyed."[2] A panel of the American Society of Civil Engineers looking into the hurricane protection system failures has concluded that the system's catastrophic failure "demonstrates" that "fundamental flaws were part of how the system was conceived and developed."[3] That hurricane protection system was planned by the Corps.

Hurricane Katrina was no more than a Category 3 storm by the time it reached New Orleans, a storm event that the floodwalls were supposed to protect against. But Ivor Van Heerden, deputy director of the Louisiana State University Hurricane Center and director of the Center for the Study of Public Health Impacts of Hurricanes in Baton Rouge who has been investigating the system-wide failures, has said that the "system wasn't even capable of withstanding a Category One hurricane."[4] The floodwall design did not meet the Corps' own guidelines, and the Corps knew of – but did not modify its design to address –extremely unstable soils under sections of the floodwalls that warranted a much stronger design.[5] As disturbingly, the Corps ignored crucial data on the need to increase the levee heights. The Corps was informed as early as 1972 that new weather data showed that the levees needed to be higher than planned to protect New

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[1] Editorial, *Divided we flood*, New Orleans Times Picayune, February 8, 2006.
[2] Editorial, *After the Flood, Is New Orleans Safe?*, The Register-Guard (Eugene, Oregon), March 5, 2006, available at http://www.registerguard.com/news/2006/03/05/printable/ed.edit.return.0305.hr19yUF4.phtml?section=opinion (last visited March 13, 2006).
[3] Letter from the American Society of Civil Engineers External Review Panel to LTG Carl A. Strock, Chief of Engineers regarding the External Review Panel Progress: Report Number 1, February 20, 2006.
[4] Helen Lambourne, *New Orleans 'risks extinction'*, BBC News, February 3, 2006, available at http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/4673586.stm (last visited March 13, 2005)
[5] *E.g.*, Testimony from the November 2, 2005 Senate Homeland Security and Government Affairs Committee hearing, available at http://hsgac.senate.gov/index.cfm?Fuseaction=Hearings.Detail&HearingID=290 (last visited November 11, 2005); Bob Marshall, *Corps never pursued design doubts*, New Orleans Times Picayune, December 30, 2005; Kris Axtman, *Search for weak link in Big Easy's levees*, Christian Science Monitor, December 30, 2005; Lisa Myers, *New Orleans levee reported weak in 1990s*, MSNBC, September 30, 2005 available at http://www.msnbc.msn.com/id/9532037/ (last visited October 5, 2005); Ken Kaye, *Katrina may have been a Category 3 hurricane, not 4, when it struck New Orleans*, South Florida Sun Sentinel, October 4, 2005; Michael Grunwald and Susan B. Glasser, *Experts Say Faulty Levees Caused Much of Flooding*, Washington Post, September 21, 2005 at A01; Christopher Drew and Andrew C. Revkin, *Design Shortcomings Seen in New Orleans Flood Walls*, New York Times, September 21, 2005.

Orleans from stronger hurricanes. However, this data was not incorporated into the hurricane systems design specifications by the time work began in the 1980s.[6]

As Senator Mary Landrieu (D-La) recently told the New Orleans Times Picayune, "We have an unprecedented natural disaster followed by a manmade disaster of neglect, poor design, faulty design – and no telling what else will be discovered" as the investigations continue.[7]

Second, far too many Corps projects destroy vitally important natural systems that provide the first line of defense against floods. In addition to the problems with New Orleans' flood control structures, the Corps' over-engineering of the Mississippi River contributed to the devastation of New Orleans through the drastic loss of natural protection from coastal Louisiana wetlands. Since the 1930s, Louisiana has lost about 1,900 square miles of wetlands, and prior to Katrina, Louisiana was losing an additional 24 square miles of coastal wetlands each year. According to the State of Louisiana's experts, every 2.7 linear miles of coastal wetlands reduces storm surges by about one foot.[8] Major contributors to these wetlands losses were the Corps' upstream projects that served as barriers to the sediment necessary to nourish coastal wetlands, and the downstream levees through the wetlands that pushed the remaining sediment load out into the Gulf. The lost coastal wetlands were not available to reduce the size of Hurricane Katrina's storm surge before it reached the New Orleans area, making the city far more vulnerable than it otherwise would have been.

Another Corps project, a navigation channel known as the Mississippi River Gulf Outlet (MRGO), also greatly exacerbated the hurricane's impacts. The MRGO destroyed or severely damaged some 20,000 acres of coastal wetlands that could have helped reduce the storm surge.[9] But the MRGO did even more damage. For years, community leaders, activists, and scientists had warned the Corps that the MRGO was a hurricane highway that would funnel hurricane storm surges directly to New Orleans, and called for closing the outlet. The concern was validated in May 2005 by Louisiana State University's Hurricane Center. Hydrodynamic modeling showed that a "funnel" created by the MRGO and a nearby waterway would amplify storm surges by 20 to 40 percent. Experts now believe that this is precisely what happened. The initial flooding that overwhelmed St. Bernard Parish and the lower Ninth Ward of New Orleans came from the MRGO. The impacts were devastating. Only 52 of the 28,000 structures in St. Bernard Parish escaped unscathed from Katrina. In 1998, the St. Bernard Parish Council had unanimously called for closing the MRGO.[10]

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[6] Bob Marshall and Mark Schleifstein, *Corps ignored crucial levee data, Reports showed need for higher defenses*, New Orleans Times Picayune, March 8, 2006 available at http://www.nola.com/news/t-p/frontpage/index.ssf?/base/news-5/1141802754126640.xml (last visited March 13, 2006).

[7] Bob Marshall, *Overtopping claim won't hold water, experts say, Floodwall standards set in corps manual*, New Orleans Times Picayune, February 6, 2006, available at http://www.nola.com/printer/printer.ssf?/base/news-5/1139209587211190.xml (last visited March 13, 2006).

[8] http://www.msnbc.msn.com/id/9118570/ (last visited September 21, 2005).

[9] Louisiana State University, Louisiana Coast, and Sea Grant Louisiana, *"Closing" the Mississippi River Gulf Outlet, Environmental and Economic Considerations* available at http://www.ccmrgo.org/documents/closing_the_mrgo.pdf (last visited September 21, 2005). Maintaining this destructive outlet cost the federal taxpayers more than $12,600 per vessel per day. *Id.*

[10] Michael Grunwald, *Canal May Have Worsened City's Flooding*, Washington Post, September 14, 2005 at A21.

Third, the Corps builds projects that encourage development in high risk areas. The Corps planned the current New Orleans flood protection system after Hurricane Betsy hit New Orleans in 1965, killing 75 people. Instead of providing immediate protection by reinforcing levees located at the city's edge, the Corps planned an elaborate new system stretching miles into uninhabited wetlands. The Corps then claimed the increased property values of the newly drained wetlands as an economic benefit, and used those "benefits" to justify the project's $409 million price tag (this is the 1978 estimated price for construction). Tragically, many of the drained wetlands became the impoverished eastern Orleans Parish neighborhoods that suffered the brunt of Katrina's flooding.[11]

Fourth, Corps projects and project funding do not prioritize national needs. While Louisiana receives more money for Corps projects than any other state, the funding has not been directed to priority flood protection projects. Over the past five years, Congress sent $1.9 billion to Corps projects in Louisiana. During this period, California was a distant second, receiving less than $1.4 billion even though it has a population seven times as large as Louisiana, and five times the land area.[12] However, none of the money spent in Louisiana went to upgrade New Orleans' defenses to withstand a Category 5 hurricane. Instead of addressing real needs, in the past much money was directed to highly questionable non-flood control projects, including construction of a huge new lock for the New Orleans Industrial Canal and dredging little used waterways such as the MRGO, the Ouachita River, and the Red River (now known as the J. Bennett Johnston Waterway). New Orleans' repeated requests for increased flood protection garnered only a small appropriation to study the problem.

Problems with Corps Project Planning Reach Far beyond New Orleans: A Decade of Calls for Reform

The flooding of New Orleans is irrefutable evidence of the urgent need to modernize and prioritize Corps' project planning. But it is by no means the only evidence. Throughout the past decade, a flood of studies from the National Academy of Sciences, Government Accountability Office, Army Inspector General, U.S. Commission on Ocean Policy, and independent experts have called for substantial changes to the Corps' planning process, and identified a pattern of stunning flaws in Corps project planning.[13] These reports show that the Corps' project planning problems are pervasive and affect projects nationwide.

For example, in 2003, the Government Accountability Office reported on disturbing problems with the Corps' Sacramento Flood Protection Project.[14] In October 1996, Congress authorized construction of a Corps plan to improve sections of the American and Sacramento Rivers levees

[11] Jim Barnett, *Instead of shoring up levees, corps built more,* The Oregonian, September 18, 2005.
[12] Michael Grunwald, Money Flowed to Questionable Projects, Washington Post, September 8, 2005 at A01.
[13] A list of these studies is attached to this testimony.
[14] United States General Accounting Office, GAO-04-30, *Improved Analysis of Costs and Benefits Needed for Sacramento Flood Protection Project,* October 2003 ("GAO Sacramento Project Review") at 1. The 1996 Water Resources Development Act that authorized this project became law on October 12, 1996 (Pub. Law 104-303). The Chief's Report recommending the project was signed on June 27, 1996. Pub. Law 104-303 at § 101.

that protect downtown Sacramento and a largely agricultural area just north of downtown that is being rapidly developed.[15] The plan, which avoids the more expensive and environmentally destructive Auburn Dam project, involves constructing cut-off walls in the center of the levees to make them more impervious to water seepage, which is a major cause of levee failure.[16] Just a few months later, however, it became clear that the Corps had not executed the levee project in a way that would provide the promised level of flood protection. As the GAO reported: "A severe storm in January 1997 demonstrated vulnerabilities in the American River levees and alerted the Corps of the need to do additional work to close the gaps in the cut-off walls at bridges and other areas and extend the depth of some cut-off walls from about 20 feet to about 60 feet."[17] Had the Corps proceeded with the original construction project, lives clearly would have been put at great risk.

The Corps' original plan also miscalculated the levels of flood protection that would result from the levees. The 2003 GAO report found that the Corps' original plan significantly overestimated both the area and the number of homes that would be protected by the project. "The actual number of protected residential properties was about 20 percent less than the number that the Corps estimated."[18] The Corps also did not properly assess the value of the properties it did count.[19]

The need for significant design changes to address these vulnerabilities dramatically increased the project's cost. In 1996, the Corps estimated that the project would cost $57 million. Just six years later, the project was estimated to cost at least five times that amount. In 2002, the Corps said the project would cost between $270 million to $370 million.[20] These dramatic cost increases, though still much cheaper than a major new dam, have a very real impact on the project's local sponsors, who are required to pay a percentage of the total project cost.

Levee problems in California also demonstrate the lack of prioritization of Corps project planning and construction. Congress appropriated $41 million in levee repairs and related flood control work for the Sacramento-San Joaquin Delta levee system in FY2006, but the Corps said it would need at least an additional $52 million to do all the repairs it could carry out this year. As Chairman Jerry Lewis (R- CA) has acknowledged, fixing the deteriorating levees "is a high-level, critical problem" and "people will be killed" unless something is done quickly to strengthen the levee system.[21] Under a worst-case scenario, failure of these levees would

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[15] *Id.* at 1-2.
[16] *Id.*
[17] GAO Sacramento Project Review at 4.
[18] *Id.* at 5.
[19] *Id.* at 21.
[20] *Id.* Cost overruns are not unusual on Corps projects. For example, the Corps' estimate for just four of the many projects in its Everglades ecosystem restoration projects saw costs estimate increases totaling $1 almost billion in just five years. Gary Hardesty, U.S. Army Corps of Engineers, 5-Yr Report to Congress, HQUSACE Guidance, March 7, 2005 (this internal memorandum was leaked to the press, a copy is available at http://www.peer.org/docs/ace/2005_21_3_everglades_5-year_report.pdf (last visited June 1, 2005).
[21] David Whitney, House committee rejects $41 million levee funding, The Sacramento Bee, March 8, 2006, available at http://www.sacbee.com/content/breakingnews/v-print/story/14227620p-15051298c.html (last visited March 13, 2006).

submerge 3,000 homes, 85,000 acres of cropland, and contaminate and shut down the water supply to Central and Southern California.[22]

While much needed emergency repairs to California's levees have not yet been funded, $54 million has been appropriated since FY2003 to construct the proposed Yazoo Backwater Pumping Plant in the state of Mississippi, a project designed to promote intensified agricultural production in wetlands and other marginal farmlands.[23] In addition to clear problems with this project, these appropriated funds cannot even be spent for construction, as the project reevaluation report and environmental reviews still have not been completed.

The Yazoo Backwater Pumping Plant would cost federal taxpayers $191 million. Though the Corps touts this effort as an important flood control project, the project is nothing of the sort. In 2000, the U.S. Environmental Protection Agency reported that the project would drain or damage some 200,000 acres of highly productive wetlands, including portions of two National Wildlife Refuges. In addition to causing enormous habitat losses, this project will decimate natural flood protection in the region. A single wetland acre, saturated to a depth of one foot, retains 330,000 gallons of water – enough to flood thirteen average-sized homes thigh deep.

In addition to the unacceptable environmental costs and the direct costs of construction and operation, an independent economic analysis commissioned by the U.S. Environmental Protection Agency shows that if the project is constructed, the federal government will simply wind up paying more in farm subsidy payments. The Yazoo Pumps are specifically designed to drain wetlands so that agribusiness can intensify production on marginal lands that have always flooded, and some 80 percent of the project's alleged benefits will come from agricultural intensification. The independent study shows that increased farm subsidy payments will constitute virtually the entire very limited increase in farm income as a result of the Yazoo Pumps. The study also shows that the Yazoo Pumps will produce far less than 14 cents of agricultural benefits for each of the $191 million dollars it will cost to construct the project, and that the Corps overstated the agricultural benefits of the project by an incredible $144 million.[24]

The Yazoo Pumps will be constructed in one of the most sparsely populated regions in the state, and in an area that has not seen only very limited residential flooding since the Corps completed a major levee project in the region in the late 1970s. Federal Emergency Management Agency data shows that residential flooding is very limited in the project area, a fact that this is borne out by anecdotal evidence presented by the local *Deer Creek Pilot* newspaper during a 2003 series

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[22] Kevin Starr, Commentary, *California's calamity in waiting*, Los Angeles Times, November 20, 2005, available at http://www.latimes.com/news/printedition/suncommentary/la-op-starrlevees20nov20,1,5109876.story?coll=la-headlines-suncomment (last visited March 13, 2006). Kevin Starr is a Professor of History at the University of Southern California. His latest book is *California: A History.*

[23] The Yazoo Pumps received $10 million in FY2003, $12 million in FY2004, $12 million in FY2005, and $20 million in FY2006.

[24] Leonard Shabman and Laura Zepp (Department of Agricultural and Applied Economics Virginia Tech), *An Approach for Evaluating Nonstructural Actions with Application to the Yazoo River Backwater Areas*, February 7, 2000; Leonard Shabman, *Comments on Yazoo Backwater Plan Reformulation Report Economics*, September 26, 2000, both available at http://www.epa.gov/region4/water/specialprojects/yazoo/ (last visited March 13, 2005).

examining the Yazoo Pumps. During the 24-year period from 1979 to 2002, only 62 properties within the Yazoo Pumps project area filed flood insurance claims under the National Flood Insurance Program. Collectively, these properties filed 209 claims for damages totaling $1.664 million. At that rate, it would take more than 2,754 years to recoup the $191 million construction investment in the Yazoo Pumps.

Structural projects like levees can be an appropriate approach to protect large, well-established communities from floods. These communities deserve the support of the nation to protect themselves. In these situations, levees should be designed and constructed with the most advanced engineering and rigorous oversight and review and be able to withstand a 500-year flood. However, proposals for such construction must be tempered with a clear understanding of the value of natural flood protection and the relative costs of various proposals. In other areas, removing levees or rebuilding them further away from the river channel may be the most effective option for providing needed protection and for relieving pressure on levees downstream. Under any scenario, however, structural projects like the Yazoo Pumps that destroy natural flood protection and vital fish and wildlife habitat, and that do not address significant flooding, should not be constructed and certainly should not receive priority over far more vital national needs.

Corps Project Planning Must Be Modernized to Prevent Future Disasters

Although the problems are large, the solutions are manageable. With just a few systemic changes America can have the effective water resources and flood management agency it deserves. A bill recently introduced in the Senate, the Corps Water Resources Modernization and Improvement Act of 2006 (S.2288) would implement these much needed changes. Just this week, a letter from 125 national, regional, and grassroots organizations was delivered to the Senate in support of this legislation that will protect communities, the environment, and scarce taxpayer dollars.

Neither H.R. 2864, the Water Resources Development Act (WRDA) passed by the House in 2005, nor S.728, the WRDA reported by the Senate Environment and Public Works Committee in 2005, include these much needed reforms. Both of these bills must be reexamined in light of the water resources planning lessons so tragically highlighted by Hurricane Katrina.

The following reforms must be implemented before Congress gives the Corps more work to do. These reforms would give the Corps the tools it needs to a better job and would give Congress the information it needs to focus on national water resources needs:

Corps projects must focus on national priorities. As Hurricane Katrina so tragically demonstrated, the Corps does not prioritize projects to ensure public safety or to address the nation's most pressing needs. To protect communities and prevent future disasters, Congress must take steps to ensure that the Corps focuses its efforts on projects that will provide vital flood protection for population centers and critical infrastructure, and require that all Corps projects avoid impacts to natural flood protection systems.

Congress should require that Corps projects reflect national priorities for flood damage reduction, navigation, and ecosystem restoration, and provide guidance on setting those priorities. Congress should require that the Corps reduce the vulnerability of communities and critical infrastructure to flooding by designing projects that avoid the unwise use of floodplains, and that work to restore and maintain natural systems that provide the first line of defense against flooding. Congress should reinstate the Water Resources Council to develop guidance on prioritizing Corps projects and to assess the nation's vulnerability to floods to ensure that projects address the most pressing safety needs.

The Corps' planning guidelines must be modernized. The Corps is operating under woefully outdated planning guidelines that have not been updated in well over twenty years. These guidelines promote the destruction of healthy natural ecosystems that should be the first line of defense against storm surges and flooding; allow the Corps to recommend projects that encourage development of high risk areas, luring people into harm's way; and do not adequately address potential loss of life. In addition, the current guidelines discourage consideration of innovative and nonstructural approaches to water resources planning. They fail to account for the value of sustainable environmental protection, and ignore the value of services provided by natural water systems and wetlands, such as storing excess floodwater, cleansing and filtering water and providing habitat for wildlife. Indeed, under current rules, the Corps can count draining wetlands as an economic benefit of a project.

Numerous studies have called for updating the Corps' planning guidelines to provide an increased focus on protecting and restoring the environment, and to incorporate new methods and approaches to solving water problems. Congress should reinstate the Water Resources Council to develop revisions that will address these and other failings with the Corps' planning guidelines in consultation with the National Academy of Sciences. The Corps should be required to adopt those revisions, subject to public comment.

Input from independent experts must be integrated into Corps project planning. Multiple reviews have confirmed that many Corps projects are not based on the best available science, economics, or engineering, and that the Corps often ignores the views of the public, civic leaders, and scientists. It is essential that Congress establish a transparent process for obtaining oversight from independent outside experts who examine whether projects are designed to meet appropriate needs while minimizing costs and environmental harm. This input must then receive appropriate weight in the Corps' planning process.

Congress should require the Corps to subject all projects costing more than $25 million or projects that are deemed to be controversial to review by an outside panel of independent experts to ensure that those projects are properly designed; protect and restore natural systems that reduce flood damages and provide important ecological benefits; and ensure that limited resources are sent to effective, necessary project.

The Corps must protect natural systems that provide the first line of defense against flooding and other vital functions. The Corps often does not mitigate the impacts of its projects, adding to the loss of healthy systems that provide the first line of defense against flooding, are vital to fish and wildlife, and are essential for a vibrant economy. A May 2002

GAO report found that the Corps failed to mitigate at all for 69 percent of projects constructed since 1986, when the existing mitigation law was passed.[25]

Properly implemented mitigation will produce a host of vital benefits for communities, including much needed natural flood protection. As noted above, a single wetland acre, saturated to a depth of one foot, retains 330,000 gallons of water – enough to flood thirteen average-sized homes thigh deep. Healthy wetlands also filter pollutants from water; absorb and slow the release of storm runoff; recharge aquifers; provide crucial wildlife habitat for millions of migrating waterfowl, shorebirds, and other species; and provide recreation and enjoyment to millions of Americans who visit wetland areas each year. Fish and wildlife based recreation (which relies heavily on healthy wetlands) is a significant economic driver for the nation.

In addition to planning projects to avoid harming rivers and wetlands wherever possible, the Corps should be required to mitigate any impacts that cannot be avoided. To ensure effective mitigation, Congress should require the Corps to meet the same mitigation requirements as everyone else and establish clear requirements for mitigation plans.

Conclusion

American Rivers urges Congress to act quickly and decisively to address the water resources planning lessons so tragically highlighted by Hurricane Katrina. The Corps' project planning process must be modernized to protect lives, communities, the economy, and the environment. We urge Congress not to pass another Water Resources Development Act unless needed reforms are included. We would be happy to work with the Committee to make these reforms a reality.

[25] General Accounting Office, *U.S. Army Corps of Engineers Scientific Panel's Assessment of Fish and Wildlife Mitigation Guidance*, GAO-02-574, May 2002 at 4. The Corps provided the mitigation planning information for 150 projects that it says were authorized between the Water Resources Development Act of 1986 and September 30, 2001 that received construction appropriations. The Corps included mitigation plans for only 47 of these 150 projects. *Id.*

The Corps Must Be Modernized to Correct Project Planning Flaws Revealed By A Decade of Expert Analysis

A Summary of Studies by the National Academy of Sciences, Government Accountability Office, Army Inspector General, and Independent Experts

A decade of reports from the National Academy of Sciences, Government Accountability Office, Army Inspector General, U.S. Commission on Ocean Policy, and independent experts have revealed a pattern of stunning flaws in U.S. Army Corps of Engineers project planning and implementation, and urged substantial changes to the Corps' project planning process.

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2005 (November), R.B. Seed, P.G. Nicholson, et al. (Report No. UCB/CITRIS – 05/01), **Preliminary Report on the Performance of the New Orleans Levee Systems in Hurricane Katrina on August 29, 2005:** finds, based on field investigations performed by several teams of engineers and scientists in the wake of the passage of Hurricane Katrina, that three major and costly breaches in New Orleans levee systems appear to resulted from stability failures of the foundation soils and/or the earthen levee embankments pointing to failings in the design and oversight of construction of the levees by the Corps of Engineers, and that many of the other levees and floodwalls that failed due to overtopping might have performed better if conceptually simple details had been added and/or altered during their original design and construction.

2005 (September), GAO, (GAO-05-946), **Army Corps of Engineers, Improved Planning and Financial Management Should Replace Reliance on Reprogramming Actions to Manage Project Funds:** finds that the Corps' excessive use of reprogramming funds is being used as a substitute for an effective priority setting system for the civil works program and as a substitute for sound fiscal and project management. In FY 2003 and 2004, the Corps reprogrammed funds over 7,000 times and moved over $2.1 billion among projects within the investigations and constructions accounts.

2004 (October), National Academy of Sciences, **Review of the U.S. Army Corps of Engineers Restructured Upper Mississippi River-Illinois Waterway Feasibility Study (Second Report)**: finds flaws in the models used by the Corps to predict demand for barge transportation and concludes that these flaws preclude a demonstration that expanding the locks is economically justified. NAS also concludes that the Corps' study does not provide sufficient attention to inexpensive, nonstructural navigation improvements that could ease current barge traffic.

2004 (September), U.S. Commission on Ocean Policy, **An Ocean Blueprint for the 21st Century Final Report of the U.S. Commission on Ocean Policy**: recommends that the National Ocean Council review and recommend changes to the Corps' civil works program to ensure valid, peer-reviewed cost-benefit analyses of coastal projects; provide greater transparency to the public; enforce requirements for mitigating the impacts of coastal projects; and coordinate such projects with broader coastal planning efforts. Also recommends that Congress modify its current authorization and funding processes to encourage the Corps to

monitor outcomes from past projects and study the cumulative and regional impacts of its activities within coastal watersheds and ecosystems.

2004 (May), Congressional Research Service (RL32401), **Agriculture as a Source of Barge Demand on the Upper Mississippi and Illinois Rivers: Background and Issues:** finds that the grain traffic forecasts being used by the Corps to justify lock expansion on the Upper Mississippi River were overly optimistic as more and more grain is used to produce ethanol, livestock and other value-added products – products that are generally shipped by truck and rail, not barge. CRS further reports that significantly more grain is now being shipped by rail to Canada and Mexico (since passage of NAFTA) and to West Coast ports for shipment to Asia.

2004, National Academy of Sciences, **U.S. Army Corps of Engineers Water Resources Planning: a New Opportunity for Service:** recommends modernizing the Corps' authorities, planning approaches, and guidelines to better match contemporary water resources management challenges.

2004, National Academy of Sciences, **Adaptive Management for Water Resources Project Planning:** recommends needed changes to ensure effective use of adaptive management by the Corps for its civil works projects.

2004, National Academy of Sciences, **River Basins and Coastal Systems Planning Within the U.S. Army Corps of Engineers:** describes the challenges to water resources planning at the scale of river basins and coastal systems and recommends needed changes to the Corps' current planning practices.

2004, National Academy of Sciences, **Analytical Methods and Approaches for Water Resources Planning**: recommends needed changes to the Corps' "Principles and Guidelines" and planning guidance policies.

2003 (October), GAO (GAO-04-30), **Improved Analysis of Costs and Benefits Needed for Sacramento Flood Protection Project**: finds that the Corps dramatically miscalculated the costs and benefits of the Sacramento Flood Control Project in California, over-counted the residential properties that would be protected, miscalculated the area that would be protected, and used an inappropriate methodology to calculate prevented flood damages. GAO recommends that the Corps improve its cost benefit analysis and cost accounting procedures and submit the project to independent review (estimated to cost $57 million in 1996, by 2003 project costs had skyrocketed to between $270 and $370 million).

2003 (August), Pennsylvania Transportation Institute (PTI), **Analysis of The Great Lakes/St. Lawrence River Navigation System's Role in U.S. Ocean Container Trade:** finds fundamental flaws in the Corps' plan to expand the Great Lakes navigation system, including a host of factors not considered by the Corps that make the Great Lakes ports unattractive to international containerized cargo. PTI concludes that the Corps has not demonstrated that expansion is needed or that it would produce the claimed benefits and has not developed the necessary cost estimates to support an accurate benefit-cost analysis of the project.

2003 (May), Pew Oceans Commission, **America's Living Oceans, Charting a Course for Sea Change, A Report to the Nation, Recommendations for a New Ocean Policy:** recommends enactment of "substantial reforms" of the Corps, including legislation to ensure that Corps projects are environmentally and economically sound and reflect national priorities. Recommends development of uniform standards for Corps participation in shoreline restoration projects, and transformation of the Corps over the long term into a strong and reliable force for environmental restoration. Also recommends that Congress direct the Corps and other federal agencies to develop a comprehensive floodplain management policy that emphasizes nonstructural control measures.

2002 (September), GAO (GAO-02-803), **Oregon Inlet Jetty Project: Environmental and Economic Concerns Need to Be Resolved:** finds that the Corps' economic analysis does not provide a reliable basis for deciding whether to construct the project, as it relies on outdated and incomplete data and unsupported assumptions, and fails to account for risk and uncertainty in key variables that could significantly affect the project's benefits and costs. In addition GAO reports that Departments of Commerce and the Interior do not believe that the Corps has adequately mitigated for environmental concerns, including the project's impact on fish larvae migration, beach erosion, and wildlife habitat. GAO recommends that the project not proceed if the environmental concerns cannot be addressed.

2002 (June), GAO (GAO-02-604), **Delaware River Deepening Project: Comprehensive Reanalysis Needed**: finds that the Corps overstated the project's benefits by 200 percent (the GAO found at most $13.3 million annual benefits vs. the Corps' $40.1 million), that the Corps' benefit cost analysis was based on invalid assumptions and outdated information, and that the Corps could not explain its own analysis and instead blamed $4.7 million of the differential on a computer error. GAO concludes that the Corps' analysis is so flawed that it can not provide a reliable basis for deciding whether to proceed with the project, and makes numerous recommendations for improving the Corps' analysis.

2002 (May), GAO (GAO-02-574), **Scientific Panel's Assessment of Fish and Wildlife Mitigation Guidance**: finds that the Corps has proposed no mitigation for almost 70% of its projects, and for those few projects where the Corps does perform mitigation, 80% of the time it does not carry out the mitigation concurrently with project construction.

2002, National Academy of Sciences, **Review Procedures for Water Resources Planning**: recommends creation of a formalized process to independently review costly or controversial Corps projects.

2001, National Academy of Sciences, **Compensating for Wetland Losses under the Clean Water Act:** highlights the significant problems with mitigation efforts to date, including mitigation carried out by the Corps (this report looks at issues beyond the Corps).

2001, National Academy of Sciences, **Inland Navigation System Planning: The Upper Mississippi River-Illinois Waterway:** finds that the Corps was using a fundamentally flawed model to assess the lock expansion project; Congress should direct the Corps to fully evaluate use of nonstructural measures; the Corps was not properly accounting for the environmental

consequences of its proposed plan; and the Corps' adaptive mitigation strategy is inconsistent with the principles of adaptive management articulated in the natural resources management literature.

2000 (November), Department of the Army Inspector General (Case No. 00-019), **Investigation of Allegations against the U.S. Army Corps of Engineers Involving Manipulation of Studies Related to the Upper Mississippi River and Illinois Waterway Navigation Systems:** finds that the Corps deceptively and intentionally manipulated data in an attempt to justify a $1.2 billion expansion of locks on the Upper Mississippi River, and that the Corps has an institutional bias for constructing costly, large scale structural projects.

2000 (February and September), Leonard Shabman and Laura Zepp, Department of Agricultural and Applied Economics Virginia Tech, **An Approach for Evaluating Nonstructural Actions with Application to the Yazoo River (Mississippi)** and **Review Comments on Yazoo Backwater Area Reformulation:** finds that the Corps' proposal to construct the $191 million Yazoo Backwater pumping plant in Mississippi overestimates just the agricultural benefits by $144 million, and claims almost $3 million in annual benefits that are explicitly prohibited by the Corps' own rules.

1999, National Academy of Sciences, **New Directions in Water Resources Planning for the U.S. Army Corps of Engineers:** recommends key changes to the Corps' planning process and examines the length of time and cost of Corps studies in comparison with similar studies carried out by the private sector.

1994, National Academy of Sciences, **Restoring and Protecting Marine Habitat: The Role of Engineering and Technology:** finds, among other things, that the Corps and all federal agencies with responsibility for marine habitat management should revise their policies and procedures to increase use of restoration technologies; take into account which natural functions can be restored or facilitated; improve coordination concerning marine resources; include environmental and economic benefits derived from nonstructural measures in benefit/cost ratios of marine habitat projects; and examine the feasibility of improving economic incentives for marine habitat restoration.

Mr. ISSA. Thank you all. Thank you for very much staying within, I think, a good timeframe. And for all of you went off your prepared speeches, you are allowed to go off your prepared speeches and I always appreciate that.

I will begin questioning. This hearing is not about Katrina. I want to make that clear. But it is inevitable that Katrina is a poster child for what the Corps should be in the future and perhaps what it has not been, and what Congress's role has not been in the past. So I hope you will all look at this as anecdotal questions, because we are using Katrina, but not that this committee is investigating Katrina.

Mr. Lamont, Ms. Birnbaum's testimony claims the Corps knowingly used incomplete, outdated weather information in the design of the levees that were to protect New Orleans. I am astonished that the Corps may use obsolete data for projects the primary purpose.

This is an allegation that I have heard before. Would you like to address it, please, of how old the data was, why there was not an update before the levees were produced and how it may have impacted the levees?

Before you answer, I would ask that you primarily concentrate on what this committee should look to doing in the future. Again I do not want this to be about a specific event but rather, is there a flaw that either has been corrected or could be corrected and if so, what Congress would also participate in doing. Please, Mr. Lamont.

Mr. LAMONT. Thank you, Mr. Chairman. I am involved with the forensic investigation of what happened in New Orleans. Let me give you some quick background on that, to put this in proper context.

The Chief of Engineers, General Strock, set up an Interagency Performance Evaluation Task Force composed of some of the best and brightest people within the Corps, outside the Corps, and in academia, to try to find out exactly what happened. This is the first time that I have heard, for example, that there may have been an allegation of parameters that may have been looked aside.

As a professional engineer myself, and engineers in the community and the Corps of Engineers, the first thing that you are going to look at is the available information and the existing design criteria and codes at the time. A lot of these were designed back in the 1960's and I do not know this as a fact but I suspect that the design criteria have changed over time.

The Interagency Performance Evaluation Task Force is also having the results of their input reviewed separately by the American Society of Civil Engineers. Mr. Woodley, who is the Assistant Secretary of the Army for Civil Works, has also established under Mr. Rumsfeld's direction a contract with the National Academies of Science to independently review what the ASCE is externally reviewing and what the Corps of Engineers Interagency Task Force is looking at.

The heart of this is that the chief of engineers and Mr. Woodley are looking for the answers in a transparent fashion. We are trying to get to the bottom of exactly what happened, to determine lessons

learned, and then incorporate that in the reconstitution of the levee system in New Orleans.

I have no personal knowledge, sir, of the allegations that I just heard. I think this needs to be further examined as this comes about. We are looking for a June 1st date to wrap up the Interagency Performance Task Force information and provide that information to the NRC panel and also to ASCE. That is the best information I have at this time.

Mr. ISSA. OK. And what I would like to do is give you a copy. This is from a site Greenwire that specifically says that the Corps of Engineers knew the threat to the levees as early as 1972. It does quote that the knowledge, the research was done in 1959 for a worst-case scenario, so you were very close to accurate on it being the 1960's.

I would like to give this to you so that in answer after the fact, if you could respond to the specifics of this as you look at when the design was done and whether or not the weather data of 1959 was, in fact, what was used, because this is something that—like anything you pull down off the Internet, as good as it might seem, you would certainly like to give an opportunity for fair response. So if you will make sure they get a copy of it.

I would like to go to something, and I make it a point not to try to characterize—I characterize folksy things from my own life, but I try not to make things about my own district. And with 88 percent of your funds earmarked in fiscal year 2006, I think way too many of us have lived and died based on how much we earmark for our own districts. And the only thing I can say in defense is if we do not do it, the remaining amount is not sufficient for you to do those jobs in our districts that need to be done, either.

But I would like to talk briefly about one that I would like your response on. The San Luis Rey River project, which is over a decade old, was a project that was to be completed in about 6 years, 5 to 6 years. It ran out of funding and additionally, the maintenance that was to be done during that time was not done. So what started off as a flood prevention levee now is, in fact, habitat in which the Corps of Engineers on an annual basis pays to exchange eggs from smart birds to dumb birds so that the dumb bird will continue to be around as an endangered species. The Corps of Engineers manually removes arrondo and other invasive species so as to minimize the flooding while, at the same time, not being able to disturb habitat in general.

Isn't the best—and this comes to the real question—isn't the best way for the Corps to do a project to start the project, have full funding on the project until the project is completed, regardless of whether there is a powerful appropriator representing that district or not? And shouldn't there be a process in which a project in its development says if it is not done on this time schedule, there will be secondary or potential secondary costs? Shouldn't that be part of the whole way the Corps allocates its resources?

Mr. LAMONT. Mr. Chairman, if I could, I would like to ask our Deputy for Management and Budget, who is emminently more qualified than myself, to try to answer that.

Mr. ISSA. Well, I hit a home run if I can get the big guns in here. Thank you.

Ms. TORNBLOM. Thank you, Mr. Chairman. It is easy to say that the Corps budget is largely earmarked, but many of those are the President's earmarks. Some of them are congressional earmarks that are added to the budget.

The Corps budget is that way because each project is individually authorized. We do not have underlying generic authorization in most cases. So the program has evolved over the decades as you see it now, individual project funding.

On occasion the administration has proposed fully funding projects. That was never found acceptable by the Congress, for I am sure a variety of reasons. We are, however, moving steadily toward prioritizing the project based on performance and how near they are to completion and being much more efficient about the way we use the funds, reducing the number of reprogrammings and the number of continuing contracts which require further funding in the future.

Mr. ISSA. I appreciate that but my real question was since I have one in my district that I have been up close and personal on, that has at least $18 million of mitigation required because on an annual basis during construction it was never cleared because funds were reprogrammed away.

Now that is a personal, anecdotal, granted, but a personal observation where the Corps is now doing the work of Fish and Wildlife, spending Corps money on an annual basis in order to meet agreed-on requirements as a result of accidentally creating habitat in a project that was supposed to have 200-year flood benefits, now may have less than a 100-year flood benefit. And just so you understand why this is so significant.

I have advised and the attorneys for the city that contracted and should have already had full cost of maintaining the thing, I have advised them not to accept the project because there is no basis for them to take your problem, your habitat you have created, and take it on. There is no reason for them to spend the million dollars a year. So the $18 million, if not spent, will mean that in perpetuity $1 million more a year will be spent by the Corps from your $5 billion budget to continue basically producing habitat because the city is not going to accept the output of the levees because it does not meet the spec that you agreed to, all of this because on an annual basis, the dredging was not done and the project was not completed. It was defunded and stretched out over more than a decade.

Ms. TORNBLOM. We are trying to avoid stretching the money across as many projects, which has the effect that you just described, by concentrating the resources we do have on fewer projects that produce higher benefits for the Nation so that we can get them finished.

Mr. ISSA. Well, how do we do that as the Congress is really the question, and I want others to pipe in. Particularly Miss Mittal, you said, and I know all of you actually said the Corps cannot do it itself. There is a belief by the other three panelists that the Corps itself, which has 25-year-old projects that have been substantially unfunded but left on the books for all these years, is incapable of getting rid of a project and narrowing the scope to where

within a $5 billion level of funding, you can do and realistically deal with.

I mean it would be more than a decade if you took on no new projects to finish all the projects that you have in your backlog today. Is that a fair assessment, if I just do $5 billion into $58 billion of known backlog? Is that a fair assessment?

Ms. TORNBLOM. Your math is correct, sir.

Mr. ISSA. Thank you.

Mr. Ellis. And I will get to the ranking member quickly because I think we need to get her in, too.

Mr. ELLIS. Absolutely, Mr. Chairman. I would just point out that the $5 billion is the total Corps budget. They only have $2 billion in construction funding, so your $58 billion is actually going to take a lot longer to finish than just a decade.

Mr. ISSA. I am not that young. That is why I picked a number I could deal with.

Mr. ELLIS. I understand. But I do think that there are two points that I would like to raise about this. One is that absolutely Congress is part of the problem in giving a little bit more money to the Corps and stretching it out further over more projects. In just the fiscal year 2007 budget that the president has proposed, there were 532 earmarks that he defunded that were in the fiscal year 2006 appropriation, so that was 532 projects that Congress essentially added to that budget last year.

Also——

Mr. ISSA. You mean the President took away and we put back?

Mr. ELLIS. Well, you put in the fiscal year 2006 and then he specifically delineated those projects were not getting funding in fiscal year 2007. I imagine that a significant number of those, if not all of those, will reappear in the fiscal year 2007 budget for the Corps.

The other point I would like to make is that in the Corps' planning, in their economic analyses of projects, they actually assume optimal funding when they do the economic analysis, the benefit/cost ratio. So there is some optimal timeline of building a project. If it is a $50 million project you could not spend all the $50 million in 1 year. It would take a couple of years.

So let us say you take $10 million a year for 5 years to build a project. The Corps assumes that in their economic analysis. That has never happened. I do not think that has ever happened probably for a Corps project, where it has gotten every dime that it could have possibly spent in a particular year. So what the Corps is effectively——

Mr. ISSA. Hoover Dam would be the clear exception.

Mr. ELLIS. What that actually ends up meaning, though, is that it holds the cost down and it accelerates the delivery of the benefits. So it essentially skews the benefit/cost analysis to help justify projects when, in reality, it is going to cost more and the benefits are going to take longer to be achieved. So it actually ends up skewing it to justify more projects, as well.

Mr. ISSA. It is clear that we could have an infinite amount of questions. As soon as Miss Birnbaum has made her comment, I want to turn this over to the ranking member so she can get her questions in. Please.

Ms. BIRNBAUM. I just want to comment that we are supporting the idea that there needs to be some sort of legislative way to prioritize Corps projects to meet the problems you are talking about and the bill I was talking about, S. 2288, would have the Water Resources Council do that every 2 years with a specific requirement that they balance maintaining the rankings with any new really important projects that might come along.

So somebody has to sit back and balance any new important priorities, but also look at that consistency of funding that you are talking about and maintaining consistent priorities at the same time.

Mr. ISSA. Thank you.

Ms. Watson.

Ms. WATSON. First, I want to apologize, Mr. Chairman, for being late and not hearing the presentations. So if I repeat something that has already been addressed, just let me know.

I want to thank all the witnesses for coming down and I wanted to side with you, Mr. Chairman, that we have some problems in the State of California and I do not know how priorities are being set now that FEMA is operating under Homeland Security. From testimony I heard earlier today, the kind of bureaucracy that has been set up under Homeland Security automatically has an effect on FEMA where it cannot move as quickly to respond.

Now we had one of the greatest disasters this country has ever known, Katrina, Wilma, and all the rest of the ladies, female names.

Mr. ISSA. Guys are getting their turn now but they are underproducing. It seems the big ones are still tending to be women on these hurricanes. Did you notice that?

Ms. WATSON. Well, you know, let us just take the names off and have Hurricane A and B and C and get out of that debate.

Anyway, in all seriousness, I am really concerned about how we set priorities. What I read in the paper is all that I know because information, vital information is not always shared with the Members of the House. Just understand that.

I want to commend my chair for going after some of these issues and doing oversight because, as you know, many of our committees do not do the oversight that we are responsible for.

The question is I hear the Corps of Engineers trying to repair the 17th Street Bridge levee is using material that cannot last the strength of a category 3 landfall. I would like someone to respond to that.

The other thing I need a response to, I understand that FEMA has people down there and they are not given work orders but they are getting paid the big bucks. And when we talk about the funding for FEMA to address the levees, why is it we have contractors that are there sitting on ships and sitting in mobile units waiting to work but they are getting paid?

Now if my information is inaccurate, please correct me because all I know is what I read in the newspapers. Really, we do not get informed. Regardless of what you hear, we do not get informed.

So can someone respond?

Mr. LAMONT. Yes, ma'am. To give you the best possible information, if I could, I would like to turn to Mr. Tom Waters, who could bring you up to speed on that.

Ms. WATSON. Please do.

Mr. ISSA. Please come up and sit in the hot seat.

Mr. WATERS. Thank you. I am not going to be able to give a good, definitive answer on the debris. I am sorry but I just do not have that information available.

Ms. WATSON. I am not talking about the debris. I am talking about addressing the needs of the levees, the materials and the cost of doing it and the time span in which it is supposed to be done. I understand there are people down there and they are not working, but they are getting paid.

Mr. WATERS. Yes, ma'am. And I——

Ms. WATSON. These are FEMA contracts.

Mr. WATERS. Right. And I just cannot answer that part of the question. I do not have enough information to provide you an answer in terms of what you are asking about the acquisition and how that is going with the debris. But we certainly can find out the answer to that and get it to you.

Ms. WATSON. I would like to give you something in writing and have you respond to us in writing.

Mr. WATERS. Yes, ma'am.

On the question of materials on the 17th Street Canal, Mr. Lamont earlier gave a description of an effort that the Chief of Engineers and Mr. Woodley have commissioned using the National Academies, American Society of Civil Engineers and Corps of Engineers, probably the best group of experts ever convened in the country to examine what exactly has happened there. This is called the Interagency Performance Evaluation Task Force and they have made two public findings so far. The last one was released on March 10th.

I am not going to be able to address the materials. That is a matter of public record, but the——

Ms. WATSON. Excuse me. Is that public record accurate?

Mr. WATERS. Well, it is a public record that is being reviewed by experts and yes, ma'am. We are bringing the best——

Ms. WATSON. OK. Well, let me tell you what I read.

Mr. WATERS. Yes, ma'am.

Ms. WATSON. That the materials that were in the levee, the one that broke, were inferior materials and now the Corps is using another material that will not withstand landfall at category 3. That is what I am reading.

Mr. WATERS. Yes, ma'am. And the final conclusions of what happened and why the levees were breached will be available—the schedule for that is the first of June of this year. And I cannot address the materials. It is a work in progress, unless something is covered in the report that was published on March 10th. That is about as good as I can do, I am afraid.

Ms. WATSON. Thank you for nothing. You cannot address it.

Is there anyone that can address the work orders for the people who were called down to work on the levees? I understand they are not working and getting paid big dollars. Anyone? If you cannot address it, then do not respond.

Mr. LAMONT. We would be happy to take the question and answer it for the record to the best of our ability, ma'am.

Ms. WATSON. I will put it in writing.

Mr. LAMONT. As Ms. Tornblom has just pointed out to me, the issue relative to FEMA, we have no knowledge about.

Ms. WATSON. All right.

Mr. LAMONT. But we will investigate that and get back to you on that.

Ms. WATSON. Fair enough. I will send it to you in writing, I will share with the chair and other members of our committee, and I will share the response. Thank you.

Mr. ISSA. And I am going to ask unanimous consent that all Members, present or not present, be able to have followup questions and submit them to each of you in writing. Additionally, I would ask unanimous consent that the record be left open for 2 weeks or extended further by the majority and minority, if necessary, to allow for that.

I will tell you that the efficiency of this has been excellent, but there is no question that we are going to have additional followup questions. I would like to thank you for beginning the process with us.

I would like to summarize, in closing, that it appears very much at the end of this hearing, as it began, that the Congress is a willing and active culprit in the poor performance of the Corps' projects in that clearly if we have $58 billion of backlog projects, $2 billion in funding, and a larger and larger amount of funds that find themselves unintendedly going to the studies, the mitigation, various activities under the Endangered Species Act and others, as a result, those continue on an every-year basis while, in fact, the project itself may be at a virtual standstill.

So I think that will characterize a lot of the questions we are going to have, not just for all of you but for the Members themselves as we begin to find out how we can one, eliminate a $58 billion backlog or two, fund it in a reasonable period of time.

I will close, with the ranking member's permission, by letting you all know that when I entered Congress and actually when Ms. Watson entered Congress we had a similar backlog in military housing. We had a policy of talking about how special the troops were but not building them housing. Using public-private partnerships and some other techniques, we have substantially reduced that. Hopefully, with the great minds that exist on both sides of this issue, we can begin to look at how we could eliminate the backlog with Congress of those that must be there.

Last and least, I would charge all of you to, whether asked specifically or not, you are being asked now to give me as many projects that are still on the books for as many years as you can that, in fact, you believe should be eliminated and reauthorized if and only if Congress is willing to put substantial new dollars.

We will followup with the rest in writing. I want to thank you for your time. I want to thank the audience, who came here to participate and to listen, for their attentiveness.

And with that, I would yield to the ranking member.

Ms. WATSON. Thank you so much.

My concern is this. I was not here when you discussed the projects and the timing, and so on, but we know that there are climate changes and we know that we are going to in a matter of few months get back into another hurricane season and we are going to have devastating hurricanes. And when we talk about the backlog, what are we doing to take into consideration if we are going to dump money into these projects, to do it in a more timely fashion?

I take my own State of California. We are always prone to earthquakes. We know the big one is coming. Every 19 years we have a huge earthquake.

So I hear about the backlog. I hear about the funding, Mr. Chairman. I hear that we are cutting funds. What are we doing to be ready in case there is another hurricane? What are we doing to address the fact that we are going to have another earthquake? We have them every day. I just want to know what kind of planning and thinking goes into it.

Some things cannot be put off, and let me give you an example. In 1994 we had a huge earthquake in California. The freeway that went down, went down in my district, right, in the center of my district and affected the 405, affected the 10, affected the 5, the I–5, and so on. And the Governor had a plan and we were in the third segment. I said you cannot do that. I said you have to fix all freeways and you have to be able to see that they can withstand an earthquake that goes to 7. By the way, there is no 10 on the Richter Scale. It only goes to 9. So you have to retrofit all of them at the same time because we never know where the next—we are on a fault line, so putting it off, you know, project one over several years and project two, project three, this lays us bare.

So I am wondering can anyone respond to how we lay out what priority fixing of levees receives? We are having tremendous problems in the northern part of our State. I was just up there Sunday around the Sacramento area and we have flooding because the levees did not stand up.

So how do you think this through and how do you plan? How do you set priorities? Can anyone respond?

Mr. LAMONT. Ma'am, I will give it a try.

Ms. WATSON. Thank you.

Mr. LAMONT. It is clearly a dynamic world that we are living in right now. There is definitely a limitation of resources that are available to fund projects.

This is myself personally speaking as an engineer. This country is probably faced with looking at the infrastructure that is out there, looking at it from a regional or national basis, and then making some hard decisions by the administration, working with the Congress, and that is about as far as I would want to go right now.

Ms. WATSON. Do you want to add anything?

Ms. TORNBLOM. I mentioned earlier what we are using to prioritize the construction projects, the remaining benefit/cost ratios, looking at the performance, trying to finish projects that are under way.

In terms of the levees you are speaking of, we are just right now taking another look at that since the Governor has elevated the

issue and I expect some movement on that soon to raise the priority of that. We have been talking about it but you are probably right; we have not done much about it yet.

Mr. ISSA. OK. And with that, I am going to use the power of the gavel to thank you all and to say that I have no doubt this is not the last hearing on this subject.

Ms. WATSON. And may I have my opening statement included in the record?

Mr. ISSA. We made that by unanimous consent when I sat here alone.

[The prepared statement of Hon. Diane E. Watson follows:]

Opening Statement
Congresswoman Diane E. Watson
Government Reform Subcommittee – Energy and Resources
"Strengthening the Nation's Infrastructure: The Army Corps of Engineers' Planning Priorities"
March 15, 2006

Thank you Mr. Chairman.

I look forward to the testimony that we will hear today. The United States Army Corps of Engineers is a valuable national asset. Unfortunately, the Corps' Civil Works program has experienced some difficulties that have caused concern, and in some cases suffering, for the American public. I fully understand the dilemma of the approximately 34,000 Civilian and 650 Military hardworking Corps personnel. Public Service is sometimes a thankless job when it is done correctly. Had the levees in New Orleans held, or a few more projects been completed on time, the status quo may have remained.

Good public policy requires us to assess our procedures and guidelines from time to time. This Subcommittee is tasked to do just that. The GAO, the National Academy of Sciences, internal Pentagon

Investigators, and the OMB have all conducted reviews of the Corps. All have detailed problems with the Corps' current planning process. Congressional Oversight, and legislation, is the next step for some closure.

Mr. Chairman, I must point out that we have situations in our State of California where good projects are failing to be implemented in a timely fashion. In some cases, we are seeing devastating floods in the very locations where we are working on flood protection projects, but the slow pace means our citizens are suffering because projects are not being completed soon enough. Army Corps of Engineering projects in Sacramento and Napa are specific examples. Moreover, I am aware of your own project worries in Oceanside.

In a broader sense, we need to know the safety of our existing levees all across the nation. How many other situations like New Orleans may already exist? How many need immediate remediation?

It is also critical that these programs be much better coordinated with other FEMA programs such as the National Flood Insurance Program, flood hazard mapping, federal disaster relief, and hazard mitigation.

Mr. Chairman, to conclude, it is imperative that we understand the Army Corps of Engineers programmatic issues that we can resolve. Specifically, Congress can provide guidance for the Prioritizing of

Projects, Reprogramming of Appropriated Funds, and Authorizations in general.

I would hope our Subcommittee will continue to pursue these issues aggressively as we go forward. Katrina is a wake up call that we dare not ignore.

Mr. Chairman, I want to commend you again on holding this hearing. American citizens are demanding answers. Good oversight assistance will provide answers for constituents, and offer critical guidance for the professionals of the Army Corps of Engineers.

I yield back.

Mr. ISSA. Thank you. With that, we are adjourned.

[Whereupon, at 4:05 p.m., the subcommittee was adjourned.]

[Additional information submitted for the hearing record follows:]

COMMITTEE ON GOVERNMENT REFORM
Subcommittee on Energy and Resources
DARRELL ISSA, CHAIRMAN

Oversight Hearing:
"Strengthening the Nation's Water Infrastructure: The Army Corps of Engineers' Planning Priorities"
March 15, 2006, 3:00 p.m.
Room 2203 Rayburn Building

BRIEFING MEMORANDUM

SUMMARY:

The Army Corps of Engineers (the Corps) is a federal agency in the Department of Defense with military and civilian responsibilities. At the direction of Congress, the Corps plans, builds, operates, and maintains a wide range of water resources facilities in US states and territories. The agency's traditional civil responsibilities are creating and maintaining navigable channels and controlling floods. In the last two decades, Congress has increased the Corps' responsibilities in ecosystem restoration, municipal water and wastewater infrastructure, disaster relief, and other activities. Congressional direction comes primarily through authorization and appropriations legislation and oversight activities.

The Water Resources Development Act (WRDA), a frequent reauthorization, is a more than $10 billion spending bill that authorizes many Corps infrastructure projects. The contents of each WRDA are cumulative and new Acts do not supercede or replace previous Acts. WRDA and the corresponding appropriations bill are packed with earmarks and directives given to the Corps on how to carry out activities. Funds appropriated are invariably less than authorized Corps projects. As a result, the Corps is challenged to meet a great number of competing priorities and mandates with limited funds. In response, the Corps has chosen to serially reprogram funds and move them from project to project on what may be viewed as either a "just-in-time" or "seat-of-the-pants" basis.

The Corps has also been under scrutiny since 2000 due to a series of investigative articles by the *Washington Post*, an Army Inspector General's report, and a National Academies of Science study that asserted Corps' planning deficiencies and oversight were resulting in unjustified projects moving forward in the approval process. A number of Government Accountability Office studies have raised questions regarding Corps' planning processes, priority-setting, and financial management. In response, the Corps has recently moved forward with an aggressive plan to address these deficiencies, update its planning and business practices, be more collaborative, and better match its changing civil works mission.

The Corps' challenges are extremely important to the strength of infrastructure of the United States. Existing water infrastructure is a result of the priority-setting, decisions, and projects constructed in decades past. For decades to come, infrastructure priorities set today will impact commerce, economic growth, electricity generation, the health of wetlands and ecosystems, and, most importantly, the safety of communities dependent on the Corps for flood protection. Because the level of Corps' funding is a persistent issue, it is all the more important that the operations of the Corps are efficient and result in the most benefit for every dollar spent.

This hearing will examine the how the Corps' sets its priorities and seeks to improve its planning processes and economic analysis. A well-functioning Corps is required to ensure that projects are economically justified and produce their intended effects, and that the civil works program strengthens the nation's critical infrastructure.

BACKGROUND:

The Role of the Corps

The Corps is an agency within the Department of Defense that has military and civilian responsibilities in engineering. At Congress' direction, the Corps plans, constructs, operates, and maintains a wide range of water resources projects. A military Chief of Engineers oversees the Corps' civil and military operations and reports on civil works matters to the Assistant Secretary of the Army for Civil Works. The Corps operates as a military organization with a largely civilian workforce. It has approximately 34,600 civilian and 650 military personnel.

The Corps' civil works responsibilities date back to the early 19th century. Since then the Corps has traditionally focused on navigation and flood control projects in partnership with local sponsors. Navigation projects include river deepening, channel widening, lock expansion, dam operations, and dredged material disposal. Flood control projects include levees, floodwalls, dams, and river channelization. Many of these projects are multipurpose, with elements relating to water supply, recreation, and hydropower in addition to navigation or flood control. Construction of projects is normally subcontracted to private firms with Corps personnel involved in oversight and project management.

In recent decades, Congress has given the Corps responsibilities in the areas of environmental restoration, infrastructure, and other non-traditional activities, such as disaster relief and remediation of formerly used nuclear sites. Environmental restoration activities involve wetlands restoration and environmental mitigation activities for Corps projects. Environmental infrastructure refers to municipal water and wastewater facilities. The agency's regulatory responsibility for navigable waters extends to issuing permits for private actions that might affect wetlands and other waters of the United States.[1]

[1] Nicole T. Carter and Betsy A. Cody, *The Civil Works Program of the Army Corps of Engineers: A Primer*, Congressional Research Service, RS20866, 1-2.

The Corps' Funding and Federal Cost-Sharing

Most Corps activities and projects are governed and authorized by the Water Resources Development Act (WRDA). Contents of each WRDA are cumulative and new Acts do not supercede or replace previous Acts. Since the landmark 1986 WRDA that broke a 10-year impasse with the Executive Branch, WRDAs have been more frequent. However, the last enacted WRDA was in 2000, and other enacted WRDAs in the last 20 years occurred in 1986 (PL 99-662, 1988 (PL 100-676), 1990 (PL 101-640), 1992 (PL 102-580), 1996 (PL 104-303), 1999 (PL 106-53), and 2000 (PL 106-541). The most recent round of attempts to enact a WRDA have stumbled on a number of issues relating to the large scope of responsibilities assigned to the Corps.

In the 109th Congress, the House passed HR 2864 in July 2005, while the Senate has yet to bring its version of the bill, S 728, to the floor after having been reported out of committee. Both versions of the bill authorize Corps projects and activities at more than $10 billion, which is one issue of contention for Office of Management and Budget. Other contentious issues include the degree of regulatory authority assigned to the Corps, the specific projects to be authorized, and so-called "corps reform" efforts—a suite of modifications that includes Corps planning, operations, environmental mitigation efforts, and outside review of some Corps economic analyses.

As with most authorizations, OMB does not agree with the priorities set by Congress in preparing the President's budget.[2] At the same time, the Appropriations Committee balances Corps' funding with other federal needs—such as some Department of Energy activities—funded by the specific appropriations bill. Ultimately, numerous projects that are authorized do not receive appropriations or do so at reduced levels, but total appropriated funding is usually above the President's request.

The vast majority of Corps projects can be described as "earmarked." According to a March 2006 memorandum and research prepared by the Congressional Research Service, the FY 2006 Energy and Water Development Appropriations Act conference report included $4.75 billion for water projects and 1,767 individual earmarked water projects. Earmarks for FY 2006 represent 88 percent of the Corps' budget.

This creates a large backlog of accumulating projects for the Corps, often with local and congressional sponsors anxious to see their priorities move forward. And, rather than the Corps being proactive in setting priorities, the funding situation has contributed to a reactive posture on the part of the Corps, which often reprograms funds on a "just-in-time" basis according to perceived needs. The Government Accountability Office estimates that two-thirds of funds appropriated for specific projects in FY 2003 and FY 2004 were moved in or out of the Construction and General

[2] OMB is typically frugal in its budget request for Corps projects. OMB usually proposes to terminate a great number of projects and ongoing studies as well. Until the FY 2007 Budget, OMB budgeted Corps Operations and Maintenance (O&M) activities on a project rather than program basis. For FY 2007, OMB budgeted according to regions rather than projects to indicate the Administration's interest in giving the Corps some flexibility to address priorities according to needs as determined by the Corps.

Investigations Accounts, and information was not available for reprogramming in Operations & Maintenance accounts.[3]

Water resources projects that involve the Corps are cost-shared between the federal government and the local sponsor. Cost-share depends on the type of project and the stage of the planning process. Prior to WRDA 1986, as a general rule the federal government was responsible for a larger share of the costs of civil works projects. Below is a table prepared by the Congressional Research Service that indicates cost-sharing for Corps projects, with O&M referring to Operations and Maintenance activities.[4]

Project Purpose	**Maximum Federal Share of Construction**	**Maximum Federal Share of O&M**
Commercial Navigation		
Coastal Ports —		
<20 ft. harbor	80%*	100%
20-45 ft. harbor	65%*	100%
>45 ft. harbor	40%*	50%
Inland Waterways	100%**	100%
Flood Control	65%	0%
Hydroelectric Power	0%	0%
Municipal and Industrial Water Supply	0%	0%
Agricultural Water Supply	65%***	0%
Recreation	50%	0%
Hurricane and Storm Damage Reduction (except Periodic [Beach] Nourishment)	65% (50%)	0% (0%)
Aquatic Plant Control	not applicable	50%
Environmental Restoration		
Congressionally Authorized Projects	65%	0%
Beneficial Uses of Dredged Material and Modification for Improvement of Environment	75%	0%

Source: 33 U.S.C. 2211-2215

* These percentages reflect that the non-federal sponsors pay 10% of the cost of the general navigation features of the project over a period not to exceed 30 years.

** 50% is paid by federal appropriations, and 50% by the Inland Waterway Trust Fund.

*** For the 17 western states where reclamation law applies, irrigation costs are funded by the Corps but ultimately repaid by non-federal users.

[3] Government Accountability Office, *Army Corps of Engineers: Improved Planning and Financial Management Should Replace Reliance on Reprogramming Actions to Manage Project Funds*, September 2005, GAO-05-946.

[4] Besides the figures in the table, the federal cost share for reconnaissance studies and feasibility studies are different—reconnaissance studies are entirely a federal expense. Local sponsors pay 50 percent of the cost for feasibility studies, except for inland waterways which is a 100 percent federal responsibility. The project development and planning process is discussed in the next section.

The Corps Project Development and Planning Process[5]

The Corps usually becomes involved in a water resource project when the local community identifies a need and contacts the Corps for technical assistance. If the Corps does not have the statutory authority required to study the project, the Congress must provide authorization. After receiving authorization, and if funds are available, a Corps district office conducts a preliminary reconnaissance study to determine whether the problem can be addressed and whether further study is warranted.

If further study is warranted, the Corps typically seeks agreement from the local sponsor to share costs for a feasibility study. If federal funds are available, the feasibility study moves forward and often includes an economic analysis upon which federal participation hinges because federal cost-sharing requires that the economic benefits of the project exceed the costs. The feasibility report makes recommendations on whether the project is worth pursuing and how the water resource problem should be addressed. In conjunction with the feasibility study, the Corps must also perform the appropriate environmental study under the requirements of the National Environmental Policy Act. After public comments on the environmental study are considered, the Chief of Engineers transmits the final versions of the environmental and feasibility reports to the Congress through the Assistant Secretary of the Army for Civil Works and OMB.

As long as appropriations are available, the Corps will also prepare a pre-construction engineering and design report, which is provided to the authorizing committees. Project construction will occur once the project is authorized and Congress appropriates the federal share of funds to start the project. Upon appropriation of needed funds, and before construction can begin, the Secretary of the Army and nonfederal sponsors generally sign a formal project cooperation agreement. The Corps district office completes the necessary engineering and design work to develop plans and specifications for construction. Private contractors managed by the Corps do the construction work.

Shortcomings in Economic Analysis

The Corps has been under close scrutiny concerning its economic analyses and the lack of oversight in economically justifying projects for federal cost-share. In 2000, the Army Inspector General found that three senior Corps officials had manipulated data in the Upper Mississippi River-Illinois Waterway Navigation System feasibility study. Shortcomings in the economic analysis of the Delaware River Deepening Project reported by GAO resulted in the Corps agreeing that a reanalysis was required. GAO has identified a number of additional projects with a number of defects and errors, including relying on long-obsolete data and not incorporating new statistics into the studies. This has been a recurring problem in a number of navigation deepening projects, due in part to optimistic predictions on commerce by the Corps as well as the extreme difficulty in predicting barge and container ship traffic far into the future. Some critics have questioned whether problems in Corps analyses are symptoms of a systemic problem that cannot be rectified by the Corps.

[5] This section largely mirrors the description of Corps' processes contained in Appendix 1, p. 45, of the Government Accountability Office Report, GAO-02-803.

Corps Improvement Efforts

The Corps has acknowledged deficiencies and taken steps to improve its economic analysis methods and models, business practices, and efforts to be collaborative and transparent. In addition, the Corps has sought to better match its operations with its evolving civil works mission. The Corps is currently implementing its *Corps 2012* personnel and operations reorganization plan to incorporate managerial best practices and break down stovepiping within areas of Corps expertise.

In addition, the Corps has prepared new regulations for the principles and guidelines under which it plans projects. The Corps is already operating under five Engineering Circulars issued in May 2005. The Engineering Circulars strengthen internal review processes, mandate certified models for all planning activities, establish procedures for peer review of decision documents (including an option for external review), and addresses issues of planning timeframes and collaboration with interested parties. The Engineering Circulars can be adapted if additional needs are identified, until May 2007 when the Circulars become formally binding and regulatory.

ISSUES TO BE ADDRESSED AT THE HEARING:

- Are Corps' efforts to improve its planning processes adequate?
- What steps are being taken to ensure there is effective oversight of the reprogramming of funds?
- How does the Corps set its priorities in a challenging fiscal environment?
- How can Congress better ensure that the nation's critical water infrastructure needs are met?

Witnesses:

Mr. Douglas W. Lamont, Deputy Assistant Secretary of the Army (Project Planning)

Ms. Anu Mittal, Director, Natural Resources and Environment, Government Accountability Office

Mr. Steve Ellis, Vice President, Taxpayers for Common Sense

Staff Contact:
Larry Brady, Staff Director
Subcommittee on Energy and Resources
B-349C Rayburn House Office Building
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[The Army Corps of Engineers Response to Chairman's Questions follows:]

Questions for the Record
From 15 March 2006
Committee on Government Reform
Subcommittee on Energy and Resources

Q1. Regarding the design of the levees that failed to protect New Orleans from Hurricane Katrina, what was the latest weather information and hydrodynamic modeling that went into their design and construction? According to a copy of a news article given to you at the hearing,

The levees and floodwalls that failed after Hurricane Katrina were based on research done in 1959 for a worst-case storm scenario. Weather service research done in the 1970s that increased the size and intensity of a worst-case scenario did not change the Army Corps' design specifications when it began work in the 1980s (Greenwire, "Army Corps: Engineers Knew of Threat to Levees as Early as 1972," March 8, 2006).

Are these allegations correct? If so, how old was the data, why was there not an update before the levees were constructed, and what would have been the impact if more up-to-date weather information was included in the designs that were ultimately constructed?

A1: We applied the state-of-art definition of the standard project hurricane in selecting the features and design for the authorization of the barrier plan. New data were collected from subsequent storm events and a weather service report was prepared that included new design parameters for the definition of the standard project hurricane. At about the same time, the high level plan replaced the barrier plan as the preferred alternative. In making that change in plans, levee and flood wall heights were changed in many locations, but it is not yet clear if, or how, these changes were related to new hurricane parameters. As a parallel effort to IPET, a hurricane protection decision chronology team (HPDCT) is investigating this and other questions on the decision making process. The HPDCT will issue its report in the fall, after an independent external review is completed.

Q2. Of projects that are currently authorized, please provide a list of projects that the Corps' believes should not move forward unless the projects receive adequate sources of new funding.

A2: The Water Resources Development Act of 1986, as amended, provides for the automatic deauthorization of water resources projects and separable elements of projects for which adequate funding has not been available. Section 1001(b)(2), requires the Secretary of Army to submit to the Congress a biennial list of unconstructed water resources projects and separable elements of projects for which no obligation of funds have been incurred for planning, design or construction during the prior seven full fiscal years. If funds are not obligated within 30 months from the date the list was submitted, the project/separable element is deauthorized. For projects currently under consideration

for inclusion in the budget, priorities have been established which provide funding first toward the completion of high performing projects.

Q3. Are the materials now being used to repair the levees protecting New Orleans and the surrounding area adequate to protect against a Category 3 hurricane? According to independent experts cited in articles in the March 8, 2006, editions of the Washington Post and Los Angeles Times, sampling of some fill material indicates that it is "highly erodeable" and unsatisfactory.

A3: We are using a clayey soil to reconstruct the levees to include bringing material from as far away as Mississippi. The construction of the Mississippi River Gulf Outlet channel used the dredged material to construct the original levees. This material is sandier and we have capped these levees with the clayey soils.

As part of our work, we are conducting tests to determine how resistant the material is to erosion. Under the best conditions, a well compacted clay with a thick cover of grass can handle up to 5 feet per second (fps) of over topping flows. During Hurricane Katrina the over topping flows were as high as 15 fps which is 1000 times more erosional than flows at 5 fps.

Q4. RE: Response to Hurricane Katrina and contracts executed by the Corps in cooperation with FEMA. It has been reported to the Ranking Member that some contracts have been substantially reduced in scope despite a more than an adequate volume of work, yet the support costs for the contractors (per diem, accommodations, etc.) remain the same. Is this the case? If so, does this call into question the rationale for reducing the scope of work under the contract?

A4: Of the contracts being executed by the Corps in cooperation with FEMA, we are not aware of any that have been reduced in scope.

BRINGING RIVERS TO LIFE

American Rivers
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April 21, 2006

The Honorable Darrell E. Issa
Chairman
Subcommittee on Energy and Resources
Committee on Government Reform
2157 Rayburn House Office Building
Washington, D.C. 20515-6143

Dear Mr. Chairman:

Please find enclosed my response to your follow-up question from the March 15 hearing on "Strengthening the Nation's Water Infrastructure: The Army Corps of Engineers' Planning Priorities." We appreciate your continued concern over this issue.

I was unable to answer the first half of your question as posed, since our organization does not take a position on whether to deauthorize Corps projects if they are not adequately funded. While this is an appropriate inquiry from the perspective of good government, and we have supported the development of an independent prioritization for Corps funding, this is not an evaluation we have made ourselves. Rather, we evaluate whether projects should be pursued at all, based on their environmental consequences and economic costs. Thus, the attached list is responsive to the second half of your question – a list of projects we think should be deauthorized regardless, based on their lack of economic value and significant environmental impacts, and a rationale for deauthorizing each. This is not an exhaustive list, since we have not reviewed the Corps' entire project backlog, but a list of a select group of projects that are notable for their lack of justification.

Please let me know if I can provide any further information to the committee as you continue your evaluation of Corps projects.

Sincerely,

S. Elizabeth Birnbaum
Vice President for Government Affairs

cc: The Honorable Diane Watson

Army Corps of Engineers Projects That Should Be Deauthorized

As the primary federal manager of the nation's water resources, the U.S. Army Corps of Engineers (Corps) is entrusted with the fate of America's rivers and the safety and welfare of millions of Americans. The Corps has often violated that trust by designing and building flawed projects that do not reflect the nation's priorities, are not economically justified, do not realize predicted economic returns, fail to protect people from harm, and destroy environments that can provide vital natural flood protection and a host of other economic and environmental benefits.

The following are some of the Corps' most egregious projects. These projects should be deauthorized.

Appalachicola River Dredging: FL
In 2000, the Corps acknowledged that maintaining a navigation channel in the Apalachicola River was not economically or environmentally justified. At that time, the Corps concluded that barge traffic on the Apalachicola River returned only 40 cents to the nation for each federal dollar spent on maintaining a navigation channel in the river. Since then, commercial barge traffic has dropped to virtually zero. On October 11, 2005, the Florida Department of Environmental Protection ruled that the Corps could not continue its environmentally destructive dredging of the river.

Big Sunflower River Dredging: MS
The Corps' $62 million plan to dredge the Big Sunflower River would destroy 100 miles of instream habitat, 4,000 acres of wetlands, and one of the world's richest mussel beds. It will also endanger area residents' health by re-suspending significant quantities of DDT and toxin-laden sediments into a river that is already so contaminated that the Mississippi Department of Environmental Quality has issued fish consumption advisories. This project will not protect people from flooding, rather it is an agricultural drainage project designed to allow intensified agricultural production on marginal farmlands. This project is strongly opposed by local residents.

Clear Creek Flood Control: TX
Economic justifications for straightening Clear Creek were always distorted, but the $149 million project became completely obsolete when FEMA relocated many high-risk residents out of the floodplain following tropical storm Allison in 2001. The local community is opposed to the project because of its devastating environmental impacts, its excessive costs, and its potential to flood downstream communities.

Columbia River Channel Improvements: OR & WA
In 2002, the Oregonian newspaper exposed this project for the economic boondoggle and environmental catastrophe that it is. A six-month review by investigative journalists found that this $148.4 million project would return only 88 cents on the dollar. The disposal of the tens of millions of cubic yards of dredged spoil produced by the project also would threaten the local Dungeness crab industry that is valued between $31.7 and $84.4 million annually. A review panel established by the Corps also challenged the economic viability of the project, but the Corps ignored the key findings of that panel.

Dallas Floodway Extension Project: TX
This $154.4 million project will extend levees in downtown Dallas by more than 5 miles, reroute 3,000 feet of the Trinity River, and cut a 600 foot wide swale through the Great Trinity National Forest destroying 30,000 trees. The Corps has acknowledged that the new levees will facilitate potential future commercial or residential development, despite the very real possibility of continued future flooding in the area. Once this project is complete, local and state authorities intend to construct ten lanes of toll road within the Trinity River's floodplain using materials excavated during construction of the Dallas Floodway extension project. In recommending the current plan, the Corps ignored the opposition of the administration and past directives from OMB to consider fundamentally different and lower-cost alternatives to the project. Necessary flood protection could be provided at a fraction of the cost by raising some existing downtown Dallas levees by two feet and carrying out a voluntary buyout of a contaminated, flood-prone neighborhood.

Delaware River Deepening Project: DE, NJ, & PA
In 2002, the Government Accountability Office (GAO) found that the costs of this $420 million project (with a federal cost share of $287 million) far exceed the benefits, and that the Corps had overstated the benefits by an incredible 200 percent. The GAO found at most $13.3 million annual benefits vs. the Corps' $40.1 million. The Corps could not explain its own analysis, blaming $4.7 million of the differential on a computer error. In addition to being economically unjustified, the project would cause significant harm to fish and wildlife, water quality, and local economies.

Grand Prairie Irrigation Project: AR
The $319 million Grand Prairie Project threatens internationally-acclaimed wetlands and could pave the way for another $1 billion of irrigation projects in eastern Arkansas. OMB has opposed this project because it is not economically justified, would adversely affect two national wildlife refuges and the White River, and because agricultural water supply projects like this one should not be a Corps responsibility. The project also would hurt the region's multi-million dollar hunting, recreation, and eco-tourism industries. A poll of Arkansas voters found that an overwhelming majority opposed the project, along with about half of the Grand Prairie area farmers, the project's supposed "beneficiaries."

Inner Harbor Navigation (Industrial) Canal Lock: LA
The economic, social, human health, environmental and safety costs of this $748 million debacle far exceed any benefits. The project would replace locks that recently have been rehabilitated with new bigger locks even though barge traffic using the industrial canal has decreased 50%

since 1988 and deeper draft ocean going ships are using existing facilities along the Mississippi River. The project is vehemently opposed by local communities (communities that were devastated by Hurricane Katrina) due to the resuspension of toxic sediments, and contamination of surrounding wetlands and drinking water that would result from the project. Funding this project is even more objectionable now, given the very real needs of New Orleans and coastal Louisiana. Funding for this region should be directed to rebuilding New Orleans' devastated communities, ensuring adequate levels of flood protection, and restoring Louisiana's coastal wetlands, which are the region's first line of defense against storm surges.

Lower Snake River Navigation: ID & WA
The cumulative costs of maintaining four dams along the Lower Snake River far outweigh their economic benefits. The dams also seriously undermine ongoing federal efforts to restore viable salmon and steelhead populations in the Columbia River basin. The Corps spends $13 million each year to operate and maintain navigation channels that see relatively little barge traffic. An additional $500 million to $1 billion is spent annually in an attempt to mitigate the harm to salmon fisheries from the navigation dams.

Mississippi River Gulf Outlet (MRGO): LA.
The MRGO, a little used navigation channel, was a major contributor to the devastating post-Hurricane Katrina flooding of New Orleans. The MRGO destroyed over 20,000 acres of wetlands that could have reduced Katrina's storm surge, and funneled and amplified the hurricane's surge into the city, causing the levee breaches that left only 52 of 28,000 buildings standing in Saint Bernard's Parish. For years, community leaders – including the St. Bernard Parish Council, activists, and scientists had warned the Corps that the MRGO was a hurricane highway that would funnel hurricane storm surges directly to New Orleans, and called for closing the outlet. The Louisiana legislature joined the call to close the MRGO in 2006.

St. John's Bayou and New Madrid Floodway: MO
This $108 million project would close the New Madrid Floodway, a 1,500 foot opening in the Mississippi River frontline levee that has long been designated by the Corps as a relief valve to protect communities like Cairo, Illinois from a large flood. The primary beneficiaries of this agricultural drainage project are a handful of well connected landowners who would benefit from growing more federally subsidized soybeans on these Mississippi River bottomlands. The project would destroy tens of thousands of acres of wetlands and 75,000 acres of backwater habitat without providing any of the promised flood protection to nearby small towns.

Upper Mississippi and Illinois River Navigation Study (G.I.): IL, IA, MN, MO, WI
At $1.8 billion, this unnecessary project would be the second most expensive waterway project in American history. It would divert 10% of the Corps' construction funding for decades to replace seven existing locks with new longer locks. The Corps contends that this project is needed because traffic on the river will grow dramatically in the next few decades, presumably creating delays at locks that would justify this costly project. This justification, however, has no basis in reality. Mississippi River traffic has been flat since 1980 and has declined for the past three years to the lowest level since the Great Flood of 1993. Since the Corps was caught cooking the books on this project by the Department of the Army Inspector General in 2000, two panels of the National Academy of Sciences, plus the Congressional Research Service, have

called the Army Corps' optimistic traffic forecasts unrealistic. Even using the Corps' unrealistic projections, the lock expansion project would only reduce the 20-day trip from Iowa to New Orleans by less than half a day.

White River Navigation (G.I.): AR
This $66 million project would deepen approximately 250 miles of the White River, destroying aquatic habitat and more than 245 acres of the second largest tract of bottomland hardwood forest remaining in the lower Mississippi Valley. The Corps' entire justification for the project is based on an assumption that traffic will in fact materialize if the project is constructed. Current traffic cannot justify this project as the White River is one of the nation's least used waterways. The Arkansas legislature has rejected state funding for this project on four separate occasions, and deepening the White River has long been opposed by sportsmen, local communities and conservation groups.

Yazoo Pumps: MS
The Yazoo Pumps would cost the federal taxpayers more than $240 million – $191 million to construct and $1 million each year for next 50 years to operate. There is no local cost sharing for this agricultural drainage project that would construct the world's largest hydraulic pumping plant in the most sparsely populated region of rural Mississippi. The Yazoo Pumps would drain and damage more than 200,000 acres of ecologically significant wetlands. Wetlands drained would include those being managed by the federal and state government as wetland systems for fish and wildlife habitat; as mitigation for wetland losses caused by previously constructed federal flood control projects; and as part of the Wetlands Reserve and Conservation Reserve programs. In addition to paying to destroy wetlands that provide vital habitat and natural flood protection, federal taxpayers also would be forced to pay for the increased farm subsidy payments that outside experts have demonstrated are the only "benefits" of this project.

June 29, 2006

The Honorable Darrell E. Issa
Chairman
Subcommittee on Energy and Resources
Committee on Government Reform
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman,

Thank you for the question regarding the U.S. Army Corps of Engineers Civil Works construction backlog and what projects Taxpayers for Common Sense believes should be deauthorized.

As I testified, the Corps of Engineers backlog of projects authorized, but not fully constructed, is $58 billion. Congress is considering a Water Resources Development Act (WRDA) that would add more than $10 billion in new project authorizations to the backlog. This same WRDA includes a few project deauthorizations as well, some for projects authorized more than 100 years ago.

In 1986, Congress created an objective deauthorization process. This required that Congress be notified annually of projects that had received no funding over the preceding seven-year period. If the project did not receive funding over the subsequent two-and-a-half year period the project would be deauthorized, essentially granting three bites at the appropriations apple. The objective deauthorization process has two significant loopholes. A few WRDAs after the process was created, it was changed to not consider separable elements of projects independently. Also, any funding – including small amounts of study funding – will reset the deauthorization clock. Clearly, tightening the objective deauthorization process to ensure that separable elements are considered independently and only funding for actual construction resets the clock would serve to reduce the backlog significantly.

Last year, the House of Representatives passed H.R. 2864, the Water Resources Development Act. In that bill, navigation projects first authorized more than a century ago and flood control projects authorized more than 60 years ago were deauthorized. I

am confident these represent only the most obvious dead wood in the construction backlog and that there are many other equally ridiculous projects still in the backlog.

In recent years, TCS has concentrated on projects that are either under construction or near construction, so the scope of projects we recommend for immediate deauthorization is not nearly as large as a broader analysis would yield. Below are several projects Taxpayers for Common Sense urges immediately deauthorized.

Authorized Projects the Corps of Engineers has Suspended
Oregon Inlet Jetties (NC)
Chesapeake and Delaware Canal Deepening (MD, DE)

Controversial Projects Not Yet Constructed
Savannah Harbor Expansion (GA, SC)
Auburn Dam (CA)
Delaware River Deepening (PA, NJ, DE)
Devils Lake Emergency Outlet (ND)
St. John's Bayou/New Madrid Floodway (MO)
Arkansas River Navigation Project (AR, OK)
Long Island Beach Replenishment (NY)
Clear Creek Flood Control (TX)

Projects Under Construction Not Economically Justified
Eastern Arkansas Irrigation Projects (AR)
Big Sunflower River "Major Maintenance" River Dredging (MS)
Yazoo Backwater Pump (MS)
Inner Harbor Navigation Canal Lock (LA)
Dallas Floodway Extension (TX)
Columbia River Deepening (OR, WA)
Wichita River Basin Chloride Control (TX)
Greenup Lock Expansion (KY, OH)
J.T. Meyers Lock Expansion (IN, KY)

I would also recommend deauthorizing any "mission creep" projects or projects outside the Corps of Engineers primary mission areas of navigation, flood damage reduction, and environmental restoration. For instance, the backlog is littered with "Environmental Infrastructure" projects, which have spread like wildfire since the program was established in WRDA 1992. This program essentially authorizes the Corps to facilitate water supply and wastewater treatment projects within a geographic area – a city, state, counties, or even a congressional district. Wastewater treatment and water supply are not primary missions of the Corps. And, unlike other Corps projects, Congress does not authorize a project per se, just that the Corps will assist the communities. This is duplicative of the existing clean and drinking water state revolving funds (SRFs) of the U.S. Environmental Protection Agency, with two notable exceptions. One, criteria exist for the SRFs and they are largely directed by the states, and two, the SRFs provide low interest loans, whereas the Corps program is an outright 65% grant.

The enormity of the backlog has essentially rendered the authorizing committees impotent. The U.S. Army Corps of Engineers receives roughly $2 billion in construction funding each year and the appropriations committee has $58 billion in projects to pick from for funding. This has caused water resource dollars to be spread further and thinner, delaying construction and the delivery of project benefits, as well as increasing project costs.

Finally, a few years ago, TCS staff compiled an extensive list of the existing Corps construction backlog. As you might imagine the computer file is quite large, but I would be happy to share it with you and your staff at your convenience.

Again, thank you for holding the hearing and for your interest in the operations of U.S. Army Corps of Engineers. Hurricane Katrina revealed several areas the nation needs the Corps to improve upon. I have attached a copy of a recent report that my organization along with several others released on this topic. Please contact me with any questions at 202-546-8500 ext. 126 or steve@taxpayer.net.

Respectfully,

Steve Ellis
Vice President of Programs

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